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1400 Brush Row Road
Wilberforce, Ohio 45384
937-376-6011

**Central State University-Dayton**
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840 Germantown Street
Dayton, Ohio 45402
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# THIS IS CSU*YOU*

# Academic Catalog 2019-2020

THIS IS CSU*YOU*

*Service...Protocol...Civility®*

# CENTRAL STATE UNIVERSITY


# CENTRAL STATE UNIVERSITY CATALOG, 2019-2020

**Published by Central State University, Wilberforce, Ohio 45384**

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**CENTRAL STATE UNIVERSITY**

Fall Semester 2019

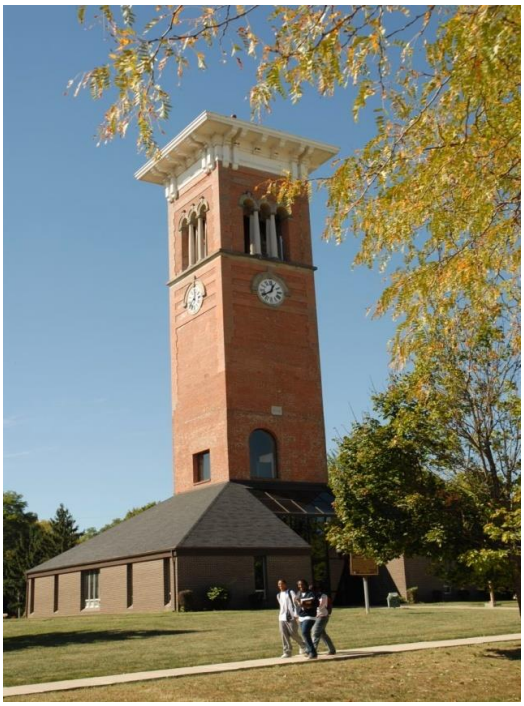
| | |
|---|---|
| August 8-9, 2019 | University Institute |
| Wednesday, August 14, 2019 | Residence Halls Open for NEW and Transfer Students only |
| August 14-19, 2019 | Pirate Week |
| Monday, August 19, 2019 | Classes Begin (Full Term= 16 weeks) (Fall A=7 Weeks) |
| Monday, August 19, 2019 | Last Day for 100% Refund (TOTAL WITHDRAWAL) |
| Thursday, August 22, 2019 | Last day to register for a full term and fall term A classes |
| August 19-30, 2019 | Drop/Add Period for the Full Term |
| Saturday, August 17, 2019 | Residence Halls Open for Returning Students |
| Saturday, August 24, 2019 | Attendance Reporting (6th class day) by Faculty due by noon |
| August 26th-30th, 2019 | Welcome Back Week |
| Thursday, August 29, 2019 | 90% Refund for TOTAL WITHDRAWAL from the University |
| Thursday, August 29, 2019 | Attendance Reporting (10th class day) by Faculty due by noon |
| Friday, August 30, 2019 | Last day to Drop a class without Record (Does not apply to Total Withdrawal) |
| Monday, September 2, 2019 | Labor Day Holiday: University Closed |
| Tuesday, September 3, 2019 | Last day for Book Advances |
| Wednesday, September 4, 2019 | Enrollment Census Date (Official Statistics Date) |
| Friday, September 13, 2019 | 50% Refund for TOTAL WITHDRAWAL from the University |
| Friday, September 27, 2019 | Last Day for Students to submit missing work to Instructors – Due by noon |
| Tuesday, October 1, 2019 | Last Day for Instructors to submit "I" Grades from Spring and Summer 2020–– Due by noon |
| September 23-27, 2019 | First Interim Grade Reporting Period- Grades due by Noon on September 27, 2019 |
| Thursday, October 3, 2019 | 25% Refund for TOTAL WITHDRAWAL from the University |
| Friday, October 4, 2019 | 0% Refund for TOTAL WITHDRAWAL from the University |
| Saturday, October 5, 2019 | Last Day of Classes for Fall A |
| Monday, October 7, 2019 | Registration begins for the Spring Semester 2020 |
| Wednesday, October 9, 2019 | Fall A Term grades due by noon |
| Friday, October 11, 2010 | Last day to register for fall term B |
| Saturday, October 12, 2019 | Homecoming: (No Classes) |
| Monday, October 14, 2019 | Classes begin for Fall B term |
| Monday, October 21, 2019 | Attendance Reporting by Faculty for Term B due by noon |
| October 21-25, 2019 | Handle Your Business (HYB) Week |
| October 21-25, 2019 | Mid-Term Grade Reporting Due (Second Interim) - Grades due by Noon on October 25, 2019 |
| Friday, November 8, 2019 | Last day to Drop or Withdraw from a class with a "W" Grade. Last day to do total withdrawal. |
| Friday, November 1, 2019 | Deadline to submit Graduation Application for Fall and Spring 2019-20 (Late fee after Nov. 1st) |
| Friday, November 1, 2019 | Last Day to Register for Spring 2020 without $300 Late Registration Fee |
| Saturday, November 2, 2019 | Spring 2020 Late fee - $300 for Continuing Students |
| Monday, November 11, 2019 | Veteran's Day Observed: University Closed |
| November 25-27, 2019 | Fall Break: (No Classes, University Open) |
| November 28-30, 2019 | Thanksgiving Holiday: University Closed |
| Monday, December 2, 2019 | Classes Resume after Thanksgiving Holiday Break |
| December 10-14, 2019 | Final Exams for the Main and CSU Dayton Campuses |
| Saturday, December 7, 2019 | Last day of Classes fall B term |

| | |
|---|---|
| Wednesday, December 11, 2019 | Final Grades for fall term B classes- Due by noon |
| Monday, December 14, 2019 | Residence Halls Close |
| Thursday, December 18, 2019 | Final Grades for full term classes- Due by noon |
| Friday, December 20, 2019 | December Degrees' Conferred |

**CENTRAL STATE UNIVERSITY**
Spring Semester 2020

| | |
|---|---|
| Monday, October 7, 2019 | Registration Begins for the Spring 2020 Semester |
| Friday, November 1, 2019 | Spring 2020 Late Registration Fee ($300.00 Fee for Continuing Students) |
| Friday, January 10, 2020 | Orientation and Registration for New and Transfer Students |
| Friday, January 10, 2020 | Residence Halls Open for New, Transfer, Continuing Students |
| Monday, January 13, 2020 | Classes Begin (Full term = 16 weeks) (Spring A = 7 weeks) |
| Monday, January 13, 2020 | Last Day for a 100% Refund (Total Withdrawal) |
| January 13-17, 2020 | Welcome Back Week |
| January 13-24, 2020 | Drop/Add Period |
| Thursday, January 16, 2020 | Last day to register for a full term and fall term A classes |
| Saturday, January 18, 2020 | Attendance Reporting (6th Class day) by Faculty due by noon |
| Monday, January 20, 2020 | Dr. Martin Luther King, Jr. Holiday (No Classes, University Closed) |
| Thursday, January 23, 2020 | Attendance Reporting (10th Class day) by Faculty due by noon |
| Friday, January 24, 2020 | 90% Refund for TOTAL WITHDRAWAL from the University |
| Friday, January 24, 2020 | Last Day to Drop a Class without Record (Does not apply to Total Withdrawal) |
| Monday, January 27, 2020 | Last Day Book Advances |
| Wednesday, January 29, 2020 | Enrollment Census Date (Official Statistics Date) |
| Friday, February 7, 2020 | 50% Refund for TOTAL WITHDRAWAL from the University |
| Monday, February 17, 2020 | Presidents' Day (No Classes, University Closed) |
| February 17-21, 2020 | First Interim Grade Reporting Period due by noon- Grades due by noon on February 21, 2020 |
| Friday, February 21, 2020 | Last Day to submit make up work from fall 2019 to instructors – Due by noon |
| Friday, February 21, 2020 | Last Day for Instructors to submit "I" Grades from fall 2019– Due by noon |
| Monday, February 24, 2020 | Registration begins for 2020 Summer and Fall Semesters |
| Wednesday, February 26, 2020 | Last Day for Instructors to turn in "I" Grade Changes |
| Friday, February 28, 2020 | 25% Refund for TOTAL WITHDRAWAL from the University |
| Friday, February 28, 2020 | Final Deadline for Submitting Graduation Application (Late Fee assessed as of Nov. 1, 2019) |
| Saturday, February 29, 2020 | 0% Refund for TOTAL WITHDRAWAL from the University |
| Saturday, February 29, 2020 | Last Day of Classes for Spring A |
| Wednesday, March 4, 2020 | Spring A Term grades due by noon |
| Tuesday, March 3, 2020 | Charter Day – Celebrating 133 Years |
| Friday, March 6, 2020 | Senior Salute |
| March 16-21, 2020 | Spring Break (No classes, University Open) |
| March 9-13, 2020 | Handle Your Business (HYB) Week |
| Friday, March 20, 2020 | Last day to register for fall term B |
| Monday, March 23, 2020 | Spring Term B begins for CSU Main and Dayton Weekend Classes (7 weeks) |
| Friday, March 27, 2020 | Last Day to register for summer and fall 2021 without $300 Late Registration Fee |

| | |
|---|---|
| Saturday, March 28, 2020 | Summer and Fall 2020 Late fee - $300 for Continuing Students |
| Monday, March 30, 2020 | Attendance Reporting by Faculty for term B due by noon |
| March 30-April 3, 2020 | Mid-Term Grade Reporting Period Second Interim -Grades due by Noon on April 3, 2020 |
| Tuesday, April 7, 2020 | Honors Convocation |
| Friday, April 10, 2020 | Last day to Drop or Withdraw from a class with a "W" Grade. Last day to do total withdrawal. |
| April 27-May 1, 2020 | Early Final Exam Week for Prospective Graduating Seniors |
| Saturday, May 2, 2020 | Last Day of Classes (Spring B) |
| Monday, May 4, 2020 | Grades Due for Graduating Seniors by noon |
| Monday, May 4, 2020 | Last Day of Classes (Full term) |
| Wednesday, May 6, 2020 | Final grades for term b-due by noon |
| May 5-9, 2020 | Final Examinations for the Main and CSU Dayton Campuses |
| Friday, May 8, 2020 | Rehearsal for Commencement |
| Friday, May 8, 2020 | Graduating Seniors Baccalaureate |
| Saturday, May 9, 2020 | Residence Halls Close |
| Saturday, May 9, 2020 | Commencement (Saturday) |
| Wednesday, May 13, 2020 | Final Grades for the full term-Due by noon |



**SYMBOL OF STRENGTH –** Galloway Tower on the Central State University campus is an historic symbol of the University's 130 years of higher education.

# CENTRAL STATE UNIVERSITY

**PURPOSE**
The purpose of Central State University is to provide opportunities in higher education for the citizens of Ohio and other qualified applicants, including both national and international students.

**MISSION**
Central State University, an 1890 Land-Grant institution, prepares students with diverse backgrounds and experiences for leadership, research, and service. The University fosters academic excellence within a nurturing environment and provides a strong liberal arts foundation leading to professional careers and advanced studies.

Central State University is dedicated to:

- providing a nurturing and culturally enriched learning environment;
- stimulating in students an intellectual curiosity and a continuous search for knowledge;
- teaching students to think critically and communicate effectively;
- instilling in students an aspiration for excellence through teaching, service, and scholarly research;
- preparing students to address the challenges of a technologically oriented world;
- providing quality educational programs in scientific and technological fields;
- offering programs with multicultural and global perspectives;
- reaching out to underserved populations; and
- collaborating with other educational institutions, business organizations and government agencies to enrich learning experiences and educational opportunities for students.

**HISTORY**
Central State University's history begins with our parent institution Wilberforce University, named in honor of the great abolitionist William Wilberforce. Established at Tawawa Springs, Ohio, in 1856, it is affiliated with the African Methodist Episcopal (A.M.E.) Church and is one of the oldest Black-administered institutions of higher education in the nation.

In 1887, the Ohio General Assembly enacted legislation that created a Combined Normal and

Industrial Department at Wilberforce University. The objectives of this new state-sponsored department were to provide teacher training and vocational education, and to stabilize these programs by assuring a financial base similar to that of other state-supported institutions.

The statute establishing the Combined Normal and Industrial Department declared that the institution was 'open to all applicants of good and moral character, thereby indicating no limitations as to race, color, sex, or creed. It was clear, however, that the Department and its successors were designed to serve the educational needs of African-American students.

Although this Department operated as part of Wilberforce University in most respects, a separate board of trustees was appointed to govern the state-financed operations. In 1941, the Department expanded from a two- to a four-year program, and in 1947, it legally split from Wilberforce, becoming the College of Education and Industrial Arts at Wilberforce. The name was changed in 1951 to Central State College, and in 1965, the institution achieved university status. The University has grown steadily since its founding. In recent years, it has added new academic programs, established a new College of Engineering, Science, Technology, and Agriculture and constructed a new Student Center, a new academic building, and four new residence halls. This year it will complete construction of a new residential wellness center.

In July 2012, Central State welcomed its eighth president, Dr. Cynthia Jackson-Hammond. Under this administration, six compelling priorities for the University have been established: a quality academic experience; targeted student enrollment; improved retention rates; reduced time to degree; production of graduates with the knowledge, skills and dispositions for advanced studies and careers; and efficient and effective institutional operations.

New initiatives are in progress which include: aggressive efforts to recruit college-ready students; increase student retention; enhancing the University's image internally and externally through the embodiment of the tenets, Service...Protocol...Civility®; diversifying the student body through focused recruitment of local and international students; developing more fluid articulation agreements with community colleges and cooperative agreements with area universities; improving communications with students, staff, and alumni; completing the University's 2014-2020 Strategic Plan; and continuing the ongoing fusion of CSU's mission with the Land-Grant mission resulting from the University's federal designation in February, 2014.

Today, as an 1890 Land-Grant Institution, Central State University is expanding science, technology, engineering, agricultural, and mathematics (STEAM) academic programming, research, and education; developing partnerships within Ohio's agricultural industry; enhancing facilities; and engaging the local communities, all for the future growth and sustainability of the University.

Central State University embraces change; but one thing that has not changed is its continuing commitment to providing an excellent, affordable education to residents of Ohio and beyond. Our future is *bright*!

**LOCATIONS**

Central State University's main campus is located in Wilberforce, Ohio, four miles northeast of Xenia and 18 miles east of Dayton. The main campus is midway between Cincinnati and Columbus on U.S. 42, about 55 miles from each city. Airline, bus, and taxi services are available in Dayton.

Central State University – Dayton, the university's satellite location, is located at 840 Germantown Street, Dayton, Ohio.

**THE CAMPUS**

Central State University has facilities valued at more than $95 million dollars, including: the Joshua I. Smith Center for Education and Natural Sciences; University Student Center; the Mass Communications Center; the McLin Center for Water Resources Management; the Paul Robeson Cultural and Performing Arts Center; the Hallie Q. Brown Memorial Library; the Newsom Administration Building; the Ward University Center; the Galloway Tower; the Walter G. Sellers Alumni Center; and the Louis Stokes Center on Aging.

The Hallie Q. Brown Memorial Library has approximately 169,380 volumes, 590,000+ microfilms, a periodical collection of 2,058 titles, and an audiovisual collection of 4,348 pieces. The library is an integral part of the Ohio Library and Information Network (OHIOLINK), which links the state library and 59 Ohio private and public institutions of higher learning. Through the university library's computer workstations, CSU students and faculty can access any of the library holdings of the other member institutions. Additionally, the CSU library maintains membership in the Southwestern Ohio Council for Higher Education (SOCHE), a consortium of 17

academic, community, and special libraries that engage in cooperative acquisition of expensive and little-used materials that would be beyond the reach of an individual library. CSU faculty and students may borrow items directly from most of these participating libraries.

Athletic facilities include the Walker Gymnasium, the Beacom-Lewis Gymnasium for intercollegiate basketball, tennis and racquetball courts, and McPherson Stadium for football and special events, and practice fields.

The campus terrain is rolling and planted in lawns accented by flowering shrubs, trees, and flower beds, and centered by the attractive Sunken Gardens. Spacious paved walkways make foot travel across the campus easy and convenient.

Across Brush Row Road and along U.S. 42 is the University's outdoor education area, a natural reserve, and within a hundred yards of the Robeson Center is the National Afro-American Museum and Cultural Center, an outstanding facility that chronicles African American history and sponsors a variety of programs.

Central State University – Dayton offers array of evening and weekends classes for students seeking to receive a degree or obtain professional development.

**STUDENTS AND FACULTY**

Central State University's enrollment was at 2,104 students in the Fall of 2018.

Central State University employs more than 150 full-time and adjunct faculty. In addition to their teaching and research, faculty members at Central State have a deep commitment to helping students outside the classroom, especially in academic advising and mentoring throughout the year. The faculty serve as academic advisors to students in their respective academic disciplines.

**Accreditations**

Central State University, Ohio's 1890 Land-Grant University, is regionally accredited by the Higher Learning Commission which is located at 230 South LaSalle Street, Suite 7-500, Chicago, IL 60604-1411.Tel. (800) 621-7440.

Following a comprehensive review of CSU's academic programs and services on March 6-7, 2017, the Higher Learning Commission continued CSU'S accreditation.

**College of Business**

Central State University's College of Business received 10-year accreditation from the Accreditation Council for Business Schools and Programs (ACBSP). Established in 1988, ACBSP is the only organization offering specialized business accreditation for all degree levels, from associate to baccalaureate to doctoral degree programs. The accreditation covers all degrees offered in the College of Business.

**College of Education**

The College of Education and its degree programs are authorized by the State of Ohio. The College is in candidacy for accreditation by CAEP, the Council for Accreditation of Educator Preparation.

**College of Humanities, Arts, and Social Sciences**

**Department of Fine and Performing Arts**

Housed within the College of Humanities, Arts, and Social Sciences, the Department of Fine and Performing Arts offers accredited programs in Art and Music.

Central State University is accredited by the National Association of Schools of Art and Design and offers Bachelor of Arts degrees in Studio Arts and Graphic Design and the Bachelor of Science degree in Art Education.

Central State University is accredited by the National Association of Schools of Music and offers the Bachelor of Arts degree in performance and the Bachelor of Science degree in Music Education.

**Department of Social and Behavioral Sciences**

The Social Work program, housed within the Department of Social and Behavioral Sciences, has been granted initial accreditation of its bachelor degree programs by the Council on Social Work Education (CSWE). CSWE is recognized by the Council for Higher Education Accreditation as the sole accrediting agency for social work education in this country. The Social Work program offers the Bachelor of Arts and the Bachelor of Science in Social Work.

**College of Engineering Science Technology and Agriculture**

The College of Engineering Science Technology and Agriculture houses two ABET accredited programs, Manufacturing Engineering and Environmental Science. ABET is a nonprofit, non-governmental organization recognized by the Council for Higher Education Accreditation (CHEA).

**Department of Manufacturing Engineering**
The Manufacturing Engineering program offers the Bachelor of Science in Manufacturing Engineering. The four-year Bachelor of Science degree program in Manufacturing Engineering (MFE) is one of only a few programs in the nation which are dedicated to undergraduate manufacturing engineering education.

**Department of Water Resources Management**
The Environmental Engineering program, housed within the Department of Water Resources Management, offers the Bachelor of Science in Environmental Engineering.

**AFFILIATIONS**
American Assembly of Collegiate Schools of Business
American Association of Colleges for Teacher Education
American Association of University Women
American Council on Education
Association of American Colleges and Universities
Association of Governing Boards
Association of Physical Plant Administrators—Midwest
Central Association of College and University Business Officers
College and University Personnel Association
Dayton Area Chamber of Commerce
Educational Testing Service
International Association of Black Business Educators
Inter-University Council of Ohio
Miami Valley Consortium for African and African American Studies
Miami Valley Higher Education Consortium
Midwest College Placement Association
National Academic Advising Association
National Association for Equal Opportunity in Higher Education
National Association of College Admissions Counselors
National Association of College Deans, Registrars and Admissions Officers
National Association of College and University Business Officers
National Association of Educational Buyers
National Association of Student Personnel Administrators
National Black Child Development Institute
National Collegiate Athletics Association (NCAA)
Ohio Association of College Admissions Counselors
Ohio Association of College and University Business Officers
Ohio Association of Collegiate Registrars and Admissions Officers

# ACADEMIC PROGRAMS

***College of Business***

Accounting

Business Administration

- Agribusiness
- Entrepreneurship
- Finance
- Hospitality Management
- International Business
- Management
- Management Information Systems
- Marketing

***College of Education***

**Health and Human Performance**

Recreation

**Professional Education**

Agricultural Education

- Ohio Agriscience License
- Agriculture Extension Education

Early Childhood Education

Integrated Language Arts Education

Integrated Mathematics Education

Integrated Social Studies Education

Intervention Specialist Education

Life Science Education

Middle Childhood Education:

- Language Arts/Reading Education
- Mathematics Education
- Science Education
- Social Studies Education

Physical Science Education

***College of Humanities, Arts, and Social Sciences***

**Fine and Performing Arts**

Graphic Design

Jazz Studies

Music Education

Music Performance

Studio Art

**Humanities**

Communication (Broadcast Media)

Communication (Print Journalism)

English (Literature)

English (Pre-Law)

History

**Social and Behavioral Sciences**

Criminal Justice

Political Science

Political Science (Public Administration)

Psychology

Social Work

Sociology

***College of Engineering Science Technology and Agriculture***

**Manufacturing Engineering**

Industrial Technology

- Computer technology
- Manufacturing Management

Manufacturing Engineering

**Mathematics and Computer Science**

Computer Science

Mathematics

**Military Science**

Four-year program (Army ROTC)

Two-year program (Army ROTC)

*Please note both are programs, not degrees. In addition, a minor in ROTC is offered.*

**Natural Sciences**

Biology

Chemistry

Exercise Science

- Sports Performance
- Wellness
- Clinical

Sustainable Agriculture

**Water Resources Management**

Environmental Engineering

Water Resources Management

# MINORS

**Minor in Africana Studies** requires a minimum of 19-21 credit hours, including AFS 1200; a literature course focused on Africa or the African Diaspora (U.S. or Caribbean), a critical thinking course, at least one course focused on gender, race, class, ethnicity or culture, at least one course focused on Africa or non-U.S. African Diaspora (i.e., South/Central America, Caribbean), and any other course from a list of relevant university-wide courses, in consultation with the student's advisor.

**Minor in Biology** requires BIO 1801, BIO 1802 and at least one elective from the following list up to a minimum of 16 credit hours: BIO 2000, Bio 2350, BIO 2650, BIO 3500, BIO 3660, BIO 3050, BIO 3550 and BIO 3150. A grade of "C" or better in these courses is required.

**Minor in Business** is available for students majoring in other areas. The minor consists of 24 semester hours and includes the following required courses: ACC 2210, BUS 1100, BUS 1500 or equivalent, BUS 2200, BUS 2343, BUS 2353, BUS 3331, and ECO 2210.

**Minor in Chemistry** requires CHM 1201, CHM 1202, CHM 2200, CHM 2401, and CHM 2402. Students are advised to check for prerequisites on these courses. A grade of "C" or better in these courses is required. Students are advised to check for prerequisites on these courses.

**Minor in Communication - Broadcast Media** requires 20-21 credit hours including COM 2200, 2272, COM 3315, COM 4894; 6 additional credit hours of Broadcast Media courses, and a 2-3 credit hour courses from a selected department. Communication majors may not minor in this area.

**Minor in Communication Print Journalism** requires 20-21 credit hours including COM 2200, 2219, COM 3319, COM 3327, COM 4894; 3 additional credit hours of Print Journalism courses, and a 2-3 credit hour course from a selected department. Communication majors may not minor in this area.

**Minor in Computational Science** — COE 2255; CPS 1192, CPS 3330; CPS 3450; MTH 3310 and a CSI Science or Engineering 3 hour elective. Electives: CPS 2680 or CPS 3465 or MTH 3110.

**Minor in Computer Science** requires a minimum of 20 semester hours in Computer Science including CPS

1191, CPS 1192, CPS 2220, CPS 2271; and 11 hours in Mathematics including MTH 2501, MTH 2502, and MTH 2503.

**Minor in Creative Writing** requires a minimum of 21 credit hours as follows: ENG 2200, ENG 3006; ENG 3540 or ENG 3550; and remaining hours from Humanities department courses in writing, language, and literature chosen in consultation with the student's advisor.

**Minor in Criminal Justice** requires a minimum of 24 semester hours in Criminal Justice to include CRJ 2210, CRJ 2310, CRJ 2330, CRJ 3310, CRJ 3340, CRJ 4655; SOC 3333 and SOC 3510 and additional courses selected in consultation with the academic advisor. Criminal Justice minors will also have to complete CHM 1610. A grade of "C" or better is required for all Criminal Justice courses, as well as SOC 3333 and SOC 3510.

**Minor in Environmental Science** requires a minimum required core of 26 credit hours including a core of 17 hours consisting of BIO 1500, BIO 3500; CHM 2200; WRM 2200 and WRM 3330; and additional 9 hours minimum from elective courses BIO 2000, BIO 2050, 2650, BIO 4200, BIO 4300; CHM 2401, 4200; GEL 2205; MTH 2001; WRM 3306, WRM 3310 and WRM 4435. Students are advised to check for prerequisites on these courses. A grade of "C" or better in these courses is required.

**Minor in Forensic Science** requires CHM 1610, CHM 2200, CHM 2600, CHM 4200, and CHM 4600, total of 20 credit hours.

**Minor in French** requires completion of University's B.A. language requirements (FLA 1141: Basic French I and FLA 1142: Basic French II) as well as completion of four core Minor in French courses consisting of the following courses taken in sequence: FLA 2241: Advanced French, FLA 2242: Advanced Writing in French, FLA 2294: Francophone African Literature, and FLA 3300 (focusing on French Translation) or FLA 3342: French Translation. A grade of "C" or better will be required for all Minor in French courses.

**Minor in Gerontology** requires a minimum of 20 semester hours to include the following courses: BIO 2200; SOC 2230; PSY 3385 and SOC 4596. Additional elective courses may be selected from SOC 3370, SOC 3380; SWK 3320; HHP 1202, HHP 2230, HHP 3301, HHP 3361, HHP 4401; PSY 2320, PSY 3380, & PSY 3420, in consultation with the academic advisor. A grade of "C" or better is required in all courses taken for the minor.

**Minor in History** requires a minimum of 24 credit hours in history courses chosen in consultation with the student's advisor.

**Minor in Literature** requires a minimum of 21 credit hours as follows: ENG 2200, ENG 3100, and remaining hours from Humanities department courses in literature chosen in consultation with the student's advisor.

**Minor in Mathematics** requires a minimum of 20 semester hours including MTH 2501, MTH 2502, MTH 2503, MTH 3001, MTH 3002, and MTH 3620.

**Minor in Military Science** requires 18 hours of course work as follows: BUS 1500, COM 3310 or COM 3326, MIL 3511, MIL 3512, MIL 4511, MIL 4512

**Minor in Nuclear Engineering** requires four (4) Nuclear Engineering courses (12 hours), and a NUE practicum (3 hours), while using two (2) additional courses (6 hours) to draw on current courses in the disciplines of science, mathematics, computer science, manufacturing engineering, environmental engineering, industrial technology, and business administration for a total of 21 semester hours beyond the student's requirement in the major.

**Minor in Philosophy and Religion** requires a minimum of 24 credit hours in philosophy courses chosen in consultation with the student's advisor.

**Minor in Physics** requires PHY 2211/ PHY 2212, PHY 2213/ PHY 2214, PHY 3320, PHY 3330, PHY 4431. Students are advised to check for prerequisites on these courses.

**Minor in Political Science** requires a minimum of 20 semester hours in Political Science including PSC 1100, PSC 2223, PSC 3304, PSC 3381, and SOC 2206. At least nine of the remaining hours are to be taken from 3000 or 4000 level courses. A grade of "C" or better is required in all Political Science courses.

**Minor in Pre-Law Interdisciplinary** requires a minimum of 24 credit hours. BUS 2200, ECO 2200, HIS 2202, LAW 1100, PHI 2240, PSC 3381 plus one course from the following: ACC 2210, COM 3326, CRJ 3340, ENG 3100, ENG 4200, HIS 4371, HMP 3310, MGT 4441, LAW, PSC 1100, PSC 1120, PSC 3304, PSC 3310, PSC 3361, PSC 4493.

**Minor in Psychology** requires a minimum of 24 hours including the following courses: PSY 1100, PHY 1200, PHY 2220, PHY 2320, PHY 3334 and SOC 2206 and additional courses selected in consultation with the academic advisor. A grade of "C" or better is required in all Psychology courses.

**Minor in Public Relations** requires 20-21 credit hours including COM 2200, COM 2204 or COM 3310; COM 2219 and COM 3300; 3 additional credit hours of COM courses and 6 credit hours from selected departments. Communication majors may not minor in this area.

**Minor in Sociology** requires a minimum of 20 semester hours in Sociology to include SOC 1105, SOC 1111 or SOC 1125, SOC 2206, SOC 2800, SOC 3800 and additional courses selected in consultation with the academic advisor. A grade of "C" or better is required in all Sociology courses.

**Minor in Sound Engineering and Recording** requires 20 credit hours including COM 2272, COM 3312, 3460 and MUS 1101; and 6 credit hours from selected departments. Communication majors may not minor in this area.

**Minor in Spanish** requires completion of University's B.A. language requirements (FLA 1131: Basic Spanish I and FLA 1132: Basic Spanish II) as well as completion of four core Minor in Spanish courses consisting of the following courses taken in sequence: FLA 2231: Advanced Spanish, FLA 2232: Advanced Writing in Spanish, FLA 2293: Hispanic American Literature in Translation, and FLA 3332: Spanish Translation. A grade of "C" or better will be required for all Minor in Spanish courses.

**Minor in Speech/Theatre** requires a minimum of 20 semester hours including DRM 1110, DRM 1115, and DRM 3315, COM 2204 or COM 3310 or COM 3326; and 3 credit hours from a selected department. Communication majors may not minor in this area.

**Minor in Sustainable Agriculture** require 18-19 credit hours. AGR 1150, AGR 1220, AGR 2150, AGR 2450 and a minimum of 3 elective hours in AGR, AGB or INT at the 3000-4000 level.

**Minor in Water Resource Management** requires 14 credit hours of core courses WRM 2200, WRM 3330, WRM 3335, WRM 4402 and a minimum of 6 credit hours of elective courses from other WRM courses. Students are expected to familiarize themselves with the prerequisites required for each course. A grade of "C" or better is required.

# STUDENT AFFAIRS AND ENROLLMENT MANAGEMENT

**B. Sherrance Russell, Ph.D**
**Vice President for Student Affairs**
**and Enrollment Management**
**University Student Center Suite 214**
**(937) 376-6387**

**NORMAN E. WARD UNIVERSITY CENTER**
The Norman E. Ward, Sr. University Center houses the following Student Affairs and Enrollment Management offices:, Admissions Office, Financial Aid Office, and University College. Numerous co-curricular activities are held in this facility each year.

**UNIVERSITY STUDENT CENTER**
The University Student Center houses the following Student Affairs and Enrollment Management offices: Vice President for Student Affairs and Enrollment Management, Dean of Students, Career Services, Student Engagement and Conduct, Office of Violence Against Women, and Interfaith Campus Ministries. This 85,000 square foot facility contains the Marauder Zone Barnes and Nobles Bookstore, the 500-seat cafeteria, the WOW Café, a game room, and multiple meeting spaces. This center is the hub of student life here at Central State.

**DEAN OF STUDENTS**
**Terree L. Stevenson**
**University Student Center, Suite 217**
**(937) 376-6493**

The Dean of Students Office serves an integral role in aiding in students personal, leadership, and educational development. The staff in the Dean of Students office (Student Engagement and Conduct, Career Services, Residential Life, and the Office of Violence Against Women) strive to provide programs and services enhance the collegiate experience. A champion of holistic engagement and growth, the Dean of Students encourages students to contact the office if they have question or concerns.

**STUDENT ENGAGEMENT AND CONDUCT**
**STUDENT ENGAGEMENT**
**University Student Center, Suite 109**
**Deshnick Lewis, Director**
**(937) 376-6414**
The Office of Student Engagement and Conduct provide opportunities for student growth and development through educational, civic, cultural, social and recreational programs and activities implemented by the staff, student organizations, and academic departments. The Office of Student Life & Development creates purposeful experiences for students that promote leadership, life skills, and personal development while enhancing campus life.

The Student Life & Development staff works collaboratively with other departments and student organizations to host traditional events and leadership opportunities such as New Student Orientation, Welcome Week, Pirate Week, Homecoming, Spring Fest, and the Aspiring Leadership Institute.

Being involved in a student club or organization allows students the opportunity to become engaged in student life and to enrich their academic and social experiences. Central State University has numerous clubs and organizations that students may join to find their niche on campus or to meet other students with whom they have similar interests.

**STUDENT CONDUCT**
**Deshnick Lewis, Director**
**Office of Student Engagement and Conduct**
**(937) 376-6421**
Central State University is committed to an academic and community environment consistent with the University's stated tenets of Service-Protocol-Civility. Central State expects for all members of the university community to share in its commitment to academic honesty, personal integrity, and behavioral maturity. All students are expected to cooperate in maintaining high standards of personal conduct and social responsibility. Stated objectives and regulations governing student conduct are detailed in the Student Handbook and it is the responsibility of every student to become knowledgeable of these regulations.

Standards for the conduct of student life are set forth in the Student Code of Conduct, carefully written and regularly reviewed by a committee of students, faculty, and staff members. The Code of Student Conduct is available online through the Central State University website.

Attendance at Central State University is a privilege, not a right, and may be forfeited by any student who does not abide by the regulations of the University or who is unwilling to adjust to the University environment through responsible conduct of high moral and ethical standards. Thus, University officials reserve the right to terminate, for appropriate

reasons and through due process, the connection of any student with the University.

**CAREER SERVICES CENTER**
**Ms. Karla Harper, Director of Career Services**
**University Student Center, Suite 217**
**(937) 376-6383**

**CAREER SERVICES CENTER**
The Career Services Center provides quality professional career counseling and career/life planning programs and experiential opportunities to all students. The Center achieves its goals by making available the following services: Career Fairs, career counseling, on-campus interviewing for full-time prospective graduates and student teacher placement, networking, referrals, credential services, on-line graduate school information, career-related brochures/handbooks, up-to-date career writing and interview techniques. In addition, job referrals for alumni, faculty and staff are available. Students are highly encouraged to attend programs, utilize office services and register for placement services beginning in their freshmen year. All students who utilize the Center **must** submit a professional résumé and register on Handshake.com. To clear for graduation, prospective candidates **must** complete the Graduate Exit Form and provide a résumé.

**COOPERATIVE EDUCATION PROGRAM**
The Cooperative Education Program at Central State University provides practical training, responsible management experiences and attitude development required for permanent job placement in career fields matching the student's interest and potentialities. Central State University Office of Career Services set the general guidelines and educational objectives for the program and place students in co-op positions providing maximum educational advantage. The Center also provides an on-going student counseling and advisement service to assure a positive relationship among student, employer and the University.
The University attempts to match students with assignments that are related to their career objectives, thus providing experiences that enhance knowledge acquired in the classroom. Once a Cooperative Education training assignment has been approved, the student must register and pay for co-op credits and fees the same as for any other course. Students holding part-time or full-time jobs may register for academic credit. There are two types of co-op plans:

- **Parallel Co-op:** A parallel co-op is similar to a part-time job. The student enrolls in classes part-time (6 semester hours) and works 20 hours a week each semester. The student receives 6 semester credit hours for the parallel co-op.
- **Alternating Co-op:** With an alternating co-op, the student alternates semesters between full-time work and full-time study. Students receive 12 semester credit hours for alternating co-op. Both of these plans are used by participating co-op employers and can be structured to fit any particular company need.

**Student Eligibility**
To be eligible for the Co-op Program, students must:

1. Have attained sophomore standing.
2. Have declared a major.
3. Submit a resume.
4. Sign the Buckley Amendment.
5. Have a minimum cumulative grade point average of 2.0. (The minimum average is subject to change pending employer requirements.)
6. Secure approval from the Academic Advisor or Department Chairperson, and from the Career Services Center.
7. Participate in on-campus interviews to acquire assignment (optional).

**NOTE:** Transfer students must have attained sophomore standing and have completed one full-time semester at Central State University to be eligible for co-op.

Cooperative Education is open to all majors/options. Consult the Department Chairperson within your discipline for eligibility.

**Academic Credit**
Academic credit is awarded as follows:

1. The student will receive a grade of credit (CR) or no credit (NC) for cooperative education. A final report and employer evaluation must be submitted and approved by a co-op counselor at the end of the assignment before credit (CR) is awarded. Co-op credit will appear on the transcript as "Earned Hours" and will have no effect on cumulative grade point average.
2. The student must be officially registered within the semester of the assignment to receive co-op credit. Credit is not awarded retroactively.
3. The student may participate in more than two co-op assignments; however, additional credit hours will not count towards graduation.
4. The decision whether co-op hours will substitute for other hours in the major is at the discretion of the Academic Advisor, Chairperson, Dean and Registrar.

**Registration**

After confirmation of a co-op assignment:

1. Pick up registration form from co-op counselor, academic advisor or the Office of the Registrar.
2. Obtain signature from the co-op counselor located in the Career Services Center.
3. Officially enroll in one of the following course numbers for parallel co-op for 6 semester hours:
   COE 2255-01 (students with 30-60 semester hours);
   COE 3355-01 (students with 61-90 semester hours);
   COE 4455-01 (student with 91+ semester hours)
4. Officially enroll in one of the following course numbers for alternating co-op for 12 semester hours:
   COE 2299-01 (students with 30-60 semester hours);
   COE 3399-01 (students with 61-90 semester hours);
   COE 4499-01 (student with 91+ semester hours)
5. Complete registration at the Office of the Registrar.
6. Meet with co-op counselor to obtain information packet.
7. Verify that financial aid award letter, fees and semester registration are complete. The co-op assignment is not final until this verification.

**NOTE:** The student may select any semester to participate in co-op. However, a co-op student may not enroll in more than 18 hours including the co-op hours.

**INTERNSHIPS**

All students are encouraged to do an internship before graduation. Internships increase opportunities for job placements through experiential learning. There are various types of internships: Regular, Summer and Business. Interns are college students selected by companies/agencies to work in their field of study prior to graduation. A regular internship may consist of full or part-time employment and may take place during the academic semesters September through June. A summer internship occurs during the period of May through August. Credit cannot be awarded to students participating in a regular or summer internship if their department does not offer a credit option within their curriculum. Business Internship credit is available only to students selecting a major/option in the College of Business.

**STUDENT HEALTH and WELLNESS CENTER**
**Karen Mathews, MD**
**Executive Director of Health and Psychological Services**
**Harry M. Lackey/Benjamin F. Lee Health Center**
**(937) 376-6134**

The Student Health Clinic provides health care services for illness, injury, and wellness needs of Central State University students. Student Health Services is located on the west side of the campus in the Lackey-Lee building, attached to the Louis Stokes Building. The Clinic is staffed by a board-certified family physician, a certified nurse practitioner, and a certified medical assistant, all very experienced at working in a university setting.

The health insurance is mandatory for all full-time students (taking 12 or more credit hours). All full-time students are automatically billed for the CSU Student Health Plan. You may waive the Health Plan if you complete a waiver application, documenting proof of other health insurance.

If you have health insurance in addition to what CSU offers, please call the 1-800 number on your insurance card to determine what your insurance covers and in what locations you can use it before you make the decision to waive (opt out of) the CSU Student Health Insurance Plan.

If you waive (opt out of) the CSU student health insurance plan, you will not be eligible for all Health Center (Wellness Center) services and will be personally responsible for any fees from visits to outside doctors, clinics, urgent care centers and ER's. The CSU Health and Wellness Center does not bill other insurance.

In general, out-of-state Medicaid plans are only accepted in Ohio for emergencies and not for routine care. If you think you may be eligible for Medicaid, please contact staff in the Student Health and Wellness Center. They can direct you to expert assistance. For assistance with health insurance enrollment options, you may also visit HelpMeEnroll.org or call 937-222-7270.

An electronic waiver application process is available May – September (Labor Day) for new and returning students who enter CSU in the Fall semester. Insurance is for an entire academic year and is billed by semester. For new and returning students who enter CSU in the Spring semester, information about the waiver application process will be provided during the admissions process.

To learn more about the CSU Student Health Insurance Plan or to apply for the waiver using the waiver link open May – September, please visit: chpstudent.com.

Part-time students (with less than 12 credit hours) may purchase the health insurance plan. This coverage is to provide convenient medical treatment here on the campus.

**COUNSELING SERVICES**
**Mr. Victor Adegbola, Manager**
**Harry M. Lackey/Benjamin F. Lee Health Center**
**(937) 376-6171**
**(937) 376-6338 (Counseling Office & For Appointments)**
www.centralstate.edu **Click on Student Life to find our website.**

Counseling Services is located in the Lackey-Lee Building with the Student Health Center on Brush Row Road. Counseling Services has three full-time staff members: a Manager/Licensed Counselor, a Licensed Counselor, and an Administrative Coordinator. All counseling records are **CONFIDENTIAL** and kept apart from other student records at CSU. Information contained in these records will not be revealed to any other person or agency without the written consent of the student.

Regular office hours are from 8:00 a.m. until 5:00 p.m., Monday through Friday. For assistance after hours and on weekends, Resident Advisors and Residence Hall Coordinators are available to assist students. For life-threatening emergencies, students are advised to call "911." Counseling Services department offers *counseling, assessments, crisis intervention, suicide prevention training, alcohol and drug counseling, post hospitalization follow-up, loss & grief counseling, classroom & residence hall presentations, court-ordered counseling* to students and *consultation* to faculty, staff & resident advisors. In addition, Counseling Services is equipped with a relaxation room and a study resource room. All services are **FREE** to all enrolled CSU students.

**OFFICE OF ACADEMIC EMPOWERMENT AND ACCESSIBILITY (Formerly DISABILITY SERVICES)**
**Ms. Gloria Kinney, Coordinator**
**Harry M. Lackey/Benjamin F. Lee Health Center**
**(937) 376-6479**
**(937) 376-6338 (For Appointments)**
www.centralstate.edu **Click on Student Life to find our website.**

The mission of the Office of Academic Empowerment and Accessibility (OAEA) is to provide and coordinate support services and programs that enable students with disabilities to maximize their educational potential. This office also serves as a resource to all members of the University community so that all students with disabilities can freely and actively participate in all facets of University life.

Central State University, in conjunction with OAEA, offers a variety of services and accommodations to students with disabilities based on appropriate documentation, the nature of the disability, and academic need. The coordinator of OAEA must approve all requests for accommodations. Students with documented disabilities should notify OAES upon their acceptance to the university.

**INTERFAITH CAMPUS MINISTRY**
**Reverend Kima Cunningham**
**(937) 376-6566**

The Inter-Faith Campus Ministry serves as a means of promoting an ecumenical approach to faith and spirituality for those who desire it. Its mission is to sponsor a meaningful community of worship, study, fellowship and action. The Inter-Faith Campus Ministry provides programs, services and an environment for the spiritual growth and development of students. Every aspect of its program and ministry is directed toward deepening and strengthening the spiritual life of all who voluntarily come under its nurture and care.

The Inter-Faith Campus Ministry program is supported by the following participating denominations: American Baptist Convention, the Roman Catholic Church, the American Lutheran Church, the Lutheran Church of America, the Ohio Baptist Assembly, the Episcopal Church, the United Methodist Church, the Presbyterian Church (USA), the United Church of Christ, the Christian Church (Disciples), and the Church of the Brethren.

**RESIDENCE LIFE**
**Mr. Justyn Fry, Interim Residence Life Director**
**Foundation Hall II**
**(937) 376-6386**
www.centralstate.edu/prospects/residence/
All non-married full-time freshman and sophomore students are required to live in the University residence halls if your permanent mailing address on file is outside of the 30 mile radius of campus. Junior students with an overall grade point average below 2.5 and who do not live with their parent(s) or a legal guardian are also required to live in the residence halls.

Permission to live off-campus must be obtained in writing from the Director of Residence Life and approved by the Dean of Students. **Any student residing in a hall must be enrolled as a full-time student** (12 hours or more credit hours is considered full-time.) Failure to maintain full-time status will result in removal from your residence hall assignment. The student will still be responsible for payment for the room for that semester.

The University agrees to assign accommodations only after a student has endorsed a housing contract, submitted a non-refundable housing application fee, and enrollment status has been confirmed for the upcoming semester. Subject to availability, the University will attempt to assign accommodations according to the student's preferences, but the University will not guarantee assignment to a particular room, residence hall or roommate.

The Central State University Board of Trustees reserves the right to make any changes or adjustments in fees and charges at any time as conditions or circumstances make the changes necessary.

Room assignments are made without regard to race, color, nationality or religion. Students wishing to be assigned with a certain roommate may request such at the time the application fee is paid. The University will attempt to honor these requests. The possibilities are improved if the reservation is sent early, and if both parties wishing to room together send their contracts at the same time.

The University provides room furniture as well as a computer outlet for each student and a cable TV outlet for each room. Each student is required to provide his/her own pillow, bed linen, blankets, bedspread, towels, study lamp, wash cloths, and personal university-approved accessories. Prohibition of certain electrical appliances (see housing contract and *Student Handbook*) will be adhered to. Supervision of living arrangements and food service is done with the student's health and welfare in mind. Students living in University residence halls are required to eat in the University Cafeteria. No charge is assessed for vacation periods, during which the cafeteria is closed. **No reduction or refund will be made for failure to eat in the cafeteria.**

Students are expected to participate in the life of the residence hall in which they live, and to set standards for themselves. The use or distribution of drugs (narcotics, hallucinogens, stimulants, depressants, etc.), except for established medical purposes determined by the prescription of a physician or the reasonable use of non-prescription medicines, is *prima facie* evidence of drug abuse. Violators are subject to university disciplinary action. State and federal laws prohibit the distribution of drugs except by licensed agencies. The University cannot protect student violators from prosecution by law enforcement agencies.

**OFF-CAMPUS LIVING**

Freshman and sophomore students are required to reside on campus, unless their permanent address on file is within a 30 mile radius of campus. Juniors with a G.P.A. of less than 2.5 are also required to reside on campus. Eligible students may elect to live off campus in private housing. Rental units such as apartments or sleeping rooms with varying types of privileges are available in Wilberforce and in nearby communities including Xenia, Yellow Springs, Beavercreek, Cedarville and Fairborn.

**STUDENT GOVERNMENT ASSOCIATION**
**University Student Center, Suite 109**
**(937) 376-6414**

The Student Government Association (SGA) is a body of vested student representatives who serve as the voice of the student body. The SGA is comprised of an elected executive and legislative board, senators and class council officers. The SGA also serves as the liaison between students, staff, faculty and administrators by keeping students informed through monthly mass student body meetings. SGA has the responsibility to seek and maintain a spirit of cooperation in the activities of the university and to encourage student initiative through service. Information concerning student participation in the various phases of self-governance is detailed in the *Student Handbook.*

**MR. and MISS. CSU and ROYAL COURT**
**University Student Center, Suite 109**
**(937) 376-6414**

Mr. and Miss. CSU (King and Queen) along with the Royal Court serve as role models and peer mentors for other CSU students. They are selected based on their intellect, talent, oratorical skills, poise, leadership, and service.

**GREEK LIFE**
**University Student Center, Suite 109**
**(937) 376-6414**

The Greek- letter organizations are identified by three categories: social, professional, and honorary. The Greek- letter organizations are governed by university rules and regulations and by the National Pan-Hellenic

Council. This governing body is overseen by the Office of Student Life and Development. Student involvement in Greek-lettered organizations enhances the campus community and provides students with the opportunity to develop responsibility and leadership outside the classroom.

**OFFICE OF VIOLENCE AGAINST WOMEN (OVW)**
**Kiedgar M. Curb**
**University Student Center, Suite 109A**
**(937) 376-6414**

Central State University is committed to creating and maintaining an environment that is free from interpersonal violence. Unfortunately, interpersonal violence, sexual violence, and stalking are a reality for some students, faculty, and staff. Central State University takes these issues very seriously. Interpersonal violence, sexual violence, and stalking are prohibited at CSU, under the Gender-Based/Sexual Misconduct Policy. The Office for Violence Against Women Program is devoted to providing advocacy, support, and education to reduce the occurrence of such crimes.

**OFFICE OF TITLE IX**
**Ariella J. Brown, Title IX Coordinator**
**Newsom Administration Building, Office #10B**
**(937) 376-6563**

Title IX of the Education Amendments of 1972 prohibits sex discrimination in educational programs that receive federal funding. Under Title IX, schools must address sexual misconduct and all forms of sex based discrimination. Central State University has a responsibility to respond promptly and effectively to reports of sexual misconduct, investigate how the incident occurred and then take appropriate steps to resolve the situation, as well as ensure that the person who experienced the sexual misconduct is safe.

Students who wish to report all forms of sexual misconduct can contact the Title IX Coordinator or find Title IX information including resources on Central State University's website. All Central State students involved in the Title IX process are entitled to be respected throughout the process, can request no contact orders and can also request additional interim measures as deemed necessary by the Title IX Coordinator.

# ADMISSIONS

**Mr. James Burrell**
**Director of Admissions**
**Norman E. Ward Student Center**
**Suite 14**
**(937)376-6121**

Central State University is committed to a policy of providing equal educational opportunity for all. In all matters, including admissions, the University adheres to a policy of nondiscrimination and welcomes applicants of any race, creed, sex, age, handicap or national origin who wish to further their education.

All students admitted must subscribe to the University policies and procedures set forth in the *University Catalog* and the Code of Conduct as stated in the *Student Handbook*. Ethical conduct is as intrinsic to the admission procedure as it is to all other aspects of university life. Misrepresentation of credentials will lead to forfeiture of student status and all accompanying privileges.


## UNDERGRADUATE ADMISSION PROCEDURE

Many factors are taken into consideration in the selection of a freshman class, and each candidate is viewed on an individual basis. The strength of a student's secondary preparation is an excellent measure of a student's readiness for college. Also of value are personal qualities, such as maturity, intellectual awareness, and motivation to learn. In addition to school records and personal attributes, aptitude and achievement test scores can be helpful in predicting college performance and are considered with other credentials in the application for admission to Central State University.

## APPLICATION INSTRUCTIONS

**Admissions applications can be completed online or in person. A nonrefundable fee of $35.00 should accompany the application.**

**The applicant is responsible for the following:**

1. Completing the application for Undergraduate Admission.
2. Submitting the completed application and fee of $35 (in form of money order or cashier's check) to the Office of Admissions.
3. Submitting the official high school/college transcripts OR General Education Equivalency (GED) scores and diploma (if applicable).

Upon receipt of all the aforementioned items, the student will receive in writing, the status of the application.

The Central State University Board of Trustees reserves the right to make any changes or adjustments in fees and charges at any time as conditions or circumstances make the changes necessary.

## COLLEGE PREPARATION STANDARDS

Central State University endorses the overall intent of improved academic competence of Ohio high school graduates as set forth in the recommendations made by the Advisory Commission on Articulation between Secondary Education and Ohio Colleges.

Thus, on March 21, 1985, the Central State University Board of Trustees approved the following statement on admission: Effective Fall 1986, 4 units English; 3 units Mathematics; 3 units Social Studies; 3 units Science; 2 units Foreign Language (both of which must be in the same foreign language) are required.

## CRITERIA FOR UNDERGRADUATE ADMISSION

**Students must meet the following criteria for admission to Central State University**

1. Have a minimum cumulative grade point average of 2.2 on a 4.0 scale. Students with a GPA of 2.5 or above, along with confirmation of the GPA and all other admission documentation will be considered for automatic admission. Students with below a 2.5 GPA must submit two letters of recommendation from core subject matter instructors, submit a minimum ACT score of 16, and or participate in a summer online college course offering.

**High school graduates must meet the above criteria. Applicants who do not meet the above criteria will be evaluated on an individual basis.**

**TRANSFER STUDENTS**

Applicants who have attended any other college and/or university must have all official transcripts forwarded to the Admissions Office.

Courses accepted for transfer credit are subject to meeting the requirements of the selected major. Applicants with less than 45 transferable quarter hours or less than 30 semester credit hours must submit an official final high school transcript.

Credits accepted from another institution are recorded on the student's permanent academic record, but grades are not transferred to the record. Only courses completed at Central State University are included in the cumulative grade point average.

Students who have been dismissed for academic or disciplinary reasons from another post-secondary school will not be considered for admission to Central State University until one calendar year after the date of the dismissal.

C**riteria for Transfer Admission**

**All transfer applicants must meet the following criteria for admission to Central State University:**

1. Have a minimum cumulative grade point average of 2.2 on a 4.0 scale.
2. Submit official final high school transcript if, less than 45 transferable quarter hours or less than 30 semester credit hours.

**TRANSIENT STUDENTS**

Students in good standing in a recognized college or university, who wish to enroll in courses at Central State University for one semester only, and expect to return to the original institution at the end of the semester, may be admitted as transient students. Transient students are not eligible for Central State University financial aid funds. Their registration will terminate at the end of the semester.

If, at the end of the semester an enrolled Central State University transient student wishes to remain at the University, the student must submit official transcripts from any other colleges and/or universities attended and submit final high school transcript if applicable and re-apply for regular admission as a transfer student.

**Criteria for Transient Admission**

**All transient applicants must meet the following criteria for admission to Central State University:**

1. Submit undergraduate admissions application.
2. Submit letter of good standing from the Registrar of the home institution.
3. Submit an unofficial or official copy of their transcript.

**PART-TIME STUDENTS**

Persons not wishing to pursue full-time study and not currently seeking a degree may be classified as part-time and may enroll in from one to eleven hours per semester. Credit earned as a part-time student may be applied to a degree program.

**Criteria for Part-time Admission**

**All part-time applicants must meet the following criteria for admission to Central State University:**

1. Submit undergraduate admissions application.
2. Submit official final high school transcript or GED scores.
3. Submit all official college transcripts from previous colleges and/or universities attended.

**SENIOR CITIZENS**

Senior citizens (age 60 or older) may enroll in classes at Central State University free of charge for "Audit" only. Such enrollment is made on a space-available basis during the late registration period only. Senior citizens enrolling in classes are responsible for meeting listed course prerequisites and for the payment of Special Course fees which may apply.

**INTERNATIONAL STUDENT ADMISSION PROCESS**

Central State University welcomes students from other countries and cultures that bring to the campus direct contact with the rich heritages of other people

and nationalities. International students should complete the online **Application Forms** and submit them before the deadlines listed below. Students who are attending other schools in the United States should not withdraw and plan to come to Central State University until they have received a definite notice of acceptance.

**Criteria for International Student Admission**

In order for you to be considered for admission to Central State University, you must follow the instructions below. As soon as items listed below are received, you will be informed of the admission decision.

**1- Official Application**

The **Application Forms** must be completed fully in English. All international students must apply as full-time students and must specify a major. Your application must be in our office by the following deadlines:

- **Fall Semester (Starts in August) May 15**
- **Spring Semester (Starts in January) October 1**

In order to ensure consideration for admission, we recommend you apply by the deadline. It is to your advantage to supply all requested information by the deadline.

When filling out the application, you should use your complete name and be consistent in its use. Please use the **same order** of your first name, middle name, and last name in all your correspondence with Central State University offices. Any inconsistency in name order may prevent proper processing of your application.

To access the online **Application Forms,** go to: **http://www.centralstate.edu/services/form/global/application.php**

**2- Application Fee**

All applicants to Central State University are required to submit a nonrefundable application fee of $30 in US currency. Please make draft checks or money order payable to Central State University. Fee waivers are not accepted from international applicants.

**3- Academic Records**

**Official transcripts** of all secondary schools and universities previously or currently attended should accompany your application for admission. A high school **transcript** is a record of all the courses/subjects you have completed and the grades (marks) attained for each class of the **four years** of study prior to graduation from high school.

An official transcript of the General Secondary School Examination administered by your country must also be submitted with your high school transcript and other documents.

Please send an official copy of your school transcripts to the following credential evaluation agency. Request that they send us a copy of the evaluated transcripts. The agency's web address is: https://www.wes.org/. Have them mail a copy of the credential evaluation to:

Central State University
The Center for Global Education
1400 Brush Row Rd
Wilberforce, OHIO 45384-1004

Photocopies of original documents must have the signature of the registrar and **the seal must be original** and separate from the photographic image. All documents not issued in English by the officials signing them must be accompanied by **notarized English translation.** All official documents must be received in our office by the deadlines outlined above.

**4- English Proficiency Requirements**

1. Meet the current score requirements on the Test of English as a Foreign Language (TOEFL): 500 (Paper-Based Exam), 173 (Computer-Based Exam), or 61 Internet-Based Exam. Only official test scores received directly from the testing authority ETS will be considered valid (**www.ets.org**).

2. Pass the IELTS (International English Language Testing System) with a minimum score of 5.5 (**www.ielts.org**).
3. Score a C (Pass) or better in English on the West African Examinations Council (WAEC). Score must be no more than 2 years old.
4. Score a C (Pass) or better on the Cambridge Certificate of Advanced English (CAE).

5. Successfully complete English language studies (Level 112) from any of the ELS Centers (**www.els.com**).

**5- Financial Support**

Central State University does not guarantee any kind of scholarship or financial assistance to international students. Therefore, it is mandated that students show proof of financial support. Estimated expenses for the academic year 2019-2020 are as follows:

| | |
|---|---|
| Tuition | $ 3,926.00 |
| Instructional Fees | $ 2,320.00 |
| Out of State Surcharge | $ 1,850.00 |
| Room Charges | $ 5,340.00 |
| Board Charges | $ 4,594.00 |
| Books and Supplies | $ 1,700.00 |
| Health Insurance | $ 1,630.00 |
| **TOTAL YEARLY COST** | **$21,360.00** |

This amount does not include travel expenses to and from the United States. It is calculated on full -time basis for two-semester academic year. Tuition and fees must be paid at the time of registration for courses. Room and Board fees are due at the beginning of each semester. No exceptions are made for these requirements. Students must have adequate finances to cover all expenses for the entire time that is required to earn the degree.

Students with a family should budget approximately $4,000 per year for a spouse and $2,000 per year for each child. Please note that **tuition and fees are subject to change.** Your first month in the United States demands more financial outlay than any other single period. An additional $1,000 should be available to meet these expenses.

The financial forms are included with the **Application Forms**. They are required before an I-20 (the form required to obtain an F-1 student visa) is issued. International students must complete a financial sponsorship form including bank verification of funds, the sponsor may be the student, if he/she has personal funds, a relative, organization or government, either foreign or American.

**6- Two Letters of Recommendation**

Recommendation letters should be from faculty or administrators who are familiar with your academic and personal achievements.

**For more information email us at globaled@centralstate.edu**

**7- Shipping your I-20**

Upon acceptance to Central State University, you will be issued an I-20 document. The Center for Global Education will contact you to set up an account with EShipGlobal to pay for the shipment of your I-20 and admissions packet. Payments can be made by credit card, wire transfer, or PayPal and will vary based on location.

**COLLEGE CREDIT PLUS (CCP)**

The College Credit Plus Program at Central State University provides eligible middle and high school students multiple pathways to earn college credits while enrolled in high school. CCP is open to Ohio students in grades 7 through 12 in public, community, and non-public schools. The purpose of College Credit Plus is to expose students to rigorous academic options beyond the high school classroom.

**Benefits**

- Earn transferable college credits while in school.
- Achieve reduced time to college degree.
- Take up to 30 college credits per academic year, excluding summers.
- Attend classes at the district school or at multiple Central State University locations.
- Take courses taught by approved Central State University faculty
- Receive academic and social support.
- Have access to smaller student-faculty ratio.
- Earn automatic admission to Central State with full-time status, based on admission eligibility.
- No application or registration fees.

**ELIGIBILITY**

- Public, home-schooled, and private school students in grades 7-12 who are enrolled in a general education or college preparatory curriculum.
- Students must submit a Letter of Intent before the due date in order to participate.
- Minimum cumulative grade point average of 2.2 on a 4.0 scale.

**Flexible Scheduling**

- Face-to-face
- Online (when available)
- Weekend courses (based on schedule)
- Courses vary each semester depending on need

**ADMISSIONS**

- Students must complete Letter of Intent at the district high school and get permission to participate in the Central State University CCP Program
- Students should complete the CCP admissions application in accordance with ODE (Ohio Department of Education) guidelines and Central State University's admissions deadlines.
- Student are required to meet all applicable deadlines for CCP Program
- Students must follow all rules and regulations of the university and those outlined in the Student Code of Conduct
- Students must maintain the minimum GPA required for inclusion in the CCP Program
- To enhance data security, parents of private and homeschool students (ONLY) are required to establish a SAFE Account before their student can apply for funding (https://safe.ode.state.oh.us/portal).

**EXPECTATIONS**

- Students must follow all rules and regulations of the university and those outlined in the Student Code of Conduct
- Students must maintain the minimum GPA required for continuation inclusion in the CCP Program

**READMISSION**

A student whose enrollment is disrupted for more than one academic year and one term, excluding summer, is required to apply for readmission prior to registering for classes.

Students applying for readmission and who have attended any other college and/or university, after separation from Central State University, must follow the transfer criteria. Students are required to submit official transcripts of all college-level work completed since separation from the university. A nonrefundable application fee of $35 must accompany the application.

**ADVANCED PLACEMENT**

The State of Ohio, working through the University System of Ohio, has initiated polices to facilitate the ease of transition from high school to college as well as between and among Ohio's Public colleges and universities. Beginning in the Fall term 2009:

1. Students obtaining an Advanced Placement (AP) exam score of **3** or above will be awarded the aligned course(s) and credits for the AP exam area(s) successfully completed.
2. General Education courses and credits received will be applied towards graduation and will satisfy a general education requirement if the course(s) to which the AP area is equivalent fulfill a requirement.
3. If an equivalent course is not available for the AP exam area completed, elective or area credit will be awarded in the appropriate academic discipline and will be applied towards graduation where such elective credit options exist within the academic major.
4. Additional courses or credits may be available when a score of 4 or 5 is obtained. Award of credit for higher score values varies depending on the institution and academic discipline.
5. In academic disciplines containing highly dependent sequences (Sciences, Technology, Engineering and Mathematics – STEM) students are strongly advised to confer with college/university advising staff to ensure they have the appropriate foundation to be successful in advanced coursework within the sequence.

# FINANCIAL AID

**Mrs. Demarus Crawford-White**
**Director of Financial Aid**
**Norman E. Ward Sr. University Center**
**Ground Floor**
**(937) 376-6579**
www.centralstate.edu/financialaid

**STUDENT FINANCIAL AID**
Central State University offers financial aid to all eligible students based upon financial need and academic standing. Central State University utilizes the Free Application for Federal Student Aid (FAFSA) to determine the financial aid applicant's eligibility for grants, loans, and federal work study. The FAFSA can be accessed at www.fafsa.ed.gov. The priority deadline to receive full consideration for need based student aid for new and continuing students is **December 1st. Students selected for verification must submit all their documents by March 1.**

**AWARD NOTIFICATION**
Each year students are required to complete a Free Application for Federal Student Aid (FAFSA) for consideration for most types of financial aid. Students may accept or decline any portion of the financial aid award package by emailing the Financial Aid Office. All aid offers are contingent on the availability of federal, state, and institutional funds and the student's continued eligibility.

Students can view financial aid awards online via MyCSU account. Students should maintain a file containing all financial aid correspondence and information, as well as all of your account statements. This will assist in answering any questions that might occur in the future.

**FINANCIAL NEED**
Most of the programs discussed in this catalog are awarded based on financial need. When applying for federal student aid, the information reported is used in a formula established by the Department of Education. The formula calculates the **Expected Family Contribution (EFC)**, an amount used to determine a student's eligibility to receive certain need-based aid. The Office of Financial Aid does not automatically renew your financial aid, as the EFC is recalculated each year.

**COST OF ATTENDANCE AT CSU**
The cost of attendance at CSU for an academic year (two semesters) is based on the assumption that a student will be enrolled full-time (12 to 18 credit hours) each semester. The 2019-2020 budget for students is shown below to assist you and your parent(s) in estimating your cost of education:

**COST OF ATTENDANCE FOR ACADEMIC SCHOOL YEAR**

| **2019-2020** | **In-State Student /Reciprocity** |
|---|---|
| Tuition and fees | $6,726.00 |
| Room and Board | 10,480.00 |
| Books and Supplies | 1,200.00 |
| Transportation | 450.00 |
| Miscellaneous/Personal | 1,500.00 |
| Loan Fees | 100.00 |
| **TOTAL** | **$20,680.00** |

| **2019-2020** | **Out-of-State** |
|---|---|
| Tuition and fees | $8,726.00 |
| Room and Board | 10,480.00 |
| Books and Supplies | 1,200.00 |
| Transportation | 900.00 |
| Miscellaneous/Personal | 1,500.00 |
| Loan Fees | 100.00 |
| **TOTAL** | **$22,680.00** |

**Budgets are subject to change, please check with the Office of Financial Aid for current information.**

*****NOTE:** Students are billed for tuition, fees, room, board (meals). Students who live off campus are not charged for room and board (meals). Full-time students who have valid health insurance are able to waive the university health insurance.*
*Student enrolled at part time not charged for the health insurance. Students who are full time and do not provide proof of health insurance will have health insurance charged to their account. All remaining costs illustrated in the cost of attendance (i.e. transportation, books and supplies, miscellaneous) are all amounts that students should budget for out of pocket.*

**THE FINANCIAL AID AWARD**
How Financial Aid is awarded: The Office of Student Financial Aid has developed a philosophy of awarding various types of aid to students that is designed to meet several objectives given the resources available.
The objectives are:

1 Meeting the needs of as many students as possible.

2. Awarding each student the best combination of funds available.
3. Awarding the total amount of funds available during the award period.
4. Awarding funds according to donor specifications.

**AWARDING AID ON THE BASIS OF HOURS ENROLLED**

During the academic year, your financial aid award will be based on the number of hours for which you are registered. Unless the student has indicated otherwise, it is assumed that the student will be enrolling as a full-time (minimum of twelve credit hours) degree seeking student each semester. The award notification letter outlines the exact types and amount of aid received for each period of enrollment during the academic year.

For those students who are enrolled less than full-time, all affected aid will be reduced. Other aid (*i.e.*, state grants or outside full-time scholarships) that require full-time attendance may be cancelled. For example, if you enroll for six hours, some aid for that semester may be reduced to one-half the amount of aid for which you would be eligible as a full-time student. Students receiving loans must be enrolled a minimum of six credits.

**ADJUSTMENTS TO FINANCIAL AID AWARD**

**Verification**

The Department of Education can select students for a process called verification. Verification is to ensure that students are getting the proper amount of financial aid based on the information provided in the FAFSA. To complete the verification process, students and parents are required to submit documentation supporting the information they used to complete the FAFSA application via an online process. Once verification is complete, if there is a change in the student's EFC, their financial aid awards may be adjusted to accommodate the new EFC. Students can review their MyCSU account at any time for adjustments made to their Financial Aid award.

**Over Awards and Aid Reductions**

Receipt of outside awards and/or resources will result in a review of your financial aid package to ensure that the student is not over-awarded. An Over Award happens when a student has more aid than the published Cost of Attendance. Over awards are usually the result of the student receiving aid that the Financial Aid Office was not aware of when it completed the student's financial aid package and/or processed a loan application for the student.

When the total of all aid received by the student exceeds the student's cost of attendance budget, awards in the package will be adjusted (cancelled or reduced) in order to eliminate the over award. Federal Work-Study awards and loans will be reduced before any reduction is made to scholarship or grant awards.

Students can have their financial aid award reduced due to, but not limited to, 1) no remaining unmet need, 2) reduction in hours enrolled, 3) loss of eligibility for a particular award, and 4) withdrawal (including non-attendance) from class(es).

**Withdrawals**

Withdrawals from the university:

**Official Withdrawal:** A student who registered for classes can make the decision to withdraw from all classes during a specific term. If the student received Federal financial aid, the University, required by Federal regulation,, calculates the amount of Federal funds the student has earned in a term at the point they withdrew. This process known as "Return of Title IV Funds"(R2T4).The amount of funds that are earned by the student is based on a percentage of the number of days during the semester the student completes. Funds that are determined to not to have been earned by the student are then returned to the Department of Education and any balance would then be owed to the University.

**Unofficial Withdrawal**: Students who do not pass at least one class during a given term are determined to have "unofficially withdrawn" from the University. These students will have their R2T4s completed per Department of Education guidelines. This requires that the calculations be completed using either 50% completion percentage or a student's last date of documented academically related activity.

**Z Grades**

Students earn a Z grade if they have registered for a class and the instructor determines that the student had not begun attendance. Students receiving a Z grade will have their total hours adjusted in the Financial Aid Module to exclude hours for which a Z grade was entered. Federal regulations require that to be eligible for financial aid a student's attendance must be verified. No financial aid can be disbursed for those hours in which attendance cannot be confirmed. For example, a student who is enrolled for 15 hours and receives a Z grade in a 4 hour class would have their financial aid adjusted to 11 hours. This would take the student below full-time attendance and adjustments to the Federal Pell Grant

and any affected aid would be made. This adjustment could result in the student owing a balance to the University.

**Default**

A loan is in default when the student borrower fails to pay several regular payments on time or otherwise fails to meet the terms and conditions of the loan. For instance, a borrower who is 270 days late on a federal education loan is considered to be in default. When a borrower is in default the loan becomes due in full immediately and the lender may pursue more aggressive collection techniques, such as sending the account to a collection agency or filing suit against the borrower. If you default on a loan, the university, the holder of the loan, the state government and the federal government can take legal action to recover the money, including garnishing your wages and withholding income tax refunds. Defaulting on a government loan will make you ineligible for future federal financial aid, unless a satisfactory repayment schedule is arranged, and can affect your credit rating. There are various repayment options available to borrowers. Please visit studentloans.gov to review the list of available repayment options.

**CHANGE IN FINANCIAL SITUATION**

Your family's financial situation may change after you submit your FAFSA. In the event of a substantial change in your family circumstances (such as a loss of employment or the death of a parent), you should notify the Office of Financial Aid immediately to request a re-evaluation and possible adjustment to your award. You must complete an appeal. Your appeal must describe the change in detail, specifying the changes in dollar amounts. Any adjustment in your aid award is contingent upon your eligibility according to program regulations and the availability of funds.

**FEDERAL WORK STUDY (FWS)**

The Federal Work-Study Program involves a part-time job on campus, which gives the student an opportunity to gain work experience and earn extra money to help meet educational expenses. Student positions can be in a variety of areas such as administrative services, student activities and lab assisting. Students must visit Human Resources in order to apply for open positions Students cannot work more than 20 hours per week while classes are in session. The student may work up to 40 hours per week when classes are not in session at the discretion of the supervisor. To be determined eligible, 1) The student must complete the FAFSA by the priority deadline, 2) Must demonstrate financial need, as determined by the FAFSA application, and 3) For returning students, maintain a minimum grade point average of 2.0. Funding is limited and there is no guarantee for job placement.

**FINANCIAL AID PAYMENTS TO STUDENTS**

Federal Loan funds are not be credited to your account until you have completed and signed a Master Promissory Note (MPN), and completed Loan Entrance Counseling. Scholarships, grants, and loan funds are disbursed to your account on the 14th day of the term pending confirmed attendance. Federal Work Study (if earned through on-campus employment) is received in the form of a paycheck every two weeks beginning approximately four weeks after you begin campus employment for the hours worked. Other aid listed on the award letter, such as outside scholarships, are credited to the account upon receipt. For first-time borrowers, there is a 30-day delay in the disbursement of their financial aid.

**BOOK ADVANCES**

Books are an out-of-pocket expense unless the amount of the approved financial aid is greater than the amount of direct charges.

A book advance is an advance to a student on their expected financial aid refund for the purpose of purchasing books and other school related supplies from the bookstore**.** If eligible, the maximum amount provided for book advances is $750.

**STUDENT RIGHTS**

You have the right to:

- Know what financial aid is available, including information on all federal, state, and institutional financial aid programs.
- Know the deadlines for submitting applications for each of the financial aid programs available.
- Know the cost of attending the institution and the school's refund policy.
- Know the criteria used by the institution to select financial aid recipients.
- Know how the school determines your financial need.
- Know what resources (such as parental contribution, other financial aid, your assets, etc.) are considered in the calculation of your need.
- Know how much of your financial need, as determined by the institution, has been met.
- Request from the Office of Student Financial Aid an explanation of the various programs in your student aid package. If you believe you have been treated unfairly, you may

request reconsideration of the award which was made to you.

- Know what portion of the financial aid you received must be repaid and what portion is grant aid.
- Know what the interest rate is, the total amount that must be repaid, the pay back procedures, the length of time you have to repay the loan, and when repayment is to begin.
- Know how the school determines whether you are making satisfactory progress, and what happens if you are not.
- Know that the Department of Public Safety provides for all interested students and parents a leaflet entitled "Safety, Health, and Law Enforcement Information" in accordance with the Crime Awareness and Campus Security Act of 1990.
- Know that the Office of the Dean of Students provides the "Student Handbook" which details the special facilities and services available to handicapped students.

**STUDENT RESPONSIBILITIES**

It is your responsibility to:

- Review and consider all information about the school's program before you enroll.
- Complete all application forms accurately and submit them on time to the right place.
- Pay special attention to and accurately complete your application for student financial aid. *Errors can result in long delays in your receipt of financial aid*. Intentional misreporting (misrepresentation) of information on application forms for federal financial aid is a violation of the law and is considered a criminal offense subject to penalties under the U.S. Criminal Code.
- Return all additional documentation, verification, corrections, and/or new information requested by either the financial aid office or the agency to which you submitted your application.
- Read and understand all forms that you are asked to sign and keep copies of them.
- Accept responsibility for all agreements you sign.
- Notify the lender of changes in your name, address, and enrollment status.
- Perform the work that is agreed upon in accepting a federal college work-study award.
- Know and comply with the deadlines for application or re-application for aid.
- Know and comply with your school's refund procedures.
- Know your responsibility to read and adhere to the Office of Financial Aid Satisfactory Academic Progress Standards (SAP).

**TYPES OF FINANCIAL AID**

The Student Financial Aid Office at Central State University offers four basic types of financial aid:

- ***Grants:*** Are gift aid and do not have to be repaid. Most grant aid is based on financial need.
- ***Scholarships:*** Are gift aid and are based on students meeting particular criteria. Scholarships may be need or merit based.
- ***Loans:*** Low-interest aid that is borrowed and must be repaid six months after borrower ceases to be enrolled at a post-secondary institution at least half-time. In accepting a loan, students need to be aware of the repayment implications.
- ***Federal Work Study:*** Aid earned hourly through an employment on campus. The student is paid bi-weekly through a paycheck. Money earned is not directly applied to the student account.

**STUDENT AID AND SCHOLARSHIPS AT CSU**

**Federal Grants**

***Federal Pell Grant***

*Description and Term:* A direct grant from the federal government through CSU awarded to undergraduate students demonstrating financial need.

*Application:* Complete a Free Application for Federal Student Aid (FAFSA).

*Selection*: Based upon a student's Estimated Family Contribution (EFC).

***Federal Supplemental Education Opportunity Grant (FSEOG)***

*Description and Term*: A federal grant awarded to full-time students with exceptional financial need.

*Application:* Complete Free Application for Federal Student Aid (FAFSA).

*Selection:* Federal Pell Grant eligible students who meet the priority deadline are considered first. Funding is limited.

**Loans**

***Federal Parent Direct Loans (PLUS)***

*Description and Term:* Loans available to parents for dependent undergraduates. Repayment begins 30 days after disbursement, unless deferred through the Department of Education. Interest

Rates are fixed for all new PLUS Loans at a rate of 6.41%.

*Maximum amounts*: Parents may borrow amount up to the cost of education per year per eligible dependent student.

*Application:* Complete Free Application for Federal Student Aid (FAFSA) www.FAFSA.ED.GOV and Parent PLUS loan application www.STUDENTLOANS.GOV.

*Selection*: Credit worthy parents of undergraduate students.

***Subsidized Federal Direct Loans***

*Description and Term:* Need-based loan borrowed through federal government. Repayment begins six months after borrower ceases to be enrolled at least half time or graduates. The government pays the student's interest while student is enrolled in college at least half-time. Once in repayment, interest applies.

*Maximum amounts*: Undergraduates: 1st year $3,500; 2nd year $4,500; 3rd year and 4th year $5,500

*Application:* Complete Free Application for Federal Student Aid (FAFSA) at www.FAFSA.ED.GOV; Complete Entrance Counseling and Master Promissory Note at www.STUDENTLOANS.GOV.

*Selection:* Based upon a student's EFC.

***Unsubsidized Federal Direct Loans***

*Description and Term:* Loan available to all students regardless of need or income. The terms are similar to the Subsidized Direct Loan except the borrower is responsible for paying all of the interest. Unlike the Subsidized Federal Direct Loan Program, the borrower can make monthly or quarterly interest payments or "capitalize" the interest. "Capitalizing" means the lender will add accrued interest to the principal while the borrower is enrolled in school. Repayment begins six months after borrower ceases to be enrolled at least half time or graduates.

*Application:* Complete Free Application for Federal Student Aid (FAFSA) at www.FAFSA.ED.GOV Complete Entrance Counseling and Master Promissory Note at www.STUDENTLOANS.GOV

Selection: All eligible applicants receive aid.

**Scholarships**

***Institutional Scholarships***

*Description and Term:* Institutional scholarships include band grants, choir grants, ROTC grants, athletic grants, Freshman Scholarship, Upper Class Scholarship, and Presidential Leadership and Service Award Scholarship.

*Application:* Each department will have their own application and selection process for the scholarships listed above.

***Private Donor Scholarship***

*Description and Term:* Private donor scholarships are awarded to students based on academic merit, financial need, and/or other donor specifications.

*Application: Contact Institutional Advancement Office.*

**Student Employment**

*Federal Work-Study (FWS)*

*Description and Term:* Part-time jobs on campus.

*Eligibility:* Date the FAFSA is completed, financial need, and minimum grade point average of 2.0.

*Application:* Complete Free Application for Federal Student Aid (FAFSA).

*Salary*: Will be at least the current federal minimum wage.

*Students awarded Federal Work Study are not guaranteed employment.*

*Funding is limited.*

**SATISFACTORY ACADEMIC PROGRESS FOR FINANCIAL AID**

***Federal financial aid funds are awarded with the understanding that students will make progress toward their chosen degree. Central State University, as directed by the U.S. Department of Education, has established Standards of Satisfactory Academic Progress that students must meet in order to receive Title IV student aid.***

***Standards of Satisfactory Academic Progress apply to the following types of federal financial aid: Federal Pell Grant, Federal Supplemental Educational Opportunity Grant (SEOG), TEACH Grant, Federal Work-Study, Federal Direct Loans, Federal Graduate PLUS Loan, and Federal Parent PLUS Loan.***

**What are the standards of Student Academic Progress that I am expected to meet?**

**Undergraduate Student Standards**

The Standards of Satisfactory Academic Progress for undergraduate students has two measures: qualitative and pace.

**Qualitative Measure**

*Cumulative Grade Point Average (CGPA):*

As a student, you will know if you are meeting SAP

requirements based on your cumulative GPA. The required GPA to maintain SAP is a 2.0.

**Pace Measure**

*Completion Rate Requirements (Pace):*

You must successfully complete at least two-thirds (67%) of your total cumulative credit hours attempted[1].

Student are required to complete their degree at Central State University within one and a half times the length of their academic program (150% of the published length of the educational program). For instance, a student typically has six years to complete a four-year degree. However, consideration is given to the student's enrollment status i.e. part-time and full-time.

**What happens if I don't meet the SAP requirements?**

If you are not meeting one and/or both of the measures of SAP, your financial aid will be suspended.

**Can I appeal a SAP decision?**

Yes. You have the right to appeal if you are experiencing extenuating circumstances. Appeal forms are available online.

**Satisfactory Academic Progress Appeal Procedures**

At the end of spring semester each year, the academic records of all students who are receiving or applying for federal financial aid will be reviewed. Those students who fail to meet the Standards of Satisfactory Academic Progress will be sent a letter notifying them of their status by email. This letter will also outline steps students can take to maintain or restore their eligibility.

**Can SAP affect me if I am a Transfer Student?**

Yes. SAP can affect you as a Transfer Student. Credit hours accepted by CSU will be included in the maximum time frame towards completion of a degree.

**What if I have not attended Central State for over one semester, will my past credits be considered towards SAP?**

Yes, all prior credits are considered when determining SAP for students who return to CSU after one or more semesters of absence.

**If I change my major, are those credits reviewed for SAP?**

General education requirement credits will be considered in determining your SAP. However, for students who change majors, credits attempted and grades earned from a previous major do not count toward the new major and will not be included in the SAP determination.

**What grades are used when calculating and determining SAP?**

**ALL** of them.

**How does SAP apply to graduate students?**

Graduate students must also meet standards of Satisfactory Academic Progress with the exception of a required 3.0 GPA.

**SAP and Reinstatement of Aid**

The Office of Financial Aid may approve a student's appeal based upon the academic plan developed by the academic advisor and the student. In this case, the student is not required to meet the SAP standards set forth in the policy, but instead must follow the academic plan.

Once a student fails to follow the academic plan provided by the academic advisor, the student must do the following in order to be eligible for financial aid: Complete a full-time equivalent term (12+ credits) with a 2.0 GPA without the use of federal funds. A student may complete multiple part-time terms with a 2.0 GPA to achieve the full-time equivalence in credit hours.

[1] *The number of credits that must be earned is based upon the number of hours attempted and the appropriate enrollment status. Even periods of enrollment when you do not receive federal assistance will be counted in the evaluation of satisfactory academic progress.*

# CASH MANAGEMENT

**Per Semester Effective: Fall 2019**

| | | New/Transfer | | Continuing | | |
|---|---|---|---|---|---|---|
| | | Ohio Resident/ Reciprocity | Out of State | Ohio Resident/ Reciprocity | Out of State | Out of State Prior to Fall 16 |
| **Full Time Students** | | | | | | |
| (12 to 18 credit hours) | | 2,153 | $2,153 | $2,026 | 2,026 | 2,026 |
| Non-resident surcharge | | | $1,000 | | 1,000 | 50 |
| General Fees | $326 | | | | | |
| Athletic Fees | 442 | | | | | |
| Student Union Fees | 204 | | | | | |
| University Center Fees | 100 | | | | | |
| IT Fee | 88 | | | | | |
| Career Services Fere | 50 | 1,210 | 1,210 | 1,210 | 1.210 | 1,210 |
| **Total Tuition & Fees – Semester** | | **$3,363** | **$4,363** | **$3,236** | **4,236** | **3,286** |
| Room Rent (standard double occupancy) | | 2,800 | 2,800 | 2,800 | 2,800 | 2,800 |
| Board (unlimited meals) | | 2,440 | 2,400 | 2,400 | 2,400 | 2,400 |
| **Total for Campus Resident** | | **$8,603** | **$9,603** | **$8,476** | **$9,476** | **$8,526** |
| Overload (over 18 credit hours) charge per hour | | $200 | $300 | $200 | $300 | $300 |
| **Part Time Students** | | | | | | |
| (1 – 11 credit hours) | | | | | | |
| Instruction | | $192 | $297 | $192 | $297 | $297 |
| Non-Resident Surcharge | | | | | | |
| Combined Fees | | $103 | 103 | 103 | 103 | 103 |
| Tuition and Fees charge per credit hour | | **$295** | **$400** | **$295** | **$400** | **$400** |
| Optional Health Services (flat rate per semester) | | $435 | $435 | $435 | $435 | $435 |
| **Graduate** per Credit Hour | | **N/A** | **N/A** | **N/A** | **N/A** | **N/A** |
| Health Insurance Premium (if not opted out) | | $815 | $815 | $815 | $815 | $815 |

| ***Residential Hall Fees*** | ***Amount*** |
|---|---|
| *Double* | |
| Anderson, Green, Hunter, Williamson Halls | $2,800 |
| Foundation, Wesley Village | 3,000 |
| New Hall, Payne Village | 3,500 |
| *Single* | |
| Anderson, Green, Hunter, Williamson Halls | 3,000 |
| Foundation, Wesley Village | 3,200 |
| New Hall, Payne Village | 3,300 |

| **Meal Options** | |
|---|---|
| Cart Blanche (Unlimited + 50 bucks) | 2,440 |
| Cart Blanche (Unlimited +175 bucks) | 2,540 |
| Cart Blanche (Unlimited +250 bucks) | 2,580 |
| New Flex Plan I 75 meals + 500 bucks | 1,295 |
| New Flex Pan II 75 meals + 750 bucks | 1,545 |
| Meal Options - available to commuters | |
| Commuter Bronze 25 meals | 213 |
| Commuter Silver 50 meals | 425 |
| Commuter Maroon 75 meals | 638 |
| Commuter Gold 150 meals | 1,275 |

***Rates are subject to change without notice***

Contact us at CashManagement@centralstate.edu
Visit our web site at www.centralstate.edu
Tel. (937) 376-6343

**REGISTRATION IS NOT COMPLETE UNTIL CERTIFIED BY THE OFFICE OF THE BURSAR**

All incomplete registrations must be cancelled by the student before the end of the 100% refund period to avoid charges for the semester. To be financially certified each semester, the following must apply:

1. All unpaid balances from a previous semester must be paid in full.
2. Students are required to have 100% of their current semester's bill (all charges) covered by any combination of the following.
   - Cash, Money Order and Cashier's Check
   - Visa, MasterCard or Discover
   - Accepted financial aid in approved loans and grants, excluding Federal Work Study
   - Documented Third Party Payer
   - Be in good standing with a University approved payment plan.

   Students who have not covered their full financial obligations may be subject to administrative withdrawal.

**PAYMENT PLAN**

As an option to assist families with covering direct cost incurred to attend Central State University we offer a convenient monthly tuition payment plan. This plan allows two methods for making monthly payments. Payments can be made via automatic ACH withdraws from a checking or saving account or automatic payments from a Visa, MasterCard or Discover credit card. There is not a credit check and no interest or finance charges apply on the unpaid balance. There is a $35.00 per semester non-refundable enrollment fee to participate in the payment plan. Go to www.centralstate.afford.com to sign up.

**BOOK ADVANCES FOR FINANCIAL AID RECIPIENTS**

At the beginning of the term the University will defer $750.00 of the eligible refund of financial aid in excess of fees to issue a Book Advance for all eligible students who receive financial aid, excluding PLUS loans, Federal Work Study or part-time work. The Book Advance will be equal to the amount of financial aid accepted less the semester current balance, not to exceed $750.

**RESIDENCE HALLS**

In accordance with the Housing Contract, students living in the residence halls are committed to on-campus housing for the duration of the contract (one academic year). These fees are non-refundable. Due to the shorten length of the Summer term, the charges for Room and Board are adjusted. All students residing in the residence hall are required to pay a room reservation fee and a key deposit before receiving their room key. These deposits are not refundable.

**REFUNDS**

Students whose accounts have excess funds after all Central State charges are posted can expect that the excess of refundable funds will be sent to them. Students have the choice of delivery for their excess funds. The choices are ACH to a personal checking account, a Central State University branded pre-paid debit card or check. Please note that checks are mailed to the residence of record and cannot be picked up on campus. Students will be sent an email to make a selection within the first 30 days of the semester their first term of enrollment and students can change their choice at any time.

**PAYMENT OF FEES**

All fees due to the university can be paid at the office of cash management, either in person, by mail or online at www.centralstate.afford.com. These fees can include but are not limited to:

1. Tuition and Fees
2. Parking Permits and Citations
3. Graduation applications
4. Student Event
5. Athletic Sporting Events
6. Housing Fees and Fines
7. Transcripts

## UNIVERSITY WITHDRAWAL POLICY

### CASH MANAGEMENT WITHDRAWAL REFUND POLICY

The Withdrawal Refund Policy below applies to **total** withdrawals only. Students who drop classes after the scheduled refund period will be charged in full for registered courses. Refunds for withdrawals will only be issued when all outstanding charges have been paid in full. The student's account will be reviewed for accuracy of charges before any refunds are issued.

After the 39th day of a full semester (Fall or Spring), no fees will be refunded (see academic calendar for withdrawal dates). If a student withdraws before the registration is complete he/she is indebted to the University for the amount determined by the stated policies stated. Students withdrawn for disciplinary reasons during the semester forfeit any refund based on withdraws. The refund policy does not apply to students who drop classes only and are still enrolled in the University. Students who fail to officially withdraw forfeit the refund of any fees.

One hundred percent (100%) refund of fees for withdraws will be honored up and through the first day of the semester. Credit will be given to accounts of students whose **total** withdrawals are completed during the refund period.

### WITHDRAWAL REFUND PERIODS

**Fall through Spring**

2nd through 10th day of the semester 90%
11th through 22nd day of the semester 50%
23rd through 39th day of the semester 25%
40th through the end of the semester 0%

**Summer only**

(see academic calendar)

### FINANCIAL AID WITHDRAWAL POLICY

When you withdraw from classes, an adjustment to financial aid awards will be made in conformity with federal and state regulations. A portion, or perhaps all, of your financial aid may be returned to the fund(s) that originally paid the account. If all financial obligations to the University have been met, a refund will be processed.

### FINANCIAL AID RECIPIENTS WHO WITHDRAW

Students who completely withdraw from classes are subject to the Return of Title IV refund calculation as dictated by federal regulations. Please contact the Office of Financial Aid and Scholarships if you have questions on this process.

### DETERMINATION OF FEDERAL AID EARNED

Earned aid is based on the number of calendar days the student attended classes divided by the total number of calendar days in the term. The result is a percentage of federal aid funds that the student has earned. For example, a student who attends 20% of the term has earned 20% of the total aid value that was disbursed to their account.

### RETURN OF UNEARNED FEDERAL AID

The total federal aid disbursed at the point of withdrawal less the earned amount constitutes the unearned aid that must be returned to the federal government. The university will allocate the return of unearned aid in the following order:

1. Federal Unsubsidized Direct Loan
2. Federal Subsidized Direct Loan
3. Federal Parent or Graduate PLUS Loan
4. Federal Pell Grant
5. ACG
6. National SMART Grant
7. Federal SEOG
8. TEACH Grant

### REGISTRATION WITHDRAWAL POLICY

Students withdrawing from the University must complete a withdrawal form. The form may be obtained from the Office of the Registrar. Students may withdraw at any time during the semester through the last day of the 12th week. Students can NOT totally withdraw from the University via MyCSU online.

Students who stop attending classes without officially withdrawing will receive failing grades. Students who stop attending classes are also subject to administrative total withdrawal with or without record from the University.

# OFFICE OF THE REGISTRAR

**FELICIA HARRIS, EdD**
**University Registrar**
**Lionel H. Newsom Administration Building**
**Room 105**
**(937) 376-6231**

**Mrs. Isabelle Cayo Sanders**
**Associate Registrar**
**(937) 376-6613**

**Mrs. Kelly Stricker**
**Degree Audit Coordinator**
**(937) 376-6133**

**Ms. Monica Cospy**
**Registration & Records Administrator**
**(937) 376-6230**

The Office of the Registrar conducts the process of registering students in courses, maintaining official academic records and certifying students for graduation. This office is also responsible for calculating and recording the academic progress of students.

**REGISTRATION PROCEDURE**

Central State University is on the semester system. The academic year is divided into two semesters (fall and spring) and multiple summer sessions. Registration is open to all continuing students according to the Academic Calendar available on CSU's web site. The dates are published in the Academic Calendar on CSU's web site.

Fees for students who register early are due prior to the start of the semester and are published on CSU's web site. During the open registration period, students must pay fees or prove ability to pay.

Late registration allows continuing students to register until the beginning of the semester with an additional cost per the academic calendar.

All incomplete registrations must be cancelled by the student. Students must officially be registered for classes during the semester in order to be eligible to receive grades at the end of the semester. Students will not be retroactively registered once the semester has ended. If a student has reason to request an exception to this policy, the request must be submitted in writing to the Academic Standards Committee.

**COURSE CREDIT-UNIT OF INSTRUCTION**

Course credit is computed in terms of semester hours. The semester hour is the unit of instruction used in computing the amount of work required for graduation.

**STUDY LOAD**

The recommended study load is 15 to 18 semester hours. Written approval from the Department Chairperson and the College Dean is required if a student wishes to register for 19-21 semester hours during Fall and Spring Semesters. A student who enrolls in 22 or more semester hours will need to see approval from the Department Chairperson, College Dean, and Provost/VP of Academic Affairs. The maximum study load for the Summer terms (8) hours.

This is information includes credit taken for classes on campus through SOCHE Consortium cross-registration, or as a transient student at another institution.

**A FULL-TIME** student is one who enrolls for 12 or more credit hours per semester. Students registering for more than 18 credit hours per semester must obtain permission from their Department Chairperson and the College Dean.

**A PART-TIME** student is one who enrolls for 11 or fewer credit hours per semester.

**STATUTE OF LIMITATIONS ON GRADE CHANGES**

Grade changes, with the appropriate approvals, will be processed by the Office of the Registrar, up to two (2) years after the completion of a course. This policy does not apply to "I" grades.

**GRADING AND GRADE POINTS**

Students will not be retroactively registered once the semester has ended. If a student has reason to request an exception to this policy, the request must be submitted in writing to the Academic Standards Committee. At the close of each semester a letter grade indicating the quality of the student's work is reported by the instructor to the Office of the Registrar. Most departmental major courses require the student to earn a "C" grade or better in order for the course to satisfy graduation requirements. If a student receives a "D" or "F" grade in such a course, the student will be required to repeat the course. No course substitutions or waivers will be permitted to replace the course in which an unsatisfactory grade was received. The repeat attempt must take place at CSU. The student may not take a comparable course at another institution and transfer it back to CSU in an attempt to satisfy the CSU requirement.

Points are assigned to each letter grade. The students are graded in accordance with the grading system. Grading standards are a faculty prerogative.

**GRADING SYSTEM**
**Grade Point Letter Interpretation per Semester**

| Grade | | Hour |
|---|---|---|
| A- | Very High | 4 |
| B - | High | 3 |
| C - | Satisfactory | 2 |
| D - | Low (poor work) | 1 |
| F - | Failure | 0 |
| Z - | Non-Attendance | 0 |
| FZ- | Quit Attending/Did not officially Withdraw | |
| I - | Incomplete | |
| P- | Pass | |
| CR- | Credit | |
| NC- | No Credit | |
| AU- | Audit | |
| IP- | In Progress | |
| W- | Withdrawal | |

**CALCULATING THE GRADE POINT AVERAGE**

The Grade Point Average can be obtained by multiplying the credit hours for each course by the points generated by each grade earned for the course. Next add the credit hours column being careful to exclude courses with grades that by policy do not calculate in the GPA. Then, add the points earned column. Finally, divide the points by the credit hours to obtain the GPA.

**EXAMPLE:**

| | Letter Grade | Credit Hours | Grade Pts. | Quality Pts. |
|---|---|---|---|---|
| PSY 2000 | B | 5 x | 3 = | 15 |
| BUS 1000 | D | 3 x | 1 = | 3 |
| EDU 1330 | A | 2 x | 4 = | 8 |
| GEL 1010 | C | 4 x | 2 = | 8 |
| **Total** | | **14** | | **34** |

**Grade Point Average (34 divided by 14) = 2.42**

**STUDENT CLASSIFICATION**

- **Freshman:** A student who has earned 29 credit hours or less.
- **Sophomore:** A student who has earned between 30 and 59 credit hours.
- **Junior:** A student who has earned between 60 and 89 credit hours.
- **Senior:** A student who has earned 90 or more credit hours.

**Attendance Policy**

Attendance is a critical element in being a successful student. It is expected that students attend all classes. The instructor of record is responsible for monitoring attendance and will include an attendance policy in the course syllabus.

Failure to attend class can affect a student's overall grade in a course and **may affect his or her financial aid status**.

Faculty members as representatives of their individual programs may maintain specific attendance requirements for their respective courses. Each faculty member within their program will determine the percent of the final course grade contributed by the attendance grade. Students are responsible for knowing and adhering to these policies.

The university recognizes that school-sponsored activities are part of the education process and that such an activity may conflict with a scheduled class. These situations require discussion among the teacher, student, and supervisor of the activity, so that all parties understand the effects of not attending the class. Students who are absent because of university business **MUST** personally notify faculty of impending absences and discuss class work. Athletes who are absent from two consecutive classes must be reported immediately to the Athletic Compliance office (937-376-6295) for student intervention by the athletic department.

**Excused Absences**

Excused absences are under the final discretion of the instructor of record. Excused absences may include:

- documented military service,
- documented jury duty,
- documented university service, university sponsored field trip, or off-campus representation of the University.
- documented illness
- documented serious illness or death in the student's immediate family
- documented court appearance.

Students without a 2.0 cumulative GPA or better are ineligible for excused absences due to University sponsored programs or travel. Students who miss class for any reason are responsible for all missed exams, homework, and assignments.

**Effective Fall 2015**

## ACADEMIC STANDING, PROBATION AND SUSPENSION

**Academic Standing Policy:**
Central State University students are expected to actively pursue their coursework and maintain persistence in fulfilling degree requirements within a reasonable time frame. Students are expected to meet the standards for good academic standing each semester. A student's academic standing is indicated on his/her transcript.

**Good Academic Standing**
A minimum cumulative grade point average of 2.0 is required for good academic standing and for the completion of an undergraduate degree at Central State University; however, some programs may require a higher grade point average. A student who does not maintain a cumulative grade point average of 2.0 may be placed on probation and/or suspended.

### Academic Probation

Academic Probation occurs when a student, regardless of classification, has not achieved a minimum cumulative grade point average of 2.0. If a student does not achieve the minimum cumulative grade point average of 2.0 at the end of a semester, he/she will be placed on academic probation during the next semester of attendance. A student can return to the University while he/she is on academic probation. While on academic probation, the student is expected to achieve a semester grade point average that is high enough to yield a cumulative grade point average of 2.0 or greater. While on probation, a student may not register for more than 15-16 credits per semester (excluding summer). When the student achieves a cumulative grade point average of 2.0 or greater, he/she is placed in good academic standing status.

### Academic Suspension

Academic suspension occurs whenever the semester grade point average of a student who is on academic probation falls below 2.0 during subsequent semesters, and the cumulative grade point average is below 2.0 he/she will be placed on academic suspension.

A student who has been suspended for the first time is eligible to apply for readmission after one semester (fall or spring) through the University's appeal for readmission process. A student who has been suspended for a second time is eligible to apply for readmission after absence from the university for one academic year (excluding summer term). A student who has been suspended for a third time is not eligible for readmission.

Readmission after an academic suspension is not automatic and can be denied upon the recommendation of the Academic Standards Committee. A student whose petition for readmission is approved will be readmitted and designated as "Continued on Probation." To avoid a second or third academic suspension, the student must achieve a minimum semester grade point average of 2.0.

## APPEAL FOR READMISSION AFTER BEING ACADEMICALLY SUSPENDED

A student who has been academically suspended and seeks readmission must submit a petition to the Academic Standards Committee. Appeals are available from the Office of the Registrar. Appeals for readmission must include a plan signed by both the student and an academic advisor. The chair of the student's major program and the Dean of the student's college must also sign appeals for readmission. Once readmitted, students must show evidence of following the agreed upon plan for academic success. Failure to do so will be taken into account in the review of any future appeals for readmission.

Appeals must be filed with your Academic Advisor **at least 60 days** prior to the beginning of the semester for which one is seeking readmission. The Committee must receive from the advisor, your Appeal at least 30 days prior to the beginning of the term in which the student wishes to re-enroll.

Hours and grades earned at another accredited institution during period of academic suspension from Central State will be considered during the decision on whether to grant readmission. If the student is readmitted, credit hours earned at another institution will be accepted and posted to the student's transcript in accordance with rules on the application of all transfer credit in effect at the time of readmission.

Students who are admitted after being "Academically Suspended" will be readmitted on "Academic Probation" and must achieve at least a 2.0 semester GPA or they will be "Academically Suspended" again.

Readmission after one or two "Academic Suspensions" is not automatic and may be denied upon the recommendation of the Academic Standards Committee.

While the Academic Standards Committee will consider petitions for readmission after three or more academic suspensions, such petitions will be approved only under the most exceptional circumstances. Students with multiple academic suspensions are advised to pursue their education at another institution or to consider a career path that does not require an undergraduate degree.

**NOTE:** Student with below 30 credit hours or less are required to register for courses with the Office of Academic Coaching and Advising complete an academic success plan.

**NOTE:** The appeal process for Financial Aid reinstatement is different. Please contact to the office of Financial Aid for specific instructions.

**Grade Appeal Policy**

The student has a right to the grade he or she has earned, the right to know the grading system of the instructor, and the right to know grades as they are given during the semester. The grading system should be included in the course syllabus.

The decision to change a student's grade shall only be made by the instructor of record unless the instructor is incapacitated, cannot be contacted, or if there is evidence of prejudicial or capricious grading.

If the student has evidence of prejudicial or capricious grading, the student should first consult the instructor. If this consultation does not resolve the conflict, the student should then consult the department chairperson. If the student, after consultation with the chairperson, wishes to pursue the appeal, the chairperson will inform the dean that a hearing has been requested.

The student has the right to submit a Grade Appeal Form to the department chairperson up to 30 days after the beginning of the subsequent semester, excluding summers. Until the grade is finally determined, the student's academic standing and all related rights and privileges are based on the grade as originally assigned. The student shall collect and present any evidence (tests, papers, laboratory reports, case studies, etc.) to the Appeals Committee. The burden of proof and responsibility for evidence collection remains with the student.

1. The dean will appoint a committee composed of three tenured faculty members from within the discipline, who, if possible, should be familiar with the course. If there are not three tenured faculty members within the discipline, the dean will appoint other tenured faculty members from the department and/or college as needed.

2. The student and instructor are to be apprised of the composition of the committee. The dean should honor any reasonable objection that either person might have to the appointment of committee members.

3. The burden of proof will be on the student. No additional work may be submitted for consideration; only the original work used in calculating the grade will be used in deciding if the appeal should be heard.

4. The Appeals Committee will review evidence to decide if a hearing is warranted due to prejudicial or capricious grading. The committee will notify the student, faculty member, and department chair of their decision within 30 days after receiving the grade change appeal.

5. Both the student and the instructor have the right to present their position in person to the committee.

6. The decision of the committee is final, and the grade it decides upon becomes the official grade for the course. Unless the instructor is incapacitated or cannot be contacted, no change of grade will be made without the instructor of record being informed in writing.

**TRANSFER APPLICATION**

An applicant who was enrolled in another college or university for at least one course is classified as a transfer applicant. Official transcripts (sealed envelope with the raised seal on the document) from all other institutions attended must be submitted to the Office of Admissions as part of the Central State University Application. Failure to list attendance at a college or university on the admissions application may be grounds for revocation of admission or dismissal from the university.

The Office of the Registrar will evaluate overall transfer credit for acceptance by the University. The Department Chair, of the department you are seeking entrance into, will evaluate credits for their applicability to program and degree requirements. The evaluation of transfer credits and how they apply to degree requirements will take place within the first 30 days of your matriculation at Central State University. Students can view their transfer credits on their unofficial transcript provided through their MyCSU.

**ADVANCE STANDING**

In order for advance standing to be granted, institutions you have attended must be accredited by one of six national accrediting agencies:

- Middle States Association of Colleges and Schools
- North Central Association of Colleges and Schools
- New England Association of Schools and Colleges
- Southern Association of Colleges and Schools
- Western Association of Schools and Colleges

You can check the accreditation of your institution online at www.chea.org. The acceptance of transfer

credits from any other institutions must be approved by the Office of the Registrar.

Central State University operates on a semester academic calendar. One semester credit equals 1.5 quarter credits. For example, if you transfer 15 quarter credits, that will be the equivalent of 10 semester credits.

Central State University will accept Advanced Placement Credit Program credits (AP) and College-Level Examination Program credits (CLEP) under the auspices of the College Board. To receive AP credit a high school student must have completed an official AP (advanced placement) course and taken the test in that subject. Credit is granted for test scores of 3, 4, or 5. CLEP examinations cover material taught in the first two years of college. ***Students earning satisfactory scores in the CLEP examination will be granted the same amount of credit granted to students who successfully complete the course***. Credit is also accepted from the Defense Activity for Nontraditional Education Support (DANTES). Central State University awards transfer credit for Military Experience based upon the American Council on Education's *Guide to the Evaluation of Educational Experiences in the Armed Services*. Applicants interested in receiving consideration for any of these alternative forms of credit must have the official score report sent directly to the Office of the Registrar, where official granting of credit begins. CSU will award credit for International Baccalaureate (IB) Program "High Level" exams passed with a score of five (5) or higher.

You may transfer credits from another institution; however, you are still required to earn a minimum of 24 semester hours at CSU. Your Department Chair may require you to take specific courses at Central State University to earn your degree. This information should be shared with you at the time you receive your official check sheet.

**Central State University**
**College-Level Examination Program (CLEP) Aligned Courses/Credit**
**April 23, 2019**

| CLEP Exam Area | CLEP Score | Course ID | Course Title | Semester Credit Hours |
|---|---|---|---|---|
| American Government | 63 and Above | PSC 1100 | American National Government | 3 |
| | 56-62 | OTM Social Sciences | OTM Social Sciences Credit | 3 |
| Biology | 50 and Above | OTM Natural Sciences without Labs | OTM Natural Sciences Credit without Labs | 3 |
| French Language | 63 and Above | FLA 2241, Foreign Language Elective | Advanced French, Foreign Language Elective | 4+ |
| | 62 | FLA 1142 | Basic French II | 4+ |
| | 56 | FLA 1141 | Basic French I | 4+ |
| History of the United States I | 61 and Above | HIS 2201 | History of the U.S. To 1877 | 3 |
| History of the United States II | 57 and Above | HIS 2202 | History of the U.S. Since 1877 | 3 |
| Introductory Psychology | 59 and Above | PSY 1200 | Introduction to Psychology | 3 |
| Introductory Sociology | 56 and Above | SOC 1105 | Introduction to Sociology | 3 |
| Principles of Macroeconomics | 56 and Above | ECO 2220 | Principles of Macroeconomics | 3 |
| Principles of Microeconomics | 57 and Above | ECO 2210 | Principles of Microeconomics | 3 |
| Spanish Language | 63 and Above | FLA 2231, Foreign Language Elective | Advanced Spanish, Foreign Language Elective | 4+ |
| | 62 | FLA 1132 | Basic Spanish II | 4+ |
| | 56 | FLA 1131 | Basic Spanish I | 4+ |
| Western Civilization I | 55 and Above | OTM Arts and Humanities | OTM Arts and Humanities Credit | 3 |
| Western Civilization II | 54 and Above | OTM Arts and Humanities | OTM Arts and Humanities Credit | 3 |
| College Mathematics | 57 and Above | MTH 1550 | Modern Applications of Mathematics | 3 |
| College Algebra | 63 and Above | MTH 1750 | College Algebra | 3 |
| Introductory Business Law | 57 | BUS 2200 | Legal Environment of Business | 3 |
| English Literature | 63 | | | |
| College Mathematics | 63 | MTH 1550 | Modern Applications of Mathematics | 3 |
| Chemistry | 66 | | | |

**TRANSFER CREDIT POLICY**

Central State University accepts transfer credit from colleges and universities accredited by regional accrediting associations. The five regional accrediting associations are: Middle States, New England, North Central, Southern, and Western Association of Colleges and Schools. Courses that are being considered as transferable credit, must be college level courses and non-developmental. The Office of the Registrar will determine the credits that are accepted into the institution. Under state law, the university is required to accept grades "D" or better as transfer credit from state assisted colleges and universities in Ohio. For institutions that are out-of-state, the final grade must be a "C" or better. Grades of "S", "pass" and "credit" are considered for transfer credit. The Department Chair of the intended major will determine whether credits accepted by the institution will be used to satisfy program requirements for graduation.

Students who have already received a baccalaureate degree from an accredited institution and wish to pursue a second baccalaureate degree will automatically receive 90 semester credit hours. They will be ranked as seniors and will need to complete a minimum of 24 semester credit hours at Central State University to earn a second baccalaureate degree. An advisor will determine degree and whether the student will need to take more than 30 credits to complete the second degree

**INCOMPLETE**

A grade of incomplete "I" is a temporary grade assigned to students who lack final assignments or projects, or who, for some other extenuating circumstance, were unable to complete the requirements of the course within the semester. This grade is assigned by the instructor with the consent of the student, and the mutual understanding of the conditions under which this grade may be changed. The incomplete grade requires the signature of the instructor and the student with a brief description of the requirements necessary to receive a grade.

**Both the student and the instructor understand that if the additional coursework is not satisfactorily completed and submitted to the instructor within six (6) weeks after the beginning of the next semester of enrollment (up to one year), the grade will change to an "F". The instructor has (2) days after the stated deadline to process the paperwork and to submit the Change of Grade Report to the Office of the Registrar. Once an "I" grade has been changed to an "F" grade, no further change is permitted.**

Individual exceptions to this policy, due to extenuating circumstances, will be considered by the Academic Standards Committee upon receipt of a formal appeal presented to the Committee by the student's Academic Advisor or Department Chair"

**REPEATING A COURSE**

Students may repeat most courses in which a low or failing grade (D, NC, or F) was earned. All course repeat attempts will be recorded on the student's academic record. The first grade earned will be excluded from the calculation of the cumulative grade point average by the last repeat attempt. Students are advised to check with the Office of Financial Aid to determine the effect of repeated courses on their financial aid awards. Courses completed at CSU cannot be repeated at another institution.

**AUDITING COURSES**

Students are permitted to audit courses but will receive neither grades nor credit for those courses. The student who audits is expected to attend class but is not required to submit assignments or take examinations, unless contractually agreed. The fees for auditing are the same as those for enrolling for credit. Changing from audit to credit or from credit to audit is not permitted once the registration is complete.

**SOCHE - STUDENT CROSS-REGISTRATION PROGRAM**

Cross-Registration is a program of the Southwestern Ohio Council for Higher Education (SOCHE) to allow students who are degree-seeking and/or participating in certification programs access to academic opportunities not available at their own institutions. Students attending colleges and universities within SOCHE may register for courses that are applicable to their degree program offered by other SOCHE institutions.

Generally, all classes, including those offered through distance education, are open, subject to space availability and completion of prerequisites and with permission of the host institution. Courses categorized as workshops are not available for cross-registration.

In order to cross-register for a course at another SOCHE institution, the desired course(s) must not be offered at the student's home institution during the term in which the student desires to enroll. Students must adhere to the cross-registration guidelines established at each SOCHE-member institution. SOCHE brochures and additional information are available in the Office of the Registrar.

**POST BACCALAUREATE ROUTE**

Central State University offers a post-baccalaureate route and is designed for individuals who have

completed the baccalaureate degree from an approved accredited institution with a minimum cumulative grade point average of 2.00 or 2.75 for prospective who wish to obtain an initial teaching license. Individuals interested in seeking admission to Post Baccalaureate status should consult the University Office of Admissions or the appropriate College of Education Department.

**SENIOR CITIZEN ENROLLMENT**

Senior citizens who are Ohio residents may enroll in classes at Central State University free of charge for "audit" status only. Such enrollment is made on a space available basis during the Late Registration period only. Senior citizens enrolling in classes are responsible for meeting limited course prerequisites and for the payment of any special course fees which may apply. Proper identification is required (Golden Buckeye card or verification of age 60).

**DROP/ADD COURSES**

Students may drop or add courses during the first nine days of the semester. Students are not permitted to add courses after the first nine days of the semester. Exceptions require the written permission of the instructor. Students may drop courses during the first nine days of the semester without record. All drops after the ninth day of class will result in a grade of "W."

**TOTAL WITHDRAWAL FROM THE UNIVERSITY**

Students withdrawing from the University must complete a withdrawal form. The form may be obtained from the Office of the Registrar. Students may withdraw at any time during the semester through the last day of the 12th week. Students can NOT totally withdraw from the University via MyCSU online.

Students who stop attending classes without officially withdrawing will receive failing grades. Students who stop attending classes are also subject to administrative total withdrawal with or without record from the University.

**DECLARING A MAJOR**

All new undergraduate students are assigned to an academic advisor within the University College for advising. It is expected that a major be declared after the second semester of enrollment. A Declaration of Major form must be completed and filed in the Registrar's Office no later than the sophomore year. Students must fulfill Academic Department requirements prior to declaring a major.

**MAJORS AND MINORS**

A student must declare a major in the department of choice by the sophomore year. The major may be changed at any time during the student's academic career, however, the student should finalize a major no later than the beginning of the junior year, since certain General Education courses are required in specific disciplines.

Students seeking an Ohio Teaching License should confer with the Dean of the College of Education.

**DOUBLE MAJORS**

A student who plans to pursue more than one major notifies the Office of the Registrar of such an intention and completes major requirements for both programs, the General Education requirements being common to both. The student should note, however, that the special requirements for the Bachelor of Arts and Bachelor of Science degrees differ. The student combining two such majors must satisfy both sets of special requirements. (See GRADUATION REQUIREMENTS — SPECIAL REQUIREMENTS) The transcript will reflect both majors.

Such a student has two academic advisors to assist in coordinating the programs, but it is the responsibility of the student to notify the Office of the Registrar at the time the decision is made to pursue two majors.

**GRADUATION**

Prospective graduates are required to file an application for graduation with the Office of the Registrar and pay the application fee during the application period as outlined in the Academic Calendar. The application fee is nonrefundable and non-transferable. Students must fulfill all academic (including Final Exams) and financial requirements in order to participate in Commencement exercises. Prospective graduates are also required to earn their last 24 semester hours at CSU.

The academic advisor, the department chairperson, and the dean will verify that degree requirements have been satisfactorily completed for graduation. Course substitutions or waivers must be submitted on a Substitution/Waiver Form and must be approved by the academic advisor, department chairperson and the dean. The Registrar will certify that all graduation requirements have been satisfied after receipt and review of the student's final grades. Any student wanting to take any of their last 24 credit hours at another institution, must complete an academic appeal for consideration.

SOCHE students must adhere to the cross-registration guidelines established at each SOCHE-member

institution, which may hinder participation in commencement.

**APPLICATIONS FOR GRADUATION**

Applications for Graduation are accepted at the beginning of the academic year preceding the student's anticipated graduation date. An application fee is required (this fee can be charged to your account). The application fee is non-refundable and non-transferable. All commencement regalia are available for purchase at Senior Salute or Barnes & Noble Book Store.

Applications are valid only for the academic year in which they are submitted. The following steps and minimum requirements must be satisfied in order for a student to be considered as an applicant for graduation:

1. Meet with your advisor to obtain a completed check-sheet inclusive of all courses taken.
2. The check-sheet can be emailed from the advisor to the graduation coordinator or the advisor can sign the check-sheet and the student can hand deliver it to the office of the Registrar.
3. A degree audit will be conducted on a first come first serve basis, but it will be completed within 8-10 business days.
4. A degree audit will be sent to the academic advisor for verification. This is where a discussion regarding courses that are or should be on the check-sheet.
5. Upon resolution of the degree audit, a final copy and next steps will be sent to both the student and academic advisor.
6. The student will then come to the Office of the Registrar to receive their graduation application as instructed.
7. The student and advisor will ensure that the graduation application is completed in its entirety prior to submitting to the graduation coordinator. This is inclusive of the courses on the degree audit report, necessary signatures and any substitution forms that will be submitted
8. The completed graduation application should be submitted to the Office of the Registrar with the applicable graduation fee.
9. A minimum cumulative grade point average is required for graduation. The actual requirement varies by degree earned and by major program of study and will always be a 2.00 GPA or better. Students must check with their college and major department to determine their GPA requirements.
10. All outstanding financial obligations owed to the University must be cleared by the date published on the Graduation Application. Graduation Applications for candidates who do not complete their requirements as planned, are retained by the Registrar for one (1) academic year. Students in this group who wish to re-apply for graduation for a subsequent semester may do so by submitting a letter of intent accompanied by the appropriate application fee. Students who have not submitted an Application for Graduation within the last year must complete a new Application, and pay the appropriate fee.

**CATALOG FOR GRADUATION**

Students have a total of eight calendar years in which to complete the degree requirements for graduation. Students who take longer than eight years from the date of initial enrollment to graduate will be subject to degree requirements of the current catalog.

**RELEASE OF RECORDS/TRANSCRIPTS**

The Family Educational Rights and Privacy Act of 1974, as amended, govern the maintenance and release of records/transcripts. A copy of these regulations is available in the Office of the Registrar. The University will not release a copy of the student's grades without the student's permission, except where required by law. If a prior balance is owed to the University, the student's transcript (official or unofficial) will not be released. The student must pay the prior balance before a transcript will be issued (in accordance with CSU Finance Policy).

**RESIDENCY**

An Out-of-State student who feels that he/she qualifies as an In-State resident must complete a request to change residency status form and submit it to the Office of the Registrar. Supporting documentation and verification is required.

In-state residency approval is neither retroactive nor automatic. All requests for residency changes, with supporting documentation, must be submitted to the Office of the Registrar no later than one month prior to the beginning of the semester for which the residency change is requested.

Out-of-State students who graduated from an Ohio high school may be eligible for Forever Buckeye Residency status. Contact the Office of the Registrar for more information.

**RECOGNITION OF ACADEMIC ACHIEVEMENT DEAN'S LIST**

The Dean's List is compiled at the close of each semester and includes the names of all students who have a semester grade point average of at least 3.2 with a minimum load of 12 G.P.A hours for the academic period.

**HONORS DAY CONVOCATION**

An Honors Day Convocation is held each Spring Semester to honor full-time students* who have attained high scholastic standing, as follows:

- Class Honors to students with cumulative grade point averages of 3.20 to 3.49.
- College Honors to students with cumulative grade point averages of 3.50 or above.
- Gold Cord Honors to graduating seniors with cumulative grade point averages of 3.50 or above who have no "D", "F", "FZ" or "Z" grades or repeated courses.

Transfer students are eligible for Honors if they have earned at least 24 semester hours at CSU and they meet the same criteria required of CSU students. Freshman students who took classes during their enrollment in High School are NOT considered transfer students.

**NOTE:** "W" grades will not be considered in determining full-time status for Honors recognition.

- Freshman Honors are awarded to students with 12 to 30 quality hours earned.
- Sophomore Honors are awarded to students with 31 to 60 quality hours earned.
- Junior Honors are awarded to students with 61 to 90 quality hours earned.
- Senior Honors are awarded to students with 91 or more quality hours earned.

Class and College Scholars are recognized at the Annual Honors Day Convocation.

**GRADUATION HONORS**

Honors awarded to graduates at commencement are as follows:

- First Honors — Summa Cum Laude to students with cumulative grade-point averages of 3.80 or above.
- Second Honors — Magna Cum Laude to students with cumulative grade-point averages of 3.60 to 3.79.
- Third Honors — Cum Laude to students with cumulative grade-point averages of 3.20 to 3.59.

***** Graduating seniors who meet other specified requirements qualify for all honors regardless of fulltime status.

**VETERANS' AFFAIRS**

The Veterans' Affairs Office, located in the Office of the Registrar, provides assistance and registration information for veteran students. Persons with questions related to Veterans Administration benefits, registration and study at the University should contact the office. Students eligible for veterans' benefits can visit the University website for updates on benefits, Veterans Education Program (VEP), and other special services.

Veterans are afforded the same privileges and assume the same obligations as other students at Central State University. They should apply to the nearest Veterans Administration office for a certificate of eligibility. This certificate of eligibility for training must be presented at the time of registration to the certifying official.

Students receiving Veterans Benefits must abide by all regulations in the Federal Benefits for Veterans and Dependents 1-S-1 Fact Sheet. (See also under REGISTRATION.)

**VETERANS' REGULATIONS/CONDUCT POLICY**

All students receiving federal benefits for veterans and dependents are obligated to follow regulations of the Federal Benefits Program and those of the University. The Registrar is the certifying officer. The following University regulations are applied:

1. All veterans are required to submit a copy of their DD 214.
2. All veterans are required to submit a copy of their COE (Certificate of Eligibility).
3. All veterans must be certified each semester. It will be the veteran's responsibility to notify the certifying officer in the Office of the Registrar of any changes in the Semester Class Schedule.
4. Veterans Affairs will not pay for courses outside of a student's academic requirement.
5. All veterans are responsible for notifying the certifying officer of any repeated courses.
6. All veterans are required to alert the Office of the Registrar when adding a course, dropping a course, or withdrawing from the University.
7. Any veteran receiving incomplete grades ("I") during any semester must remove those incompletes by the last day of the sixth week of the following semester enrolled (See also under FINANCIAL AID AND THE ACADEMIC PROGRAM-GRADING).
8. All veterans are responsible for notifying the certifying officer of any transfer work.
9. Veterans' benefits will be discontinued for any veteran student who has been required to withdraw. Recipients of Title IV and/or Veterans' Educational Benefits will be required to complete successfully a minimum of 12 credit hours per semester. A Title IV student who must repeat a course that was originally paid with Title IV monies will be

required to pay for the repeat course with the student's own funds.

10. Students receiving VA benefits who repeat a course three or more times may incur a debt with Veterans Affairs.

**SELECTIVE SERVICE REGISTRATION**

All male Ohio resident students' ages 18 through 25 must register with the Selective Service to qualify for In-State fees. To register log on to: www.sss.gov. The Out-of-State Surcharge will be assessed to those students not registered with Selective Service at the time of registration.

# ACADEMIC AFFAIRS

**Pedro L. Martinez, Ph.D**
**Provost and Vice President of Academic Affairs**
**Lionel H. Newsom Administration Building**
**Room 204**
**(937) 376-6431**

## THE ACADEMIC PROGRAM
## GENERAL OBJECTIVES

The Central State University education strives to empower its students with

- **insight** formed by the liberal arts,
- **motivation** to solve problems through science and technology,
- **competence** to achieve economic self-sufficiency,
- **disposition** encouraging service and lifelong education,
- **values** promoting personal and community health,
- **understanding** of one's own and other cultures, and
- **responsiveness** to major problems confronting humankind.

## DEGREES

Central State University offers the following baccalaureate degrees: Bachelor of Arts, Bachelor of Music, Bachelor of Music Education, Bachelor of Science, Bachelor of Science in Education, and Bachelor of Science in Manufacturing Engineering.

**Undergraduate degree requirements:**

1. A minimum of **120-148** semester hours, depending on the major and year of matriculation, as follows:
    - 1.1 The General Education Requirements.
    - 1.2 Special Requirements for the baccalaureate degrees (See below)
    - 1.3 Requirements for a major or minor concentration of courses (in general, a minimum of 30 hours for a major, 20 hours for a minor. See under individual department or program)
    - 1.4 Additional electives as needed to complete the minimum 120-148 hours
2. A minimum cumulative grade-point average of 2.0 (varies by major)
3. Filling an application for graduation with the Office of the Registrar
4. At least 24 final semester hours in residence at Central State University

The student is expected to fulfill the graduation requirements in the catalog of matriculation or a subsequent one, but not from both. In the case of discontinued or replacement courses, the academic advisor will assist in making any adjustment.

Under rare circumstances, the University may choose to award a degree posthumously. To be considered for such an award, the student must have been in good academic standing with the University at the time of death and must have completed a minimum of 104 semester hours. Further, the student must have exhibited qualities of scholarship and community membership that warrant special consideration. When these conditions are met, a departmental recommendation will go to the Provost and Vice President for Academic Affairs, the President, and the Board of Trustees for final approval.

## SPECIAL REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE

1. A grade point average of at least 2.2 in the major concentration
2. Presentation of no more than 40 semester hours in any one discipline toward the minimum **120-148** hours
3. **Humanities Requirement**
    - 3.1 Completion of at least six (6) semester hours of humanities in addition to the GENERAL EDUCATION REQUIREMENT in humanities
    - 3.2 The additional humanities hours are to be selected from two of the following disciplines: art, drama, history, linguistics, literature, music, philosophy, religion, speech, and foreign languages (beyond the first year of the course).

## SPECIAL REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE

1. A grade-point average of at least 2.0 in the major concentration.
2. Except when required to meet accreditation or other professional standards, presentation of no more than 50 semester hours in any one discipline toward the 120-148 hours.
3. The sciences and the more technical subject-matter areas must receive concentration and emphasis.

## SPECIAL REQUIREMENTS FOR THE BACHELOR OF SCIENCE IN EDUCATION DEGREE

1. A cumulative grade-point average of at least 2.5.
2. A grade point average of at least 2.7 in the major teaching field.
3. A grade of "C" or above in each required professional education course.
4. Completion of at least 60 semester hours in courses numbered 2000 and above.

5. Except when required to meet licensure or other professional standards, presentation of no more than 47 semester hours in any one discipline toward the 120-148 hours.
6. Eligibility for Ohio Licensure requires personal fitness, specific prerequisites, and laboratory and field experiences.

**GENERAL EDUCATION CURRICULUM**

Central State University provides students with a strong liberal arts education that prepares them with 21st Century knowledge and skills both to be successful in their careers and to become life-long learners. As an 1890 land-grant institution, Central State's mission is to prepare students with diverse backgrounds for success in their lives and careers. The University's required general education curriculum, the Marauder Lifestyle and Marauder Foundation, reflects this commitment.

**The Marauder Lifestyle**

CSU's Marauder Lifestyle helps students adjust to college while preparing for life and careers. The Marauder Lifestyle prepares students to enact the University's three tenets of service, protocol, and civility through courses that address physical well-being, academic and social adjustment, use of information technology, personal responsibility and fiscal awareness, and psychological health. Through their Marauder Lifestyle courses, CSU students understand what it means to be a CSU Marauder and learn how their personal health and lifestyle choices affect them and society.

The Marauder Lifestyle is guided by CSU's Cornerstone for Wellness and Lifestyle Choices. This Cornerstone assures students:

- Apply effective strategies to promote and maintain physical and mental health, academic and social adjustment, and economic and information literacy.

**The Marauder Foundation**

The Marauder Foundation develops a breadth of skills, perspectives, and experiences across a wide range of disciplines to meet the educational needs of our diverse student population. Marauder Foundation classes complement students' professional programs by blending practical application of knowledge in a discipline with tools for life-long learning.

Therefore, through the Marauder Foundation, CSU students are empowered to apply their knowledge to real-world situations and adapt to change.

The Marauder Foundation is guided by CSU's Cornerstones of Academic Success. These Cornerstones assure students:

- Communicate effectively in both written and oral situations.
- Think critically and apply the habits of inquiry and analysis to various situations.
- Demonstrate an awareness of the roles cultural and social factors play in human achievement, especially for people of African and African-American heritage.
- Apply quantitative and scientific reasoning to understanding human experience and the natural world.

These Cornerstones reflect areas of knowledge and methods of inquiry recognized by our scholarly community as necessary to investigate the social, cultural, scientific, and technological complexities of our 21st Century society. These Cornerstones are central to all courses in the Marauder Foundation curriculum and are distributed among the following areas: English composition, mathematics, humanities and the arts, history, social and behavioral sciences, and natural and physical sciences. Each Cornerstone includes core courses required of all students. Students choose additional classes to complete their general education requirements from a list of approved Bridge courses in consultation with their academic advisor. The Marauder Foundation satisfies the Ohio Board of Regents' transfer module requirements and, along with the degree program, provides students the opportunity to tailor their university degree to their unique interests and academic needs.

## General Education Requirements

### The Marauder Lifestyle
(3 credits)

The Marauder Lifestyle curriculum focuses on CSU's Wellness and Lifestyle Choices Cornerstone. This curriculum is required of all CSU students and provides strategies that encourage lifelong habits to promote learning and maintain personal well-being.

| Requirement | Cornerstone |
|---|---|
| Undergraduate Success Seminar (USS 1000, 2 credits) | Wellness and Lifestyle Choices |
| Physical Activity (1 credit from List A) | Wellness and Lifestyle Choices |

### The Marauder Foundation

The Marauder Foundation curriculum is required of all CSU students and is defined by CSU's four Cornerstones of Academic Success: effective communication, critical thinking, understanding and appreciation of diversity in social and cultural values, and understanding and application of quantitative reasoning and the scientific process. These Cornerstones are distributed among the following areas: English composition, mathematics, humanities and the arts, history, social and behavioral sciences, and natural and physical sciences. For each Cornerstone, students progress from a Core course through Bridge courses. The Cornerstones continue to be developed across academic majors. Mastery of the Cornerstones is demonstrated in a designated senior-level capstone experience. Students must complete a minimum of 36 credits from the combined Core and Bridge requirements.

### Core Courses
(10-11 credits)

(At least one Core course for each Cornerstone must be completed before enrolling in Bridge courses in same Cornerstone unless exempted by major.)

| Core Course Requirement | Cornerstone |
|---|---|
| ENG 1100 or ENG 1101 (based on placement results, 4-5 credits, "C" or better required) | Effective Communication, Critical Thinking |
| MTH 1750, MTH 1550, or STEM math option (3 credits) | Quantitative & Scientific Reasoning, Critical Thinking |
| One course from<br>HIS 1110, HIS 1121, HIS 1122, PSY 1200, or SOC 1105 (3 credits)* | Awareness of Role of Social & Cultural Values, Critical Thinking |

**STEM Math Options:** Students majoring in STEM disciplines who achieve acceptable placement scores may satisfy the general education math requirement by taking one of the following courses: Math 2500, Math 2501, Math 2502, or Math 2503.

**Bridge Courses**

(minimum 26 credits)

(At least one Core course for each Cornerstone must be completed before Bridge courses in same Cornerstone unless exempted by major.)

| **Bridge Course Requirements** | **Cornerstone** |
|---|---|
| ENG 1102 (4 credits, "C" or better required) | Effective Communication, Critical Thinking |
| 3-6 credits Humanities (List B)*<br><br>3-6 credits Social Science (List C)* | Awareness of the Role of Social & Cultural Values, Critical Thinking |
| 6 credits from List D | Quantitative & Scientific Reasoning, Critical Thinking |
| Additional hours selected from List B, C, D or STEM math options in consultation with an academic advisor. Minimum combined Core/Bridge hours = 36. | Based on course selections. |

*Six total credits in humanities (List B), including at least 3 chosen from His 1110, 1121 or 1122 and six total credits in social science in two disciplines (List C) are required. The six required humanities hours and six required social science hours may be completed through a combination of Core and/or Bridge courses.

## Capstone Experience

Each major has a designated a capstone, seminar, or equivalent experience in which students integrate learning in the major and in the Marauder Foundation through a substantial final product of high quality, whether written, performance-based, or practice-oriented. The designated experience is completed in the major. *Requirements vary by major*.

## General Education Course Lists

Parentheses = Credit Hours; Brackets = Prerequisites; PI = Permission of Instructor

**LIST A. HEALTH: PHYSICAL ACTIVITY COURSES**

HHP 1101. Archery (1)
HHP 1103. Cycling (1)
HHP 1107. Racquetball (1)
HHP 1108. Beginning Swimming (1)
HPR 1110. Intermediate Swimming (1)
HHP 1111. Beginning Tennis (1)
HHP 1112. Advanced Tennis (1)
HHP 1113. Volleyball (1)
HHP 1114. Aerobic Dancing (1)
HHP 1115. Conditioning and Weight Training (1)
HHP 1117. Badminton (1)
HHP 1118. Walking for Fitness (1)
HHP 1119. Water Aerobics (1)
HHP 1120. Basketball (1)
HHP 1121. Fitness for Life (1)

**LIST B. HUMANITIES AND FINE ARTS**

ART 1110. Ancient & Early European Art History (3)
ART 1120. Later European Art History (3)
ART 1210. Introduction to Art (3)
ART 2130. Arts of Africa (3)
ART 2140. African American Art History (3)
DRM 1100. Introduction to Theatre (3)
DRM 2201. Development of Drama: Tragedy (3)
DRM 2202. Development of Drama: Comedy (3)
DRM 2204. African American Theatre (3)
ENG 2100. Great Books, Great Films (3) [ENG 1102]
ENG 2101. Literature and the Global Village (3) [ENG 1102]
ENG 2103. The Literary Tradition (3) [ENG 1102]
ENG 2200. Introduction to Literary Studies (3) [ENG 1102 is pre- or co-requisite]
FLA 2290. Foreign Literature in Translation (3)
HIS 1100. Ohio History (3)
HIS 2201. History of the U.S. to 1877 (3)
HIS 2202. History of the U.S. since 1877 (3)
HIS 2250. Survey History of Africa (3)
HIS 2280. History of Asia (3)
MUS 1140. Music Appreciation (3)
MUS 2233. History of Jazz (3)
PHI 2210. Survey of Global Philosophy
PHI 2230. Global Religion (3)
PHI 2240. Critical Thinking (3)
PHI 2250. Applied Ethics (3)

**LIST C. SOCIAL AND BEHAVIORAL SCIENCES**

COM 2214. Public Speaking (3)
ECO 2200. Introduction to Economics (3)
ECO 2210. Prin. of Microeconomics (3) [ECO 2010]
ECO 2220. Principles of Macroeconomics (3)
ECO 2270. Econ. Problems of the Black Community (3)
EDU 2300. Educational Psychology (3)
GEO 1101. World Geography: Western Hemisphere (3)
GEO 1103. World Geography: Eastern Hemisphere (3)
GEO 1110. Fundamentals of Geography (4)
GEO 2202. Economic Geography (3)
PSC 1100. American National Government (3)
PSC 2205. Introduction to Africa (3)
SOC 1111. Cultural Anthropology (3) [SOC 1105]
SOC 1125. Social Problems (3)
SWK 2200. Introduction to Social Welfare (3)

**LIST D. NATURAL AND PHYSICAL SCIENCES**

BIO 1100. Organismal Biology w/lab (4)
BIO 1300. Genetics and Diversity w/Lab (4)
BIO 1500. Environmental Science w/lab (4)
BIO 2200. Biology of Aging (2)
CHM 1150. Elements of Chemistry w/lab (4)
CHM 1610. Intro to Forensic Science w/lab (4)
GEL 1101. Physical Geology w/lab (4)
GEL 1105. Historical Geology w/lab (4)
GEL 1110. Oceanography (3)
GEL 1240. Natural Disasters (3)
PHY 1110. Physical Science I (3)
PHY 1120. Physical Science II (3)
PHY 1140. Experimental Science w/lab (2)
WRM 2200. Intro. to Water Resources Mgmt. (3)

**With SCIENCE OR ADVANCED MATH requirement(s):**

BIO 2000. Evolution (2) [BIO 1100, 1300, or 1801]
BIO 2050. Bio. of the Environment (3) [BIO 1500 or 1801]
BIO 2151. Human Anatomy & Physiology I (3) [BIO 1100 or PI]
CHM 1201. General Chemistry I w/lab (4) [MTH 1750]
GEL 2205. Environmental Geology (3) [GEL 1101 or PI]
PHY 2411. University Physics I w/lab (5) [MTH 2503]
PHY 2412. University Physics II w/lab (5) [PHY 2411]
PHY 2611. College Physics I w/lab (4) [MTH 2501]
PHY 2612. College Physics II w/lab (4) [PHY 2611]

**EXCEPTIONS TO THE GENERAL EDUCATION REQUIREMENTS**

Physical Activity Requirement

Students who are twenty-five or older at the time of entry into CSU or at time of re-entry after extended absence are exempt from the one-hour physical activity course requirement. Upon recommendation of a physician, a student with a physical disability may be excused from the one-hour physical activity course requirement. Students who are exempt from the physical activity requirement must make up the exempted hour to complete the minimum 120-14 hours toward graduation.

Other Exceptions

Other exceptions to the General Education requirements occur when the student's major field requires specific introductory courses. The three music degrees offered in the Department of Fine and Performing Arts have General Education Requirements that are different from the University requirements in order for these programs to meet the curriculum standards of the National Association of Schools of Music. General Education requirements for these three programs total 32-34 semester hours and are listed in the program's advisement materials.

**Ohio Transfer Module**

The Ohio Transfer Module is an option that facilitates transfer among Ohio's state-assisted institutions. It is comprised of 36 credit hours. The Marauder Foundation in combination with additional hours as shown on the Transfer Module Grid meets the Ohio Board of Regents' transfer module requirements and, along with the degree program, provides students the opportunity to tailor their university degree to their unique interests and academic needs.

## TRANSFER MODULE STATE POLICY

**INSTITUTIONAL TRANSFER**

The Ohio Board of Regents, following the directive of the Ohio General Assembly, has developed a statewide policy to facilitate movement of students and transfer credits from one Ohio public college or university to another. The purpose of the state policy is to avoid duplication of course requirements and to enhance student mobility throughout Ohio's higher education system. Since independent colleges and universities in Ohio may or may not be participating in the transfer policy, students interested in transferring to an independent institution are encouraged to check with the college or university of their choice regarding transfer agreements.

**TRANSFER MODULE**

The Ohio Board of Regents' Transfer and Articulation Policy established the Transfer Module, which is a specific subset or the entire set of a college or university's general education requirements. The Transfer Module contains 54-60 quarter hours or 36-40 semester hours of specified course credits in English composition, mathematics, fine arts, humanities, social and behavioral sciences, natural science and physical sciences and interdisciplinary coursework.

A Transfer Module completed at one college or university will automatically meet the requirements of the Transfer Module at the receiving institution, once the student is accepted. Students may be required, however, to meet additional general education requirements that are not included in the Transfer Module.

**CONDITIONS FOR TRANSFER ADMISSION**

Students meeting the requirements of the Transfer Module are subject to the following conditions:

1. The policy encourages receiving institutions to give **preferential consideration** for admission to students who complete the Transfer Module and either the Associate of Arts or the Associate of Science degrees. These students will be able to transfer all courses in which they received a passing grade of "D" or better. Students must have an overall grade point average of 2.0 to be given credit for the Transfer Module.

2. The policy also encourages receiving institutions to give **preferential consideration** for admission to students who complete the Transfer Module with a grade of "C" or better in each course and 90 quarter hours or 60 semester hours. Students must have an overall grade point average of 2.0 to be given credit for the Transfer

Module and only courses in which a "C" or better has been earned will transfer.

3. The policy encourages receiving institutions to admit on a non-preferential basis those students who complete the Transfer Module with a grade of "C" or better in each course and less than 90 quarter hours or 60 semester hours. These students will be able to transfer all courses in which they received a grade of "C" or better.

Admission to a given institution, however, does not guarantee that a transfer student will be automatically admitted to all majors, minors, or fields of concentration at that institution. Once admitted, transfer students shall be subject to the same regulations governing applicability of catalog requirements as all other students. Furthermore, transfer students shall be accorded the same class standing and other privileges as all other students on the basis of the number of credits earned. All residency requirements must be successfully completed at the receiving institution prior to the granting of a degree.

**RESPONSIBILITIES OF STUDENTS**

In order to facilitate transfer with maximum applicability of transfer credit, prospective transfer students should plan a course of study that will meet the requirements of a degree program at the receiving institution. Specifically, students should identify early in their collegiate studies an institution and major to which they desire to transfer. Furthermore, students should determine if there are language requirements or any special course requirements that can be met during the freshman or sophomore year. This will enable students to plan and pursue a course of study that will articulate with the receiving institution's major. Students are encouraged to seek further information regarding transfer from both their advisor and the college or university to which they plan to transfer.

**TRANSFER APPEALS PROCESS**

A multi-level, broad-based appeal process is required to be in place at each institution. A student disagreeing with the application of transfer credit by the receiving institution shall be informed of the right to appeal the decision and the process for filing the appeal. Each institution shall make available to students the appeal process for that specific college or university.

If a transfer student's appeal is denied by the institution after all appeal levels within the institution have been exhausted, the institution shall advise the student in writing of the availability and process of appeal to the state-level Articulation and Transfer Appeals Review Committee.

This State Appeals Review Committee shall hear and recommend to institutions the resolution of individual cases of appeal from transfer students who have exhausted local appeal mechanisms concerning applicability of transfer credits at receiving institutions.

**PROCEDURES**

A student appealing a decision on the applicability of transfer credit must have exhausted campus-level appeals and must have received a final decision before submitting the matter for further review by the State Appeals Review Committee. The State Appeals Review Committee shall have the power to obtain all records and documents used in the deliberation of the matter at the campus level. Neither the student appealing the decision nor the representative of the institution shall have a right of personal appearance before the committee.

**STEPS IN THE TRANSFER APPEALS PROCESS**

1. The institution publishes both state and local appeal procedures in the catalog or other appropriate student-oriented publication.
2. The student applies for admission.
3. The institution evaluates transcript of accepted student.
4. The institution decides on applicability of credit and sends dated statement of transfer credit applicability to student along with a notification of the 90-day period for filing an appeal.
5. If the student accepts the judgment, the process ends.
6. If the student challenges the judgment, he/she appeals within the institution.
7. The institution initiates its internal appeal process which must involve individuals who did not participate in the original decision. If the institution's appeal process provides for only two stages, initial review and appeal review, then this stage must provide for an institution-wide perspective. If more than one review step is involved, the final step must

involve an institution-wide perspective. At each appeal level, the institution shall respond to the appeal within 30 days of the receipt of the appeal.

8. The institution notifies the student and the department, in writing, of judgment and informs the student of the right to a state appeal process and the address to which appeals may be sent.
9. If the student accepts the judgment of the institution's internal review process, the process ends.
10. If the student challenges the judgment, the student appeals to the State Appeals Review Committee.
11. The State Appeals Review Committee notifies the student and the institution of the date of the hearing and requested information.
12. A hearing is held by the State Appeals Review Committee.
13. The State Appeals Review Committee notifies the student and the institution of advisory judgment.
14. The institution considers the advisory judgment of the State Appeals Review Committee.
15. The institution notifies the student of the disposition of the advisory judgment.
16. The process ends.

**CENTRAL STATE UNIVERSITY**
**TRANSFER APPEALS PROCESS**

This appeal process will address the applicability of transfer credits between institutions. The process applies to all undergraduate courses, not just those in the Transfer Module.

Any student applying for admission to Central State University must have a transcript(s) of credits sent to the Office of Admission for review. The transcripts of accepted students will be analyzed for applicability of credits and the student will be served with a dated statement of credit applicability along with a notification of the 90-day period for filing an appeal. The Registrar, in consultation with the appropriate department chair, will determine the applicability of the general education credits.

The Department chair will determine what courses can be applied toward the major. This determination may be based on the grade received in the course as well as course content. For example, if native students are required to earn a grade of "C" or better in a course, transfer students may be required to repeat a course with a grade of "D" regardless of whether it is acceptable for the Transfer Module.

If a student disagrees with the decision of the Registrar on the applicability of courses for the general education requirements, the student may appeal that decision to the Provost and Vice President for Academic Affairs within 90 days after receiving the decision from the Registrar. The Provost and Vice President for Academic Affairs will render a final decision within 30 days after receiving the appeal. The decision of the Academic Affairs office will be final.

If a student disagrees with the decision of the chairperson on the applicability of transfer credits in the major area, that student may, within 90 days, appeal to the dean of the college who will render a decision within 30 days. If the decision of the dean of the college is unacceptable, the student may, within seven (7), days appeal to the Provost and Vice President for Academic Affairs, who will render a final decision within fifteen (15) days.

**TRANSFER MODULE REQUIREMENTS**

The Transfer Module must include a minimum of 36 semester credit hours of introductory courses in the following areas:

- English Composition
- Mathematics
- Arts and Humanities
- Social and Behavioral Sciences
- Natural and Physical Sciences

To complete the Central State Transfer Module, students must complete the requirements found on the CSU Transfer Module Grid and described in the "CSU Transfer Module Course Requirements and Course List."

**CSU Transfer Module Course Requirements and Course List**

**Section A: CSU General Education Requirements Applicable to the Transfer Module**

**English/Oral Communication - minimum of 8 semester hours**

ENG 1100 (5) Introduction to Writing and Reading for College **or** ENG 1101 (4) Introduction to Writing for College
ENG 1102 (4) Writing & Researching the Essay

**Mathematics, Statistics or Formal Logic - minimum of 3 semester hours**

MTH 1750 (3) College Algebra
**or**
Advanced math option selected from:

MTH 2001 (3) Probability and Statistics I
MTH 2501 (3) Trigonometry
MTH 2502 (4) Calculus I
MTH 2503 (5) Calculus II

**Arts and Humanities – minimum of 6 semester hours**

HIS 1110, 1121 or 1122 (3)

Select 3 additional hours in Humanities from the Arts and Humanities section of the Transfer Module Course list.

**Social Sciences – minimum of 6 semester hours**

Select six hours from the Social and Behavioral Sciences section of the Transfer Module Course list.

**Natural Sciences –minimum 6 semester hours. At least one course must include a lab.**

Select at least 6 hours from the Natural Sciences section of the Transfer Module Course list. At least one course must include a lab for Transfer Module.

**Section B: Additional Courses to Complete Transfer Module and Transfer Module Course List**

To complete the Transfer Module requirements, select at least seven (7) additional hours from the Arts and Humanities, Social and Behavioral Sciences, or Natural Sciences sections of the Transfer Module Course List.

**Transfer Module Course List**

**Arts and Humanities**
ART 1110 (3) Ancient & Early European Art History
ART 1120 (3) Later European Art History
ART 1210 (3) Introduction to Art
ART 2130 (3) Arts of Africa
ART 2140 (3) African American Art History
DRM 1100 (3) Introduction to Theatre
DRM 2201 (3) Development of Drama: Tragedy
MUS 1140 (3) Music Appreciation
MUS 2233 (3) History of Jazz
PHI 2230 (3) Global Religion
PHI 2240 (3) Critical Thinking
PHI 2250 (3) Applied Ethics

**Social and Behavioral Sciences**
ECO 2200 (3) Introduction to Economics
ECO 2210 (3) Principles of Microeconomics
GEO 1101 (3) World Geo. West Hemisphere
GEO 1103 (3) World Geo. East Hemisphere
GEO 1110 (4) Fundamentals of Geography
GEO 2202 (3) Economic Geography
HIS 2201 (3) History of the U. S. to 1877
HIS 2202 (3) History of the U. S. since 1877
PSC 1100 (3) American National Government
PSC 2205 (3) Introduction to Africa
PSY 1200 (3) Introduction to Psychology
SOC 1105 (3) Introductory Sociology
SOC 1111 (3) Cultural Anthropology
SOC 1125 (3) Social Problems

**Natural Sciences**
BIO 1100 (4) Organismal Biology w/lab
BIO 2200 (2) Biology of Aging
CHM 1150 (3) Elements of Chemistry w/lab
GEL 2205 (3) Environmental Geology
PHY 2211 & PHY 2212 (5) University Physics I w/lab
PHY 2213 & PHY 2214 (5) University Physical II w/lab

# TRANSFER MODULE

**INSTITUTION: Central State University**
**Effective Date: Fall 2019**
**(Semester Hours Precede Course Number)**

| Areas | (A) Minimum General Education Requirements Applied to TM (24 semester hours) | (B) Additional General Education Requirements Applied to TM (12-16 semester hours) | (C) Interdisciplinary Hours Applied to TM within Areas I-V (Ohio Articulation & Transfer Policy: Appendix B) | General Education Requirements Beyond the TM for Graduation (Courses listed in this column are not guaranteed to transfer) |
|---|---|---|---|---|
| **I English/Oral Communication** (Oral Communication – column B) **Minimum 3 semester hours** | TME001 First Writing<br>(5) ENG 1100 or<br>(4) ENG 1101<br><br>TME002 Second Writing<br>(4) ENG 1102 | | | (2) USS 1000<br><br>1 semester hour Physical Education Activity course |
| **II Mathematics, Statistics and Formal Logic Minimum 3 semester hours** | Select One:<br>(3) MTH 1750 (TMM001 College Algebra)<br><br>(3) MTH 2001 (TMM010 Introductory Statistics)<br><br>(4) MTH 2500 (TMM002 Pre-Calculus)<br><br>(3) MTH 2501 (TMM003 Trigonometry)<br><br>(4) MTH 2502 (TMM005 Calculus I)<br><br>(5) MTH 2503 (TMM006 Calculus II)<br><br>(3) BUS 2801 (Business Calculus I)<br><br>(3) BUS 2802 | Additional hours from approved TM list in column A | | |

| | | | | |
|---|---|---|---|---|
| | (TMM013 Business Calculus II | | | |
| **III Arts/Humanities Minimum 6 semester hours** | **Choose one:**<br><br>(3) HIS 1121 Global History to 1500<br><br>**Choose minimum of 3 semester hours**:<br><br>ART 1110 (3) Ancient & Early European Art History<br><br>ART 1120 (3) Later European Art History<br><br>ART 1210 (3) Introduction to Art<br><br>ART 2130 (3) Arts of Africa<br><br>ART 2140 (3) African American Art History<br><br>DRM 1100(3) Introduction to Theatre<br><br>DRM 2201(3) Development of Drama: Tragedy<br><br>MUS 1140 (3) Music Appreciation<br><br>MUS 2233 (3) History of Jazz<br><br>PHI 2230 (3) Global Religion | Additional hours from approved TM list in column A | | |

| | | | | |
|---|---|---|---|---|
| | PHI 2240 (3) Critical Thinking<br><br>PHI 2250 (3) Applied Ethics | | | |
| **IV Social Sciences Minimum 6 semester hours** | **Choose minimum 6 semester hours from two different disciplines**<br><br>ECO 2200 (3) Introduction to Economics<br><br>ECO 2210 (3) Principles of Microeconomics<br><br>GEO1101 (3) World Geography Western Hemisphere<br><br>GEO 1103 (3) World Geography Eastern Hemisphere<br><br>GEO 1110 (4) Fundamentals of Geography<br><br>GEO 2202 (3) Economic Geography<br><br>HIS 2201 (3) History of the U.S. to 1877<br><br>HIS 2202 (3) History of the U.S. since 1877<br><br>PSC 1100 (3) American National Government<br><br>PSC 2205 (3) | Additional hours from approved TM list in column A | | |

| | | | | |
|---|---|---|---|---|
| | Introduction to Africa<br><br>PSY 1200 (3) Introduction to Psychology<br><br>SOC 1105 (3) Introductory Sociology<br><br>SOC 1111 (3) Cultural Anthropology<br><br>SOC 1125 (3) Social Problems | | | |
| **V Natural Sciences Minimum 6 semester hours**<br>*One Lab course required* | **Choose minimum 6 semester hours from two different disciplines**<br><br>BIO 1100 (3) Organismal Biology w/lab<br><br>BIO 2200 (2) Biology of Aging<br><br>CHM 1150 (3) Elements of Chemistry w/lab<br><br>CHM 1201(4) General Chemistry I w/lab<br><br>GEL 2205 (3) Environmental Geology | Additional hours from approved TM list in column A | | |
| **Subtotal of Hours** | 25 (Eng. 1101 option)<br>or<br>26 (Eng. 1100 option) | 11 | 0 | **3**<br><br>**Courses listed in this column are not guaranteed to transfer** |

**TRANSFER MODULE TOTAL HOURS 39-40**
**(Total of Columns A, B, and C)**

**The Transfer Module contains 36-40 semester hours of course credit.**
(Note: You can obtain a catalog/brochure that lists the TM "approved" courses from the institution.)

Other course menus for General Education (not part of the Transfer Module):

USS 1000 (2)

**Physical Education Activity Course Options**
HPR 1101 (1) Archery
HPR 1103 (1) Cycling
HPR 1104 (1) Fencing
HPR 1105 (1) Golf
HPR 1106 (1) Advanced Golf
HPR 1107 (1) Racquetball
HPR 1108 (1) Beginning Swimming
HPR 1109 (1) Advanced Beginning Swimming
HPR 1110 (1) Intermediate Swimming
HPR 1111 (1) Beginning Tennis
HPR 1112 (1) Advanced Tennis
HPR 1113 (1) Volleyball
HPR 1114 (1) Aerobic Dancing
HPR 1115 (1) Conditioning/Weight Training
HPR 1116 (1) Prescriptive Exercise
HPR 1117 (1) Badminton
HPR 1118 (1) Walking for Fitness
HPR 1119 (1) Water Aerobics
HPR 1120 (1) Basketball

# UNIVERSITY PROGRAMS AND SERVICES

## OFFICE OF ACADEMIC PLANNING AND ASSESSMENT

**Rebecca Ertel, Ph.D, Associate Vice President for Academic Planning and Assessment**
**Lionel H. Newsom Administration Building**
**Room 205A**
**(937) 376-6495**

The Office of Academic Planning and Assessment (OAPA) supports the scholarly, administrative, and fiscal infrastructures required to enhance the University's academic programs, manage institutional growth, maintain accreditations, and achieve the objectives of the University's strategic plan. The OAPA facilitates and supports institutional and program accreditations, assessment of student learning, and program review. Included within the OAPA are the Office of Institutional Research and the Center for Teaching and Learning.

## ASSOCIATED OFFICES

### Office of Institutional Research

**Mr. Mohammed Ali, Director**
Charles H. Wesley Arts & Science Building
Room 128
(937) 376-6236

The Office of Institutional Research provides data to University-wide constituencies and to external stakeholders, including the Ohio Department of Higher Education and the U.S. Department of Education. The Office of Institutional Research also provides data to ensure compliance in the areas of grants and sponsored programs and athletics (NCAA).

### Center for Teaching and Learning

Anne-Marie Walkowicz, Ph.D, Director
Charles H. Wesley Arts & Science Building
Room 213
(937) 376-6202

The Center for Teaching and Learning (CTL) provides training and development to faculty during the annual Faculty Institute/Assessment Day in fall and Faculty Retreat in spring as well as through workshops and seminars throughout the academic year. The CTL also manages a faculty development and travel fund, which provides financial assistance to support faculty's professional development, and maintains *Faculty Central*, the University's professional development site for faculty.

## CAMPUS POLICE

**Ms. Stephanie Hill, Chief of Police**
**Joseph D. Lewis / George T. Simpson Hall**
**Campus Police Main Entrance**
**(937) 376-6568**

Crime is a national problem that also affects University campuses, but through a number of ongoing proactive crime awareness activities, serious criminal incidents on campus have been minimized. Central State University's campus safety record is among the best in Ohio, and the University is proud of its past record in the area of crime prevention.

To reduce crime and to ensure that the University community is as safe and secure as possible, the Central State University Department of Public Safety employs 12 full-time officers and staff led by a Chief of Police. All officers are certified in the State of Ohio through the Ohio Peace Officer Training Academy and undergo continuing specialized training to maintain and improve their skills. All are trained in first aid and regularly train in the use of firearms.

All officers have the responsibility of protecting life and property, preventing and detecting crime, parking and traffic enforcement, fire and hazardous material inspections and providing essential police services to the campus community. Officers patrol the campus and residence halls 24 hours a day—on foot, bicycle, and in vehicles,

In addition, the Department of Public Safety coordinates with federal, state, and local authorities to enforce federal, state, and local laws as well as University rules and regulations.

## CENTER OF EXCELLENCE IN EMERGING TECHNOLOGIES

The mission of Central State University's Center of Excellence in Emerging Technologies is to graduate a diverse workforce that is highly skilled and prepared for future jobs in emerging technologies in the Miami Valley and throughout Ohio. The Center integrates CSU's core competencies in manufacturing engineering, environmental engineering, mathematics and computer sciences, natural sciences, and technology transfer and commercialization through the National Environmental Technology Incubator. The Center will offer expertise in the integration of renewable and alternative energy supporting manufacturing and environmental protection areas.

**UNDERGRADUATE RESEARCH AND STUDENT ENGAGEMENT OFFICE**
**Mr. Gorgui S. Ndao, Program Manager**
**Carl C. Jenkins Technology Education Hall**
**Room 123**
**(937) 376-6265**

The mission of the Office is to develop opportunities for students to gain academic and career advancement by providing

- Scholarships,
- Internship and Undergraduate Research Experience,
- Graduate School Preparation,
- Professional development,
- Summer bridge programs, and
- Tutoring and Mentoring.

The Office also offers graduate school test-taking preparation (GRE, GMAT, and LSAT), seminars and exposure to web resources. The staff members are available to speak with students on a one-on-one basis in the Center anytime during the hours of 8:00 a.m. to 5:00 p.m., Monday through Friday. The Office is committed to putting and keeping the "Students First."

**TEACHER EDUCATION ADVISEMENT AND PARTNERSHIP CENTER (TEAP-C)**

**Ms. Shirley Farrar, Director**
**Renita Tolbert, Program Manager**
**Ms. Karen Garmon, Administrative Coordinator**
**Joshua I. Smith Center for Education and Natural Sciences (CENS)**
**Suite 217 and Rooms 220E & 220F**
**(937) 376-6227**

The Teacher Education Advisement and Partnership Center (TEAP-C) is a support unit of the College of Education at Central State University. The Center's purpose is to assist the College of Education in

- Retaining students in teacher education programs,
- Monitoring and assisting students in strengthening pre-professional skills,
- Tracking student progress from pre-admission to program admission,
- Providing supplemental instruction in professional knowledge and skills,
- Overseeing the development of professional dispositions, and
- Developing reciprocal relationships with school districts and community colleges.

TEAP-C programs and services include

- Guiding students through the teacher education admission process,
- Presenting basic academic skills workshops and pre and port-testing as necessary,
- Providing weekly *"Power Hour"* sessions, in collaboration with University College, to strengthen required skills in mathematics, reading, and writing (grammar and essay),
- Providing interventions for admission interview and personal presentation skills,
- Coordinating services to assist in preparing students to take and pass the Ohio Assessments for Educators, and
- Conducting professional interview and portfolio development workshops.

**INTERCOLLEGIATE ATHLETICS**
**Ms. Tara Owens, Director of Athletics & Recreation**
**Madison W. Beacom/Gaston F. Lewis Gymnasium**
**(937) 376-6289**

As a Division II member of the NCAA, the Central State University Department of Intercollegiate Athletics believes that higher education has lasting importance on an individual's future success. For this reason, the emphasis for the student-athlete experience in Division II is a comprehensive program of learning and development in a personal setting. The Division II approach provides growth opportunities through academic achievement, learning in high-level athletic competition and development of positive societal attitudes in service to community. The balance and integration of these different areas of learning opportunity provide Division II student-athletes a path to graduation while cultivating a variety of skills and knowledge for life ahead.

The Central State University Athletics Department is committed to providing the student-athlete a rich and vibrant sporting experience in which to pursue their principal objective: to graduate from Central State University.

We strive to provide a nurturing, challenging, and culturally enriched environment that embodies the Core Values of Central State University, Honesty, Hard Work, Caring and Excellence.

We are dedicated to:

- ✓ The balance and benefits of scholarship and athletics;
- ✓ Teaching student-athletes to be self-reliant;

- ✓ Using the lessons of sports to produce future leaders; and
- ✓ Graduation of our student-athletes.

Central State University (CSU) is a Division II Member of the National Collegiate Athletic Association (NCAA). CSU is a member of the Southern Intercollegiate Athletic Conference (SIAC).

The Department of Intercollegiate Athletics sponsors 10 sports at the NCAA Division II level:

- Football
- Men's & Women's Basketball
- Women's Volleyball
- Men's & Women's Cross Country and Indoor and Outdoor Track & Field

Intercollegiate Athletics play a major role in the development of young men and women. It also contributes to the quality of campus life and serves as an Ambassador for CSU. As a member of the NCAA, prospective student-athletes are required to have a minimum GPA and an SAT/ACT score in order to be eligible for competition. For more information on NCAA rules and regulations, please visit www.NCAA.org or www.eligibilitycenter.org or contact the Athletic Compliance Office at (937)-376-6190. For more information on Central State University Athletics, please visit www.marauderssports.com.

## HALLIE Q. BROWN MEMORIAL LIBRARY

**Ms. Carolin Sterling, Interim Director**
**(937) 376-6106**
**Associate Professor:** Ms. Sheila L. Darrow
**Assistant Professors:** Ms. Carolin Sterling, Mrs. A. Carolyn Sanders

The general mission of the library is to provide support to the academic programs of the university. The collection is designed to support undergraduate and graduate instruction and research. The facility provides space for individual and group study as well as specialized activities. Library services include research assistance, class reserves and Interlibrary Loan/Document Delivery. The philosophy of the library faculty and staff is to meet all students at individual thresholds and to help each one towards academic success.

The current collection includes over 377,000 volumes, over 100,000 eBooks, and 64 current print journal/magazine titles, over 200 research databases, including almost 10,000 titles in the Electronic Journal Center (EJC), over 50,000 online videos, over 30,000 bound periodicals, and 4,000 audiovisual resource items. -Special microform collections include the American Missionary Association Manuscripts, Boston Symphony Orchestra Program notes, Galloway Collection, papers of George Washington Carver, Charles Chestnut, Paul Laurence Dunbar, John P. Green, and George A. Myers, the Atlanta University Black Culture Collection and the ERIC collection of 846,190 microfiche items relating to educational research. Additionally, there are over 846,000 other microforms which include the ERIC collection and periodicals.

The library is a founding member of OhioLINK (Ohio Library and Information Network), a consortium of ninety three libraries, including all of Ohio's public four-year and two-year universities and colleges, the State Library of Ohio, and private colleges and universities. The OhioLINK online catalog provides access to more than fifty million library items. Students, staff, and faculty can request books and audiovisual materials from any internet-connected computer without library staff assistance. Students, faculty, staff, and card holders from participating public libraries can use the OhioLINK Library Catalog to find and request materials online. The material is delivered to the library where it is held for pickup. The library also participates in an active Interlibrary loan service.

The Learning Commons, located on the main floor of the library, offers an integrated, user-centered environment to support learning, teaching, and research. Attractive, convenient, and flexible, the Commons has collaborative as well as individual study space. Learning support is available at the reference desk where librarians are available for consultation.

**Facility and Equipment**

- Audiovisual equipment
- Computer labs
- Instructional materials production lab
- Microform reader/printers
- Small group study rooms
- Study carrels, tables, and lounge furniture

**Services**

- Information Literacy instruction
- Class reserves
- ***HALLIE*** - the online catalog
- Instruction for audiovisual production
- Interlibrary loan
- Online borrowing across Ohio (***OhioLINK***)
- Reference assistance

**Special Collections**

- Archives
- Black collection
- Microfilm collections
- Microfilm collections

## HONORS PROGRAM

**Fred Aikens, Ph.D, Director**
**University Student Center**
**(937) 376-6033; (937) 376-6032**
**honorsprogram@centralstate.edu**
faikens@centralstate.edu

The CSU Honors Program nurtures and challenges Honors Scholars to achieve academic excellence through a rigorous and diverse curriculum and co-curriculum, leading to superior pre-professional preparation and a CSU Honors diploma. A 3.5 GPA and at least 32 credit hours are required for admission into the program. A portfolio, including six honors courses and a senior project within the major field, along with a 3.5 cumulative GPA are considered for award of the CSU Honors Diploma at graduation. Freshmen students with a 3.3 GPA may take 1000 level honors courses as a pre-honors step.

### ADMISSION AND MATRICULATION

-3.5 GPA, 32 credit hours/Sophomore status
-Scholarships: Alumni Global Awareness ($5,100), Do STEM and more.
-Sophomore year induction
-Recognition at annual Honors Convocation
-Residence: Living & Learning Center: Harry S. Johns &Fox halls
-Induction into CSU chapters of national honors societies: Alpha Kappa Mu (Kappa Tau chapter, general) Chi Alpha Epsilon( Alpha Epsilon chapter, general) Beta Beta Beta National Honor Society (Lambda Iota chapter, Biology) Psi Chi International Honor Society (Psi Chi at CSU chapter, Psychology)
**Pre-Honors/University College**. 3.3 GPA. 1000 level Gen. Ed, courses; submit TEAP-C portfolio (Education majors)

### HONORS DEGREE REQUIREMENTS

The designation "Honors Diploma" is indicated on the diploma and transcripts of students who achieve an overall minimum of 3.5 GPA in university course work, and complete all Honors Program requirements. The required colloquium seminar, HON 3300 (4 credit hours) is an interdisciplinary course.

**Honors Program Advisory Council**: Dr. Abayomi Ajayi-Majebi (CSE), Dr. Carol Bargeron (CHAS), Dr. Monique Cherry-McDaniel (COE), Dr. Lovette Chinwah-Adegbola (CHAS), Dr. Ronald Claxton (CHAS), Dr. Jennifer Cruz (CHAS), Dr. Rebecca Ertel (CHAS), Dr. Ibrahim Katampe (CSE), and Dr. Anne-Marie Walkowicz (CHAS)

### RECOGNITION OF ACADEMIC ACHIEVEMENT DEAN'S LIST

The Dean's List is compiled at the close of each semester and includes the names of all students who have a semester grade point average of at least 3.2 with a minimum load of 12 GPA hours for the academic period.

### HONORS DAY CONVOCATION

An Honors Day Convocation is held each Spring Semester to honor full-time students* who have attained high scholastic standing, as follows:

- Class Honors to students with cumulative grade point averages of 3.20 to 3.49.
- College Honors to students with cumulative grade point averages of 3.50 or above.
- Gold Cord Honors to graduating seniors with cumulative grade point averages of 3.50 or above who have no "D", "F", "FZ" or "Z" grades or repeated courses.

Transfer students are eligible for Honors if they have earned at least 24 semester hours at CSU and they meet the same criteria required of CSU students. Freshman students who took classes during their enrollment in High School are NOT considered transfer students.

**NOTE:** "W" grades will not be considered in determining full-time status for Honors recognition.

- Freshman Honors are awarded to students with 12 to 30 quality hours earned.
- Sophomore Honors are awarded to students with 31 to 60 quality hours earned.
- Junior Honors are awarded to students with 61 to 90 quality hours earned.
- Senior Honors are awarded to students with 91 or more quality hours earned.

Class and College Scholars are recognized at the Annual Honors Day Convocation.

### GRADUATION HONORS

Honors awarded to graduates at commencement are as follows:

- First Honors — Summa Cum Laude to students with cumulative grade-point averages of 3.80 or above.
- Second Honors — Magna Cum Laude to students with cumulative grade-point averages of 3.60 to 3.79.
- Third Honors — Cum Laude to students with cumulative grade-point averages of 3.20 to 3.59.

* Graduating seniors who meet other specified requirements qualify for all honors regardless of fulltime status.

### OFFICE OF SPONSORED PROGRAMS AND RESEARCH

**Morakinyo A. O. Kuti, Ph. D.**
**Director**
**937-376-6547**
**mkuti@centralstate.edu**

The mission of the Office of Sponsored Programs and Research is to maximize the success of the university in winning and executing project and program awards, whether in the form of grants, contracts, or sponsored research.

Grants and contracts from both government and private sources provide essential support for the sustenance and growth of the university. In recent years, there has been a shift toward contracts as the primary mechanism for channeling support from these agents to universities. This reflects the supporting agencies increasing focus on demonstrating positive and tangible results deriving from the activities they are funding. The contracted project arena is generally much more competitive than the grants arena and the requirements for performance are more stringent. Since the trend toward an increasing focus on contracts as a major avenue for making funding available to universities is likely to continue, it is important that the university position itself to capture and successfully implement a fair share of the contracted projects as well as those resulting from grants.

The Office of Sponsored Programs and Research (OSP&R) is the focal point for ensuring that the university is successful in winning a reasonable number of such projects both in the short and long-term, and that it is successful in the administration and execution of those projects once they are awarded. In general, sponsored activities are directly related to the three-fold mission of the institution: research, teaching, and public service.

**THE TITLE III PROGRAM**

Title III, Part B is a federal institutional development grant that provides financial assistance to Historically Black Colleges and Universities (HBCUs) to establish or strengthen their physical plants, financial management, academic resources, and endowment-building capacity. Activities may include student services, educational equipment acquisition, facility construction, and faculty and staff development. It is a formula-based discretionary grant made to the President.

**PURPOSES OF TITLE III STRENGTHENING INSTITUTIONAL PROGRAMS AT CSU**

The U.S. Department of Education's Institutional Development and Undergraduate Education Service (IDUES) administers the Title III Program. The Title III Program is focused on institutions that enroll large proportions of underrepresented students. It strengthens these institutions by

- Improving Academic Quality,
- Improving Fiscal Stability,
- Improving the Quality of Student Services, and
- Improving the Quality of Institutional Management,

At Central State University, Title III support is used to

1. Enhance the quality of academic services,
2. Increase student enrollment and qualified faculty and staff,
3. Improve the financial stability of CSU, and
4. Facilitate alignment of the institution with successful execution of strategic initiatives.

**UPWARD BOUND PROGRAM**
**Mr. John O. Anene, Director**
**Central State University-Dayton**
**840 Germantown Street**
**Dayton, OH 45402**
**Phone: (937) 376-6496**
**Cell: (937) 510-2790**
**Fax: (937) 224-4902**

The Office of TRIO/Upward Bound Program (CSU-UB) is a pre-college program of robust academic instruction, tutoring, and counseling. The program provides high school students with an opportunity to enhance their academic skills necessary to successfully complete high school and enroll in and graduate from college.

The program has a summer component and academic year component. Emphasis is placed on the core college preparatory curriculum (mathematics through pre-calculus, laboratory science, foreign language, English composition and literature). There is a six-week campus summer program (four-weeks non-residential and two-weeks residential) that enhances the academic skills, introduces the participants to campus life, teaches them college survival skills, increases their social skills and provide entertainment activities.

Participants attend workshops, use computerized tutorials and practice tests to improve their test-taking skills to enhance their SAT and ACT scores.

**Services Provided**

- **Counseling and Academic Advising** are key services offered year-round to help students solve personal, academic, and behavioral problem that impede success and

assists them in discovering self-concept and social development.

- **Tutoring and Supplemental Instruction** aid participants in improving their GPAs, increasing their academic successes, and providing the motivation needed to increase academic performance.
- **Career Exploration** helps participants choose a career suitable to their skills and explore different careers in the areas of interest.
- **Financial Aid Assistance** assists in completing the necessary applications for admission and financial aid.
- **Cultural Enrichment** provides participants opportunities for social, leisure, and educational experiences.
- **Campus Visits/College Tours** exposes participants to postsecondary institutions in Ohio and college environment.
- **Parent Services** increase awareness of the importance of college preparatory curriculum and understanding of the procedures necessary for postsecondary enrollment.

# ONLINE LEARNING

**Jean-Jacques Medastin, Ph.D**
**Director**
**Norman E. Ward Center, 2nd floor**
**(937) 376-6302**
**online@centralstate.edu**

**Center for Instructional Technology Innovation (C.I.T.I.) www.centralstate.edu/elearning1**

At Central State University, Online Learning is housed within the Center for Instructional Technology Innovation, also known as the C.I.T.I.
The C.I.T.I. is a state of the art center that offers the following:

- Main Digital Learning Hub with 18 Mac computers,
- ADA Station to serve our students with varying learning abilities,
- 3D Lab,
- 70' Touch Screen Display Devices,
- Digital Learning Hub A with 6 Mac computers,
- Digital Learning Hub B with 6 Mac computers, and
- Conference Room equipped with Videoconferencing Technology.

C.I.T.I offers answers to questions about Learning Management System (LMS) (i.e. Blackboard, Schoology) and other educational technology tools on campus as well as Online Learning inquiries, technology training, webinars, and Online Learning Resources for our students, faculty, and staff.

**What is Online Learning?**

Online Learning is a form of Distance Education that provides another option to meet the needs of our diverse student population. Distance Education is a general term used synonymously with distributed education, distance learning, online learning, e-learning, or applied to a range of other teaching and learning activities delivered at a distance through technology. Online Learning at Central State University is "any facilitated formal instructional delivery system that is not self-paced where the students and faculty are separated by time and/or distance."

**What is an online course?**

An online course (designated by "W" in the class schedule) is any course offered by Central State University in which 100% of the instruction occurs online. These courses require no face-to-face or traditional classroom attendance. Online courses are offered through Central State University's Course Management System (Currently Schoology).

**What is a hybrid course?**

A hybrid course (designated by "H" in the class schedule) is any course offered by Central State University in which some portion of traditional face-to-face "seat time" has been replaced by online course activities. In a hybrid course, students still meet part of the course face-to-face. The other course activities are offered through Central State University's Course Management System (Schoology).

**What is an interactive video course?**

An interactive video course (designated by "V" in the class schedule) is any course offered by Central State University in which face-to-face interaction is provided through room-based video, desktop-based video, or other modes of interactive audio and video conferencing (Schoology Conference, Zoom Video Conference).

**What is a Web-Enhanced course?**

A Web-Enhanced course is a traditional face-to-face course that includes some online components: course syllabus; links to other course-related websites; media; synchronous or asynchronous discussion sessions; and assessments. The online course activities are offered through Central State University's Course Management System (Schoology).

**Is Online Learning Right for Me?**

Online courses have the same or similar learning outcomes as traditional face-to-face courses. Online courses are NOT EASIER than traditional face-to-face courses but require you to have certain characteristics to be successful:

- Self-motivation,
- Good organization and communication skills,
- The ability to read well and learn on your own,
- Good technical computer skills, and
- The ability to set and keep to a schedule for completing assignments.
- Please quiz yourself by clicking this link: www.centralstate.edu/elearning1/DLQuiz.php

Currently, CSU offers online courses but does not offer fully online degree programs.

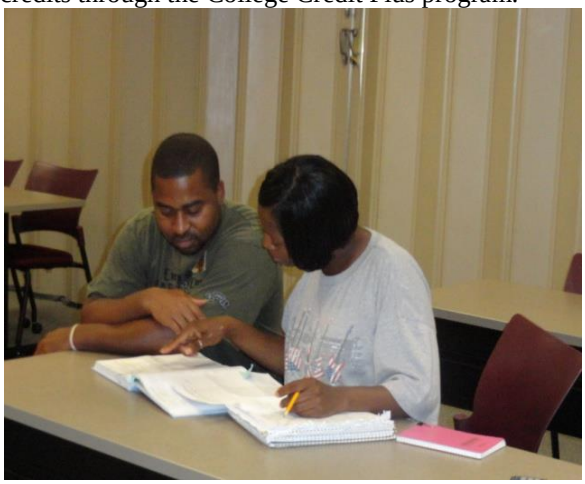
# CENTRAL STATE UNIVERSITY – DAYTON (CSU-Dayton)

**Mrs. Lesa Devond, Interim Director**
**Central State University-Dayton**
**840 Germantown Street**
**Dayton, Ohio 45402**
**(937) 224-4278 (Dayton)**
**(937) 376-6167 (Xenia)**

Central State University has served the Dayton metropolitan community since the spring of 1973. We offer the distinctive Central State supportive atmosphere and quality education while contributing to the success of the region. Programs offered are accredited by the Higher Learning Commission.
CSU-Dayton extends the University's instructional programs beyond the main campus to an increasing adult population seeking postsecondary education in the region. Our academic programs are specifically designed for the busy lives of adults who seek to complete a degree begun elsewhere, or who select Central State University as their institution of choice. Our daytime, evening and Saturday class schedules allow students to complete a Bachelor of Science degree in Business Administration with a concentration in Management or a Bachelor of Science degree in Early Childhood Education. In addition, there are expanded courses that would lead towards a degree in Management Information Systems; Criminal Justice; Intervention Specialist and Social Work. *You can also complete General Education Requirements towards other degrees offered at our Wilberforce, Ohio campus.*

Faculty members from the Wilberforce campus are joined by local professionals who serve as adjunct faculty members to deliver quality, specialized instruction. Traditionally, CSU-Dayton offers small classes which allow for personal attention and the opportunity to pace learning at the student's comfort level. Technology has increased the availability and opportunity for engaging in scholarly conversation. Faculty members correspond with students by e-mail and chat rooms are set up for both faculty-student and student-student discussion. Two state-of-the art computer labs provide internet access to the Hallie Q. Brown Memorial Library on the Wilberforce campus and for exploration and research.

As an integral part of Dayton, CSU-Dayton endeavors to serve the community through outreach services and programs. As an integral part of Dayton, CSU-Dayton endeavors to serve the community through outreach services and programs such as the GED adult high school diploma and Commercial Driver's License (CDL) training and certification. High school students may earn college credits through the College Credit Plus program.



Enrollment assistance and advising is available at our **WALK-IN-WEDNESDAY** events. They occur every Wednesday between 10:00 a.m. and 6:00 p.m.

# UNDERGRADUATE STUDENT SUCCESS CENTER

**GENE MOORE, D.Min**
**Executive Director**
**Mrs. DeAnna Brown, Administrative Coordinator**
**Norman E. Ward Sr. Bldg., 1st Floor**
**(937) 376-6419**

The Undergraduate Student Success Center (**USSC**) has the responsibility of providing academic and social support services to aid the university in increasing its student success rates. It is designed to assist students in developing positive relationships with faculty, staff, and other students, which will foster a strong academic and co-curricular foundation at CSU and provide programs for students to learn the skills, habits, and dispositions they need to achieve academic success. Its organizational units provide academic advising; tutoring and supplemental instruction; retention tracking; and much needed social developmental skills, especially for first generation college students. **USSC** is organized into three units:

## OFFICE OF ACADEMIC COACHING AND ADVISING (OACA)

**Mrs. LaKeysha Smith, Director**
**Ms. Sondra Armstrong, Academic Advisor**
**Dr. Harold Dixon, Academic Advisor**
**Mr. Alfred Harper, Academic Advisor**
**Ms. Kaila Ryan, Academic Advisor**
**Mr. Roy Tillman, Academic Advisor**
**Norman E. Ward Sr. Bldg., 1st Floor**
**(937) 376-6110**

The Office of Academic Coaching and Advising (**OACA**) helps first-year and transfer students in the development of educational plans and goals. Through communication and information exchanges with an advisor; students can maximize their educational potential.

Academic coaching and advising is an integral component of the educational process at CSU. Hence, **OACA** also serves to support students with less than 30 credit hours in selecting and/or changing their majors, scheduling courses, and supporting continuing freshmen who find themselves academically at-risk (on probation or re-admitted to the university following a period of academic suspension). Academically at-risk students work closely with their academic advisor to achieve good academic standing and to complete their programs successfully.

## OFFICE OF ACADEMIC SUPPORT AND INSTRUCTIONAL SERVICES (OASIS)

**Ms. Olanrewaju Oriowo, Tutor Coordinator**
**Mrs. Dawn MD Mumford, Mathematics Specialist**
**Mr. Conrad Zagory, Jr., Writing Specialist**
**Norman E. Ward Sr. Bldg., 1st Floor**
**(937) 376-6247**

The Office of Academic Support & Instructional Services (**OASIS**) is committed to assisting students in becoming independent learners by pairing them with peer tutors and also providing workshops and private sessions with writing or math specialists. **OASIS** provides a variety of programs and services for all students, but has major responsibility for supporting the academic success of new incoming freshmen. These programs and services include learning skill development and tutorial programs to help students successfully complete their current courses.

Peer tutoring services are typically 1:1, and are available at no cost to any student who is currently enrolled at CSU. Tutoring is available in over 40 courses, many of which are general education courses. A tutoring request can be initiated by a student, an instructor, an academic advisor, or a staff member, simply by the completion of a tutor request form. These forms are available at various locations within the Norman E. Ward Sr. Bldg.

## OFFICE OF RETENTION & FIRST-YEAR EXPERIENCE (OoR/FYE)

**Mrs. Jaton R. Brame, Coordinator, First-Year Experience**
**Ms. Carolyn Gunn, Student Success and Retention Specialist**
**Ms. Shuronda Smith, Student Success and Retention Specialist**
**Norman E. Ward Sr. Bldg., 1st Floor**
**(937) 376-6553**

The Office of Retention & First Year Experience (**OoR/FYE**) provides new student transition services, success coaching and initiative-based programming for first-year and transfer students.

As we support new students, we desire to:

1. **Build community** through an engagement-driven orientation and outreach experience;
2. **Enhance connections** with services and resources coordinated within the campus community;
3. **Create a confidence in self-awareness and learning** to enable student preparedness for collegiate study;
4. **Promote proactive interactions** with students to meet early detection and intervention needs.

This office integrates varied resources and collaborates with other units within the Undergraduate Student Success Center and with Student Affairs and Enrollment Management to ensure students have a strong educational foundation coupled with a rich collegiate experience. This experience includes initiatives and institutional collaboration with offices, such as Career Services, Academic Empowerment and Accessibility, Student Engagement & Leadership Development, Residence Life, Counseling Services and student outreach opportunities at CSU-Dayton.

In addition, to address the needs of sophomore students on campus and to alleviate common stressors that impact students during their second year of college, the office will offer a new approach toward sophomore success. This approach will include continued collaborations that will provide sophomore support services and encourage student engagement at all levels.

**FIRST-YEAR EXPERIENCE COURSE OFFERINGS**

The office further establishes an academic foundation rooted in the implementation and coordination of First-Year Experience course offerings.

**New Students, as of Fall Semester 2019:**

**USS 1000.** Undergraduate Success Seminar (I, II; 1) This is a two-credit hour, hybrid format course that provides opportunities for students to learn and apply practical knowledge and skills required for success at the college-level. Topics include CSU resources, policies, and processes; utilization of technology; health and wellness; financial and information literacy, and the history of HBCU's, and CSU in particular, within their cultural and historical context. The course consists of a once per week 50-minute live seminar, completion of online coursework, and participation in qualifying campus events. This course is a General Education requirement for all first-year students.

**Continuing Students:**

**FYS 1101.** First-Year Seminar (I, II; 1) This course is designed to help first-year students make a successful academic and social transition to CSU. The one credit hour seminar will focus on study skills, time management and library use, and the history of Central State University. This course is a General Education requirement for all first-year students (prior to fall 2019).

**FYS 1102.** First-Year Seminar II (I, II; 1) This course builds on the learning skills introduced in FYS 1101 and engages the student in activities to improve academic success. This course is required for all first-year students placed on academic probation at the end of their first semester at CSU.

# COLLEGE OF BUSINESS

**Fidelis Ikem, Ph.D.**
**Dean, College of Business**
**Charles S. Smith Hall, Room 157**

**Mrs. JoAnn Danik**
**(937) 376- 6441**
**Administrative Assistant**

**Ms. Rachele McCleskey**
**(937) 376-6642**
**Assessment Coordinator**

**VISION**

The College of Business aspires to be globally recognized by its stakeholders for preparing graduates for success in business and society.

**MISSION STATEMENT**

The College of Business is committed to providing students with a nurturing educational environment in their personal and professional endeavors. We emphasize academic excellence in teaching, research and outreach in a dynamic global business environment.

The College of Business prepares students for careers in business, government, private and public non-profit organizations and for graduate school. The college takes great care to ensure that graduates are well-rounded individuals through its "Triad for Success" which includes emphasis on academics, experiential learning and professional development.

Other objectives of the college are to:

1. Provide students with an understanding of the application of business principles and operations to actual work experiences or practical problem solving activities.
2. Assist students in understanding their responsibility to the economic system and the political and social environment.
3. Provide learning experiences that involve state of-the-art technology particularly as it relates to computerization and expert systems.
4. Provide experience which will enable the student to develop interpersonal skills necessary for proper functioning in a variety of societal settings.
5. Develop within students an appreciation for the fact that the work world of today is not limited by national boundaries. In fact, a global perspective is necessary to succeed in today's dynamic international environment.

**ADMISSION REQUIREMENTS**

Students will be admitted to the College of Business upon entry to the university by declaring a major within one of the college disciplines.

**STUDENT RESPONSIBILITY**

Students in the College of Business are required to confer with an assigned faculty advisor on a regular basis. Beyond this advisement, students are personally responsible not only for selecting their academic programs, but also for adhering to all published regulations, requirements and policies of the University and college. Students are expected to seek regular academic advisement and ultimately are individually responsible for completing all degree requirements.

During the Spring Semester immediately prior to the year in which a student expects to graduate, students must confer both with their advisor and the chair of the major department for a final degree checkout and preparation of an application for graduation.

**TRANSFER OF CREDITS**

Central State University accepts transfer credit from colleges and universities accredited by regional accrediting associations. The registrar will determine whether the university accepts credit from other universities. Under state law, the university is required to accept grades of "D" or better for transfer credit from state assisted colleges and universities in Ohio. (Credits from "D" grade courses will count towards the 121 credits required for graduation. However, the student may still need to repeat the class if Central State University requires a "C" grade in the course). Grades of "C" or better are generally acceptable from out-of-state schools. Department chairs will determine whether credits accepted by Central State University may be used to satisfy major requirements.

**DEGREE REQUIREMENTS**

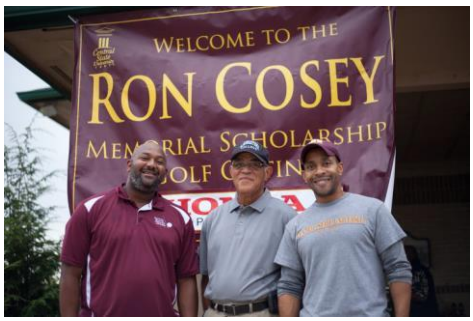
The General Education Program, a common core of 38 semester hours, is central to the University's mission of providing students with a liberal arts background. The remaining hours that must be taken to earn a total of at least 121 semester hours are designated by the departmental major requirements and the student's choice of free electives. However, majors in the college are urged to choose, with an advisor, courses that provide the student with a second field of interest or a strong minor concentration.

- Completion of a minimum of 121 semester hours with a grade point average of 2.0. Some departments or programs may require additional hours and a higher grade point average.
- Completion of at least 30 semester hours in a major field. Some departments may require additional hours.
- Completion of the University's General Education Requirements.

***Students with faculty that participated in the Morgan Stanley Case Competition during the L.E.E.D. "Leaders, Entrepreneurs, Executives, Directors" program April 3, 2019***

***Forty-First Annual Ron Cosey Memorial Scholarship and Awards Banquet April 3, 2019***

## Ron Cosey Memorial Scholarship Golf Outing




# DEPARTMENT OF BUSINESS ADMINISTRATION

**Edith Davidson, Ph.D**
**Chair (937) 376-6440**
**Charles S. Smith Hall, Room 163**

**Faculty**
**Associate Professors:** Dr. Frederick Aikens, Dr. Saima Bashir, Dr. Edith Davidson, Dr. Andrew Raschid, Dr. Alberta Thrash, Dr. Nnamdi Osakwe, Mr. Kenyal McGee and Dr. Jeng-Hong Chen

**Assistant Professor:** Mr. Lonny Gilbert, Mrs. Santhi Harvey, Mr. Kevin Tennon, Mr. Stephen Washington, Mrs. Wendy Berry-West and Dr. Erick Kitenge

**Degrees offered:**
B S. Accounting
B.S. Business Administration (Concentrations in):
- Agribusiness
- Entrepreneurship
- Finance
- Hospitality Management
- International Business
- Management
- Management Information Systems
- Marketing

**Program Description**

The Department of Business Administration offers Concentrations in Agribusiness, (AGB), Entrepreneurship (ENT), Finance (FIN), Hospitality Management (HMP), International Business (INB), Management (MGT), Management Information Systems (MIS), and Marketing (MKT). Bachelor of Science Degree in Accounting is also housed within the Department of Business Administration. The department seeks to help students develop an excellent knowledge of business in general and in their specialized concentration in particular. This provides the students with the learning atmosphere to enhance their confidence necessary for success in the business world.

**Business Program Goals**

The learning goals of the Business programs are to produce graduates who:

1. Have effective written and oral communication skills
2. Possess analytical problem solving and critical thinking skills
3. Are globally and environmentally aware
4. Have competence in business productivity skills
5. Possess a professional disposition

**Degree Requirements**

Detailed course requirements for all business concentrations and specific requirements for each individual concentration are available in check sheets from the department's office. Students are required to earn all C's or better in their major and concentration and also maintain at least a GPA of 2.0 in their degree program.

***College of Business students receive the Ron Cosey Memorial Scholarship***
***During our Forty-First Annual Awards Banquet***
***Presented by Mrs. Lisa Cosey***

***BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION – Agribusiness Concentration –*** ENG 1100 or ENG 1101 and ENG 1102; MTH 1750; HIS 1110, HIS 1121 or 1122 plus 3 Humanities credit hours from List B; Social and Behavioral Sciences - 6 hours from 2 different disciplines from List C; Natural and Physical Sciences- 6 credit hours from List D; USS 1000 and 1 HHP Activity from List A and an additional 9 hours from List B, C or D.

The following business requirements: ACC 2210 and ACC 2220, BUS 1100, BUS 1500, BUS 2200, BUS 2203, BUS 2343, BUS 2353, BUS 2260, BUS 2261, BUS 2801, BUS 2802, BUS 2901, BUS 2902, BUS 3331, BUS 3370, BUS 4785 and BUS 4795, ECO 2210, ECO 2220 and MIS 3371. Also, the following Agribusiness Concentration requirements: AGB 2300, AGB 3240, AGB 4445, AGB 4745 and 3 hours of Agribusiness Electives and 3 hours of approved electives. Students are required to earn all C's or better in their major and concentration and also maintain at least a GPA of 2.0 in their degree program.

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION CONCENTRATION IN Agribusiness**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| FALL SEMESTER | | | SPRING SEMESTER | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE#** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| BUS 1100 | Contemporary American Business | 3 | BUS 1500 | Computer Applications for Business | 3 |
| ENG 1101 | Introduction to Writing for College | 4 | BUS 2801 | Business Calculus I | 3 |
| USS 1000 | Undergraduate Success Seminar | 2 | ENG 1102 | Writing and Research the Essay | 4 |
| HIS 1xxx | 1100, 1121 or 1122 | 3 | ELECTIVE | From List B, C or D | 3 |
| HHP 1xxx | HHP Activity from List A | 1 | ELECTIVE | From General Education List C | 3 |
| MTH 1750 | College Algebra | 3 | | | |
| | | **16** | | | **16** |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| ACC 2210 | Financial Accounting | 3 | ACC 2220 | Managerial Accounting | 3 |
| BUS 2200 | Legal Environment of Business | 3 | BUS 2260 | Business Communication I | 3 |
| BUS 2343 | Principles of Management | 3 | BUS 2353 | Principles of Marketing | 3 |
| BUS 2802 | Business Calculus II | 3 | BUS 2901 | Business Statistics I | 3 |
| ECO 2210 | Principles of Microeconomics | 3 | ECO 2220 | Principles of Macroeconomics | 3 |
| | | **15** | | | **15** |
| **JUNIOR** | | | **JUNIOR** | | |
| BUS 2902 | Business Statistics II | 3 | BUS 2203 | Professional Development | 2 |
| BUS 3331 | Principles of Finance | 3 | BUS 3370 | International Business | 3 |
| BUS 2261 | Business Communication II | 3 | MIS 3371 | Information Management | 3 |
| AGB 2300 | Introduction to Agribusiness | 3 | AGB 3240 | Farm Management | 3 |
| ELECTIVE | From General Education List D | 3 | ELECTIVE | From List B, C or D | 3 |
| | | **15** | | | **14** |
| | | | **SENIOR** | | |
| BUS 4785 | Operations Management | 3 | BUS 4795 | Strategic Management | 3 |
| PHI 2240 | From General Education List B | 3 | ELECTIVE | Business Approved Elective | 3 |
| AGB 4445 | Agricultural Economics | 3 | AGB 4745 | Ag Policy - Capstone Course | 3 |
| AGB xxxx | Agribusiness Elective | 3 | ELECTIVE | From General Education List C | 3 |
| ELECTIVE | From General Education List D | 3 | ELECTIVE | From List B, C or D | 3 |
| | | **15** | | | **15** |

***Minimum hours needed to obtain a Bachelor of Science in Business Administration – Agribusiness Concentration – 121***

***BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION - Entrepreneurship Concentration –*** ENG 1100 or ENG 1101 and ENG 1102; MTH 1750; HIS 1110, HIS 1121 or 1122 plus 3 Humanities credit hours from List B; Social and Behavioral Sciences - 6 hours from 2 different disciplines from List C; Natural and Physical Sciences- 6 credit hours from List D; USS 1000 and 1 HHP Activity from List A and an additional 9 hours from List B, C or D.

The following business requirements: ACC 2210 and ACC 2220, BUS 1100, BUS 1500, BUS 2200, BUS 2203, BUS 2343, BUS 2353, BUS 2260, BUS 2261, BUS 2801, BUS 2802, BUS 2901, BUS 2902, BUS 3331, BUS 3370, BUS 4785 and BUS 4795, ECO 2210, ECO 2220 and MIS 3371. Also, the following Entrepreneurship Concentration requirements: ENT 3135, ENT 3355, ENT 3505, ENT 4895, and 3 hours of Entrepreneurship Electives and 3 hours of approved electives. Students are required to earn all C's or better in their major and concentration and also maintain at least a GPA of 2.0 in their degree program.

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION CONCENTRATION IN ENTREPRENEURSHIP**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| FALL SEMESTER | | | SPRING SEMESTER | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE#** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| BUS 1100 | Contemporary American Business | 3 | BUS 1500 | Computer Applications for Business | 3 |
| ENG 1101 | Introduction to Writing for College | 4 | BUS 2801 | Business Calculus I | 3 |
| USS 1000 | Undergraduate Success Seminar | 2 | ENG 1102 | Writing and Research the Essay | 4 |
| HIS 1xxx | 1100, 1121 or 1122 | 3 | ELECTIVE | From List B, C or D | 3 |
| HHP 1xxx | HHP Activity from List A | 1 | ELECTIVE | From General Education List C | 3 |
| MTH 1750 | College Algebra | 3 | | | |
| | | **16** | | | **16** |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| ACC 2210 | Financial Accounting | 3 | ACC 2220 | Managerial Accounting | 3 |
| BUS 2200 | Legal Environment of Business | 3 | BUS 2260 | Business Communication I | 3 |
| BUS 2343 | Principles of Management | 3 | BUS 2353 | Principles of Marketing | 3 |
| BUS 2802 | Business Calculus II | 3 | BUS 2901 | Business Statistics I | 3 |
| ECO 2210 | Principles of Microeconomics | 3 | ECO 2220 | Principles of Macroeconomics | 3 |
| | | **15** | | | **15** |
| **JUNIOR** | | | **JUNIOR** | | |
| BUS 2902 | Business Statistics II | 3 | BUS 2203 | Professional Development | 2 |
| BUS 3331 | Principles of Finance | 3 | BUS 3370 | International Business | 3 |
| BUS 2261 | Business Communication II | 3 | ELECTIVE | From List B, C or D | 3 |
| MIS 3371 | Information Management | 3 | ENT 3135 | Entrepreneurship Management | 3 |
| ELECTIVE | From General Education List D | 3 | ELECTIVE | From General Education List D | 3 |
| | | **15** | | | **14** |
| **SENIOR** | | | **SENIOR** | | |
| BUS 4785 | Operations Management | 3 | BUS 4795 | Strategic Management | 3 |
| PSY 1200 | From General Education List C | 3 | BUS xxxx | Business Approved Elective | 3 |
| ENT 3355 | Comp Entrepreneurship Enterprise | 3 | ENT 4895 | Entrepreneurship Capstone Course | 3 |
| ENT 3505 | Entrepreneurship & New Ventures | 3 | ENT xxxx | ENT Approved Elective | 3 |
| PHI 2240 | From General Education List B | 3 | ELECTIVE | From List B, C or D | 3 |
| | | **15** | | | **15** |

***Minimum hours needed to obtain a Bachelor of Science in Business Administration – Entrepreneurship Concentration – 121***

***BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION – Finance Concentration*** – ENG 1100 or ENG 1101 and ENG 1102; MTH 1750; HIS 1110, HIS 1121 or 1122 plus 3 Humanities credit hours from List B; Social and Behavioral Sciences - 6 hours from 2 different disciplines from List C; Natural and Physical Sciences- 6 credit hours from List D; USS 1000 and 1 HHP Activity from List A and an additional 9 hours from List B, C or D.

The following Finance major requirements: ACC 2210 and ACC 2220, BUS 1100, BUS 1500, BUS 2200, BUS 2203, BUS 2343, BUS 2353, BUS 2260, BUS 2261, BUS 2801, BUS 2802, BUS 2901, BUS 2902, BUS 3331, BUS 3370, BUS 4785 and BUS 4795, ECO 2210, ECO 2220 and MIS 3371. Also, 9 hours from the following Finance courses: FIN 3332, FIN 3333, FIN 4431, and six hours from the following courses: FIN 2233, FIN 3334, FIN 3335, FIN 3336, FIN 3337, FIN 3338, FIN 4432, FIN 4437, FIN 4438 or FIN 4466 and 3 hours of approved electives. Students are required to earn all C's or better in their major and concentration and also maintain at least a GPA of 2.0 in their degree program.

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION CONCENTRATION IN FINANCE**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| FALL SEMESTER | | | SPRING SEMESTER | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE#** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| BUS 1100 | Contemporary American Business | 3 | BUS 1500 | Computer Applications for Business | 3 |
| ENG 1101 | Introduction to Writing for College | 4 | BUS 2801 | Business Calculus I | 3 |
| USS 1000 | Undergraduate Success Seminar | 2 | ENG 1102 | Writing and Research the Essay | 4 |
| HIS 1xxx | 1100, 1121 or 1122 | 3 | ELECTIVE | From List B, C or D | 3 |
| HHP 1xxx | HHP Activity from List A | 1 | ELECTIVE | From General Education List C | 3 |
| MTH 1750 | College Algebra | 3 | | | |
| | | **16** | | | **16** |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| ACC 2210 | Financial Accounting | 3 | ACC 2220 | Managerial Accounting | 3 |
| BUS 2200 | Legal Environment of Business | 3 | BUS 2260 | Business Communication I | 3 |
| BUS 2343 | Principles of Management | 3 | BUS 2353 | Principles of Marketing | 3 |
| BUS 2802 | Business Calculus II | 3 | BUS 2901 | Business Statistics I | 3 |
| ECO 2210 | Principles of Microeconomics | 3 | ECO 2220 | Principles of Macroeconomics | 3 |
| | | **15** | | | **15** |
| **JUNIOR** | | | **JUNIOR** | | |
| BUS 2902 | Business Statistics II | 3 | BUS 2203 | Professional Development | 2 |
| BUS 3331 | Principles of Finance | 3 | BUS 3370 | International Business | 3 |
| BUS 2261 | Business Communication II | 3 | ELECTIVE | From List B, C or D | 3 |
| MIS 3371 | Information Management | 3 | FIN 3332 | Investments | 3 |
| ELECTIVE | From General Education List D | 3 | ELECTIVE | From General Education List C | 3 |
| | | **15** | | | **14** |
| **SENIOR** | | | **SENIOR** | | |
| BUS 4785 | Operations Management | 3 | BUS 4795 | Strategic Management | 3 |
| ELECTIVE | Approved Electives | 3 | ELECTIVE | From General Education List D | 3 |
| FIN 3333 | Financial Institutions | 3 | FIN 4431 | Financial Management | 3 |
| FIN xxxx | Finance Approved Elective | 3 | FIN xxxx | Finance Approved Elective | 3 |
| PHI 2240 | From General Education List B | 3 | ELECTIVE | From List B, C or D | 3 |
| | | **15** | | | **15** |

***Minimum hours needed to obtain a Bachelor of Science in Business Administration – Finance Concentration – 121***

***BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION - Hospitality Management Concentration –*** ENG 1100 or ENG 1101 and ENG 1102; MTH 1750; HIS 1110, HIS 1121 or 1122 plus 3 Humanities credit hours from List B; Social and Behavioral Sciences - 6 hours from 2 different disciplines from List C; Natural and Physical Sciences- 6 credit hours from List D; USS 1000 and 1 HHP Activity from List A and an additional 9 hours from List B, C or D.

All Hospitality Management students are required to take the following College of Business courses: ACC 2210, ACC 2220, BUS 1100, BUS 1500, BUS 2200, BUS 2203, BUS 2260, BUS 2261, BUS 2343, BUS 2353,BUS 2801, BUS 2802, BUS 2901, BUS 2902, BUS 3331, BUS 3370, BUS 4785, BUS 4795, ECO 2210, ECO 2220 and MIS 3371; Also, Hospitality Management Concentration requirements – select 15 hours from the following courses: HMP 1100 (required), HMP 2211,HMP 2220, HMP 2222, HMP 2250,HMP 3310, HMP 3311,HMP 3330, HMP 3331, HMP 4401, HMP 4402, HMP 4411, HMP 4412, HMP 4418, HMP 4426, HMP 4436, HMP 4439, MIS 3371 and 3 hours of approved electives. Students are required to earn all C's or better in their major and concentration and also maintain at least a GPA of 2.0 in their degree program.

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION CONCENTRATION IN HOSPITALITY MANAGEMENT**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| FALL SEMESTER | | | SPRING SEMESTER | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE#** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| BUS 1100 | Contemporary American Business | 3 | BUS 1500 | Computer Applications for Business | 3 |
| ENG 1101 | Introduction to Writing for College | 4 | BUS 2801 | Business Calculus I | 3 |
| USS 1000 | Undergraduate Success Seminar | 2 | ENG 1102 | Writing and Research the Essay | 4 |
| HIS 1xxx | 1100, 1121 or 1122 | 3 | ELECTIVE | From List B, C or D | 3 |
| HHP 1xxx | HHP Activity from List A | 1 | ELECTIVE | From General Education List C | 3 |
| MTH 1750 | College Algebra | 3 | | | |
| | | **16** | | | **16** |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| ACC 2210 | Financial Accounting | 3 | ACC 2220 | Managerial Accounting | 3 |
| BUS 2200 | Legal Environment of Business | 3 | BUS 2260 | Business Communication I | 3 |
| BUS 2343 | Principles of Management | 3 | BUS 2353 | Principles of Marketing | 3 |
| BUS 2801 | Business Calculus I | 3 | BUS 2901 | Business Statistics I | 3 |
| ECO 2210 | Principles of Microeconomics | 3 | ECO 2220 | Principles of Macroeconomics | 3 |
| | | **15** | | | **15** |
| **JUNIOR** | | | **JUNIOR** | | |
| BUS 2902 | Business Statistics II | 3 | BUS 2203 | Professional Development | 2 |
| BUS 3331 | Principles of Finance | 3 | BUS 3370 | International Business | 3 |
| BUS 2261 | Business Communication II | 3 | ELECTIVE | From List B, C or D | 3 |
| MIS 3371 | Information Management | 3 | HMP 1100 | Intro to Hospitality Management | 3 |
| ELECTIVE | From General Education List D | 3 | ELECTIVE | From General Education List D | 3 |
| | | **15** | | | **14** |
| **SENIOR** | | | **SENIOR** | | |
| BUS 4785 | Operations Management | 3 | BUS 4795 | Strategic Management | 3 |
| PHI 2240 | From General Education List B | 3 | BUS xxxx | Business Approved Elective | 3 |
| HMP xxxx | HMP Option Requirement | 3 | HMP xxxx | HMP Option Requirement | 3 |
| HMP xxxx | HMP Option Requirement | 3 | HMP xxxx | HMP Option Requirement | 3 |
| ELECTIVE | From General Education List C | 3 | ELECTIVE | From List B, C or D | 3 |
| | | **15** | | | **15** |

***Minimum hours needed to obtain a Bachelor of Science in Business Administration – Hospitality Management Concentration –121***

***BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION - International Business Concentration–*** ENG 1100 or ENG 1101 and ENG 1102; MTH 1750; HIS 1110, HIS 1121 or 1122 plus 3 Humanities credit hours from List B; Social and Behavioral Sciences - 6 hours from 2 different disciplines from List C; Natural and Physical Sciences- 6 credit hours from List D; USS 1000 and 1 HHP Activity from List A and an additional 9 hours from List B, C or D.

All International Business students are required to take the following College of Business courses: ACC 2210, ACC 2220, BUS 1100, BUS 1500 BUS 2200, BUS 2203, BUS 2260, BUS 2261, BUS 2343, BUS 2353, BUS 2801, BUS 2802, BUS 2901, BUS 2902, BUS 3331, BUS 3370, BUS 4785, BUS 4795, ECO 2210, ECO 2220 and MIS 3371; Also, International Business Concentration requirements: ECO 3360, FIN 4437, MGT 4471, MKT 4467, PHI 2230 and 3 hours of approved electives. Students are required to earn all C's or better in their major and concentration and also maintain at least a GPA of 2.0 in their degree program.

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION CONCENTRATION IN INTERNATIONAL BUSINESS**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| FALL SEMESTER | | | SPRING SEMESTER | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE#** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| BUS 1100 | Contemporary American Business | 3 | BUS 1500 | Computer Applications for Business | 3 |
| ENG 1101 | Introduction to Writing for College | 4 | BUS 2801 | Business Calculus I | 3 |
| USS 1000 | Undergraduate Success Seminar | 2 | ENG 1102 | Writing and Research the Essay | 4 |
| HIS 1xxx | 1100, 1121 or 1122 | 3 | ELECTIVE | From List B, C or D | 3 |
| HHP 1xxx | HHP Activity from List A | 1 | ELECTIVE | From General Education List C | 3 |
| MTH 1750 | College Algebra | 3 | | | |
| | | **16** | | | **16** |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| ACC 2210 | Financial Accounting | 3 | ACC 2220 | Managerial Accounting | 3 |
| BUS 2200 | Legal Environment of Business | 3 | BUS 2260 | Business Communication I | 3 |
| BUS 2343 | Principles of Management | 3 | BUS 2353 | Principles of Marketing | 3 |
| BUS 2801 | Business Calculus I | 3 | BUS 2901 | Business Statistics I | 3 |
| ECO 2210 | Principles of Microeconomics | 3 | ECO 2220 | Principles of Macroeconomics | 3 |
| | | **15** | | | **15** |
| **JUNIOR** | | | **JUNIOR** | | |
| BUS 2902 | Business Statistics II | 3 | BUS 2203 | Professional Development | 2 |
| BUS 3331 | Principles of Finance | 3 | BUS 3370 | International Business | 3 |
| BUS 2261 | Business Communication II | 3 | ELECTIVE | From List B, C or D | 3 |
| MIS 3371 | Information Management | 3 | PHI 2210 | From General Education List B | 3 |
| ELECTIVE | From General Education List D | 3 | ELECTIVE | From General Education List D | 3 |
| | | **15** | | | **14** |
| **SENIOR** | | | **SENIOR** | | |
| BUS 4785 | Operations Management | 3 | BUS 4795 | Strategic Management | 3 |
| PHI 2240 | From General Education List B | 3 | BUS xxxx | Business Approved Elective | 3 |
| ECO 3360 | International Economics | 3 | FIN 4437 | International Finance | 3 |
| MKT 4467 | International Marketing | 3 | MGT 4471 | Seminar in International MGT | 3 |
| ELECTIVE | From General Education List C | 3 | ELECTIVE | From List B, C or D | 3 |
| | | **15** | | | **15** |

***Minimum hours needed to obtain a Bachelor of Science in Business Administration – International Business Concentration – 121***

***BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION – Management Concentration –*** ENG 1100 or ENG 1101 and ENG 1102; MTH 1750; HIS 1110, HIS 1121 or 1122 plus 3 Humanities credit hours from List B; Social and Behavioral Sciences - 6 hours from 2 different disciplines from List C; Natural and Physical Sciences- 6 credit hours from List D; USS 1000 and 1 HHP Activity from List A and an additional 9 hours from List B, C or D.

All Management students are required to take the following College of Business courses: ACC 2210, ACC 2220, BUS 1100, BUS 1500, BUS 2200, BUS 2203, BUS 2260, BUS 2261, BUS 2343, BUS 2353, BUS 2801, BUS 2802, BUS 2901, BUS 2902, BUS 3331, BUS 3370, BUS 4785, BUS 4795, ECO 2210, ECO 2220 and MIS 3371; Also, Management Concentration requirements: MGT 3380, 3381, MGT 4441, MGT 4460; Management Electives: - choose 3 hours: MGT 4471, MGT 4479, MGT 4497 and 3 hours of approved electives. Students are required to earn all C's or better in their major and concentration and also maintain at least a GPA of 2.0 in their degree program.

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION CONCENTRATION IN MANAGEMENT**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| FALL SEMESTER | | | SPRING SEMESTER | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE#** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| BUS 1100 | Contemporary American Business | 3 | BUS 1500 | Computer Applications for Business | 3 |
| ENG 1101 | Introduction to Writing for College | 4 | BUS 2801 | Business Calculus I | 3 |
| USS 1000 | Undergraduate Success Seminar | 2 | ENG 1102 | Writing and Research the Essay | 4 |
| HIS 1xxx | 1100, 1121 or 1122 | 3 | ELECTIVE | From List B, C or D | 3 |
| HHP 1xxx | HHP Activity from List A | 1 | ELECTIVE | From General Education List C | 3 |
| MTH 1750 | College Algebra | 3 | | | |
| | | **16** | | | **16** |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| ACC 2210 | Financial Accounting | 3 | ACC 2220 | Managerial Accounting | 3 |
| BUS 2200 | Legal Environment of Business | 3 | BUS 2260 | Business Communication I | 3 |
| BUS 2343 | Principles of Management | 3 | BUS 2353 | Principles of Marketing | 3 |
| BUS 2801 | Business Calculus I | 3 | BUS 2901 | Business Statistics I | 3 |
| ECO 2210 | Principles of Microeconomics | 3 | ECO 2220 | Principles of Macroeconomics | 3 |
| | | **15** | | | **15** |
| **JUNIOR** | | | **JUNIOR** | | |
| BUS 2902 | Business Statistics II | 3 | BUS 2203 | Professional Development | 2 |
| BUS 3331 | Principles of Finance | 3 | BUS 3370 | International Business | 3 |
| BUS 2261 | Business Communication II | 3 | ELECTIVE | From General Education List D | 3 |
| MIS 3371 | Information Management | 3 | ELECTIVE | From List B, C or D | 3 |
| ELECTIVE | From General Education List D | 3 | MGT 3380 | Human Resources Management | 3 |
| | | **15** | | | **14** |
| **SENIOR** | | | **SENIOR** | | |
| BUS 4785 | Operations Management | 3 | BUS 4795 | Strategic Management | 3 |
| PHI 2240 | From General Education List B | 3 | BUS xxxx | Business Approved Elective | 3 |
| MGT 3381 | Organizational Behavior | 3 | MGT 4460 | Small Business Management | 3 |
| MGT 4441 | Labor Management Relations | 3 | MGT xxxx | MGT Elective | 3 |
| ELECTIVE | From General Education List C | 3 | ELECTIVE | From List B, C or D | 3 |
| | | **15** | | | **15** |

***Minimum hours needed to obtain a Bachelor of Science in Business Administration – Management Concentration –121***

***BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION - Management Information Systems Concentration –*** ENG 1100 or ENG 1101 and ENG 1102; MTH 1750; HIS 1110, HIS 1121 or 1122 plus 3 Humanities credit hours from List B; Social and Behavioral Sciences - 6 hours from 2 different disciplines from List C; Natural and Physical Sciences- 6 credit hours from List D; USS 1000 and 1 HHP Activity from List A and an additional 9 hours from List B, C or D.

All Management Information Systems students are required to take the following College of Business courses: ACC 2210, ACC 2220, BUS 1100, BUS 1500, BUS 2200, BUS 2203, BUS 2260, BUS 2261, BUS 2343, BUS 2353, BUS 2801, BUS 2802, BUS 2901, BUS 2902, BUS 3331,BUS 3370, BUS 4785, BUS 4795, ECO 2210, ECO 2220 and MIS 3371; Also, Management Information Systems option requirements: MIS 4461, MIS 4462; Management Information Systems Electives – Choose 6 hours: MIS 4465, 4491, 4497 and 3 hours of approved electives:(MIS 2251, MIS 2252, 2253, MIS 2254 are included.) Students are required to earn all C's or better in their major and concentration and also maintain at least a GPA of 2.0 in their degree program.

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION CONCENTRATION IN MANAGEMENT INFORMATION SYSTEMS**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| FALL SEMESTER | | | SPRING SEMESTER | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE#** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| BUS 1100 | Contemporary American Business | 3 | BUS 1500 | Computer Applications for Business | 3 |
| ENG 1101 | Introduction to Writing for College | 4 | BUS 2801 | Business Calculus I | 3 |
| USS 1000 | Undergraduate Success Seminar | 2 | ENG 1102 | Writing and Research the Essay | 4 |
| HIS 1xxx | 1100, 1121 or 1122 | 3 | ELECTIVE | From List B, C or D | 3 |
| HHP 1xxx | HHP Activity from List A | 1 | ELECTIVE | From General Education List C | 3 |
| MTH 1750 | College Algebra | 3 | | | |
| | | **16** | | | **16** |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| ACC 2210 | Financial Accounting | 3 | ACC 2220 | Managerial Accounting | 3 |
| BUS 2200 | Legal Environment of Business | 3 | BUS 2260 | Business Communication I | 3 |
| BUS 2343 | Principles of Management | 3 | BUS 2353 | Principles of Marketing | 3 |
| BUS 2801 | Business Calculus I | 3 | BUS 2901 | Business Statistics I | 3 |
| ECO 2210 | Principles of Microeconomics | 3 | ECO 2220 | Principles of Macroeconomics | 3 |
| | | **15** | | | **15** |
| **JUNIOR** | | | **JUNIOR** | | |
| BUS 2902 | Business Statistics II | 3 | BUS 2203 | Professional Development | 2 |
| BUS 3331 | Principles of Finance | 3 | BUS 3370 | International Business | 3 |
| MIS 3371 | Information Management | 3 | MIS xxx | MIS Approved Elective | 3 |
| BUS 2261 | Business Communication II | 3 | MIS 3372 | Bus Program &Information Systems | 3 |
| ELECTIVE | From General Education List D | 3 | ELECTIVE | From General Education List D | 3 |
| | | **15** | | | **14** |
| **SENIOR** | | | **SENIOR** | | |
| BUS 4785 | Operations Management | 3 | BUS 4795 | Strategic Management | 3 |
| PHI 2240 | From General Education List B | 3 | ELECTIVE | From List B, C or D | 3 |
| MIS 4461 | Information Systems Analysis | 3 | BUS xxxx | Business Approved Elective | 3 |
| PSY 1200 | From General Education List C | 3 | MIS 4462 | Syst Design & Database Implement | 3 |
| ELECTIVE | From List B, C or D | 3 | MIS xxxx | MIS Approved Elective | 3 |
| | | **15** | | | **15** |

***Minimum hours needed to obtain a Bachelor of Science in Business Administration – Management Information Systems Concentration – 121***

***BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION – Marketing–*** ENG 1100 or ENG 1101 and ENG 1102; MTH 1750; HIS 1110, HIS 1121 or 1122 plus 3 Humanities credit hours from List B; Social and Behavioral Sciences - 6 hours from 2 different disciplines from List C; Natural and Physical Sciences- 6 credit hours from List D; USS 1000 and 1 HHP Activity from List A and an additional 9 hours from List B, C or D.

All Marketing students are required to take the following College of Business courses: ACC 2210, ACC 2220, BUS 1100, BUS 1500, BUS 2200, BUS 2203, BUS 2260, BUS 2261, BUS 2343, BUS 2353, BUS 2801, BUS 2802, BUS 2901, BUS 2902, BUS 3331, BUS 3370, BUS 4785, BUS 4795, ECO 2210, ECO 2220 and MIS 3371; Also, Marketing option requirements: MKT 3396, 4451, 4455, 4465 Marketing Electives – choose 3 hours: MKT 3354, 3355, 3390, 3395, 4467 and 3 hours of approved electives. Students are required to earn all C's or better in their major and concentration and also maintain at least a GPA of 2.0 in their degree program.

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION CONCENTRATION IN MARKETING**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| FALL SEMESTER | | | SPRING SEMESTER | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE#** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| BUS 1100 | Contemporary American Business | 3 | BUS 1500 | Computer Applications for Business | 3 |
| ENG 1101 | Introduction to Writing for College | 4 | BUS 2801 | Business Calculus I | 3 |
| USS 1000 | Undergraduate Success Seminar | 2 | ENG 1102 | Writing and Research the Essay | 4 |
| HIS 1xxx | 1100, 1121 or 1122 | 3 | ELECTIVE | From List B, C or D | 3 |
| HHP 1xxx | HHP Activity from List A | 1 | ELECTIVE | From General Education List C | 3 |
| MTH 1750 | College Algebra | 3 | | | |
| | | **16** | | | **16** |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| ACC 2210 | Financial Accounting | 3 | ACC 2220 | Managerial Accounting | 3 |
| BUS 2200 | Legal Environment of Business | 3 | BUS 2260 | Business Communication I | 3 |
| BUS 2343 | Principles of Management | 3 | BUS 2353 | Principles of Marketing | 3 |
| BUS 2801 | Business Calculus I | 3 | BUS 2901 | Business Statistics I | 3 |
| ECO 2210 | Principles of Microeconomics | 3 | ECO 2220 | Principles of Macroeconomics | 3 |
| | | **15** | | | **15** |
| **JUNIOR** | | | **JUNIOR** | | |
| BUS 2902 | Business Statistics II | 3 | BUS 2203 | Professional Development | 2 |
| BUS 3331 | Principles of Finance | 3 | BUS 3370 | International Business | 3 |
| BUS 2261 | Business Communication II | 3 | ELECTIVE | From List B, C or D | |
| MIS 3371 | Information Management | 3 | MKT 3390 | Retail Merchandising | 3 |
| ELECTIVE | From General Education List D | 3 | ELECTIVE | From General Education List D | 3 |
| | | **15** | | | **14** |
| **SENIOR** | | | **SENIOR** | | |
| BUS 4785 | Operations Management | 3 | BUS 4795 | Strategic Management | 3 |
| PHI 2240 | From General Education List B | 3 | BUS xxxx | Business Approved Elective | 3 |
| MKT 3396 | Consumer Behavior | 3 | MKT 4455 | Marketing Research | 3 |
| MKT 4451 | Advertising | 3 | MKT xxxx | Marketing Elective | 3 |
| ELECTIVE | From General Education List C | 3 | ELECTIVE | From List B, C or D | 3 |
| | | **15** | | | **15** |

***Minimum hours needed to obtain a Bachelor of Science in Business Administration – Marketing Concentration – 121***

# BACHELOR OF SCIENCE IN ACCOUNTING


*The College of Business*
*KeyBank Stock Trading Room*

**DOUBLE MAJORS WITH BUSINESS ADMINISTRATION**

Given the many overlapping requirements in the degree programs in Economics and Business Administration, it is possible for a student to major in both by focusing the choice of elective courses in these areas. Economics courses can be electives for the Business Administration major and business courses may serve as electives for the Economics major.

**CAREER PROSPECTS**

In general, department graduates pursue advanced graduate school studies in Accounting, Finance, and Economics or begin their professional careers. Graduates go directly to the professional labor market prepared to develop successful careers with the Federal Reserve System, national and state banks, state and federal government agencies, private industry, as well as, financial services. These graduates are prepared for research and consulting work in corporate enterprises, labor unions, private research organizations and law. These graduates are also prepared for post graduate studies.

**BACHELOR OF SCIENCE ACCOUNTING PROGRAM DESCRIPTION**

The accounting curriculum prepares students for successful careers in business, government, and public accounting. The courses seek to prepare the students for direct entry into the accounting environment with minimal on-the-job training, as well as prepare students for graduate studies. Technology-based instruction is an integral part of the curriculum.

**DEGREE REQUIREMENTS**

Bachelor of Science in Accounting - University (General Education) and Business Administration Department Requirements listed previously and the following Accounting requirements: ACC 2210, ACC 2220, ACC 3301, ACC 3302, ACC 3330, ACC 3340, ACC 3360, ACC 4420, ACC 4430, and ACC 4495, BUS 4785, ECO 3320, and MIS 2251 and MIS 2252, and approved electives adding to a total of 124 hours. Students are required to earn all C's or better in their major and concentration and also maintain at least a GPA of 2.25 in their degree program.

Inside the KeyBank Stock Trading Room

***BACHELOR OF SCIENCE IN ACCOUNTING –*** ENG 1100 or ENG 1101 and ENG 1102; MTH 1750; HIS 1110, HIS 1121 or 1122 plus 3 Humanities credit hours from List B; Social and Behavioral Sciences - 6 hours from 2 different disciplines from List C; Natural and Physical Sciences- 6 credit hours from List D; USS 1000 and 1 HHP Activity from List A and an additional 9 hours from List B, C or D.

All accounting students are required to take the following College of Business courses: BUS 1100, BUS 2200, BUS 2203, BUS 2260, BUS 2343, BUS 2353, BUS 2801, BUS 2802, BUS 2901, BUS 2902, BUS 3331, BUS 3370, BUS 4785, ECO 2210, ECO 2220, ECO 3320, MIS 2251, MIS 2252; and Accounting major requirements: ACC 2210, ACC 2220, ACC 3301, ACC 3302, ACC 3330, ACC 3340, ACC 3360, ACC 4420, ACC 4430, ACC 4450, ACC 4495. A total of 123 semester hours is the minimum for a Bachelor of Science degree in Accounting. Students are required to earn all C's or better in their major and concentration and also maintain at least a GPA of 2.0 in their degree program.

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF SCIENCE IN ACCOUNTING**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| FALL SEMESTER | | | SPRING SEMESTER | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE#** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| BUS 1100 | Contemporary American Business | 3 | ENG 1102 | Writing and Research the Essay | 4 |
| ENG 1101 | Introduction to Writing for College | 4 | BUS 1500 | Computer Applications for Business | 3 |
| USS 1000 | Undergraduate Success Seminar | 2 | MTH 1750 | College Algebra | 3 |
| HIS 1xxx | 1100, 1121 or 1122 | 3 | ELECTIVE | From General Education List B | 3 |
| HHP 1xxx | HHP Activity from List A | 1 | ELECTIVE | From General Education List C | 3 |
| ELECTIVE | From General Ed List B, C or D | 3 | | | |
| | | **16** | | | **16** |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| ACC 2210 | Financial Accounting | 3 | ACC 2220 | Managerial Accounting | 3 |
| BUS 2200 | Legal Environment of Business | 3 | BUS 2260 | Business Communication | 3 |
| BUS 2801 | Business Calculus I | 3 | BUS 2802 | Business Calculus II | 3 |
| ECO 2210 | Principles of Microeconomics | 3 | BUS 2203 | Professional Development | 2 |
| MIS 2252 | Spreadsheets for Bus. Analysis | 3 | ECO 2220 | Principles of Macroeconomics | 3 |
| | | | ELECTIVE | From General Education List D | 3 |
| | | **15** | | | **17** |
| **JUNIOR** | | | **JUNIOR** | | |
| ACC 3301 | Intermediate Accounting I | 3 | ACC 3302 | Intermediate Accounting II | 3 |
| ACC 3340 | Cost Accounting | 3 | ACC 3360 | Accounting Information System | 3 |
| BUS 2343 | Principles of Management | 3 | BUS 3331 | Principles of Finance | 3 |
| BUS 2901 | Business Statistics I | 3 | BUS 2902 | Business Statistics II | 3 |
| ELECTIVE | From General Education List D | 3 | BUS 2353 | Principles of Marketing | 3 |
| | | **15** | | | **15** |
| **SENIOR** | | | **SENIOR** | | |
| ACC 3330 | Advanced Accounting | 3 | ACC 4430 | Auditing | 3 |
| ACC 4420 | Federal Income Tax | 3 | ACC 4495 | Seminars in Accounting | 3 |
| BUS 4785 | Operations Management | 3 | BUS 3370 | International Business | 3 |
| ELECTIVE | From List B, C or D | 3 | ELECTIVE | From General Education List C | 3 |
| FIN 4442 | Financial Statement Analysis | 3 | ELECTIVE | From List B, C or D | 3 |
| | | **15** | | | **15** |

***Minimum hours needed to obtain a Bachelor of Science in Accounting – 124***

# COLLEGE OF EDUCATION

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**Joshua I. Smith Center for Education and Natural Sciences**
**Room 211A**
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**Director of Accreditation**
**Room 213 A**
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**Liaison, Xenia Community School District**
**College of Education/Xenia Schools Partnership**
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**Teacher Education Advisement and Partnership Center (TEAP-C)**
**Shirley Farrar, Director**
**Room 217A**
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**Renita Tolbert, Program Manager**
**Room 220F**
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**Email:** rtolbert@centralstate.edu

**Karen Garmon, Administrative Coordinator**
**Room 220E**
**Phone: (937) 376-6259**
**Email:** kgarmon@centralstate.edu

## Accreditation

The College of Education is in candidacy for accreditation by the Council for Accreditation of Educator Preparation (CAEP) and the educator preparation programs are approved by the Ohio Department of Higher Education.

## The College Mission

The Mission of the College of Education is to prepare educators who continuously reflect on their effectiveness in serving as facilitators of learning for the diverse student populations. The College is actively committed to the preparation of educators who observe students in various learning situations and, as a result, apply appropriate professional strategies to enhance the teaching-learning environment.

## College Programs

The College of Education consists of two departments: Professional Education; and Health and Human Performance. The College offers baccalaureate degree programs that prepare candidates for teacher license in the areas listed below and in preparation for career opportunities in the areas of Recreation and Exercise Science. The following programs prepare students for teaching license for the levels and grades indicated.

- Agricultural Education 4-12
- Early Childhood Education, PK- 3
- Integrated Language Arts Education, 7-12
- Integrated Mathematics Education, 7-12
- Integrated Social Studies, 7-12
- Intervention Specialist, K-12 (mild to moderate)
- Life Science Education, 7-12
- Middle Childhood Education, 4-9
  Teaching Areas: Language Arts/Reading Education; Mathematics Education; Science Education; Social Studies Education
- Music Education, K-12 (In collaboration with the College of Humanities, Arts and Social Sciences)
- Physical Science Education, 7-12
- Recreation
- Visual Arts Education, K-12 (In collaboration with the College of Humanities, Arts and Social Sciences)

## Conceptual Framework

Educator preparation in the College of Education is undergirded by the Conceptual Framework. The theme of the Conceptual Framework is: *Preparing Reflective Educators Who Practice Evidence-based Instruction by Advocating and Demonstrating Appropriate Learning Strategies for Diverse Student Populations*. The Conceptual Framework has three elements that define the content and clinical experiences that comprise the design of educator preparation at Central State University. The three Elements are: Knowledge, Practice and Professionalism. Teacher candidates are prepared to engage in reflective practice that incorporates the psychological, cultural, social, and economic factors that impact students' learning.

# DEPARTMENT OF PROFESSIONAL EDUCATION

**Department Chair: Rajeev Swami, Ed.D.**
**Joshua I. Smith Center for Education and Natural Sciences**
**Room 213A**
**Phone: (937) 376-6643**
**E-mail: rswami@centralstate.edu**

**Sheryl Evans, Data Coordinator**
**Room 213F**
**Phone: (937) 376-6221**
**E-mail: sevans@centralstate.edu**

**Alma Brown, Secretary to the Chair**
**Room 213**
**Phone: (937) 376-6176**
**E-mail: abrown@centralstate.edu**

**The Department of Professional Education is the primary unit within the College of Education to prepare educators as teachers for Pre-Kindergarten level to grade 12 classrooms. The Department has collaborative partnerships with Dayton Public Schools, Yellow Spring Exempted Village School District, and Xenia Community Schools for the purpose of providing clinical experiences and program development.**

**FACULTY**
Rajeev Swami, Ed.D., Chair/Professor
Kwabena Ofori-Attah, Ph.D., Associate Professor
Nathan Boles, M.Ed. Assistant Professor
Lap Nguyen, Ph.D., Assistant Professor
Joshua Singer, Ph.D., Assistant Professor
Sandra Summerfield, Ed.D., Assistant Professor
Katrina Swinehart, M.S., Assistant Professor

**STAFF**
Sherry Evans, Data Coordinator
Alma Brown, Secretary to the Chair

**Educator Preparation Programs**
The Department of Professional Education offers and coordinates degree programs leading to teaching license for the subject areas and grade levels listed:

- Agricultural Education
- Integrated Language Arts Education, grades 7-12
- Integrated Mathematics Education, grades 7-12
- Integrated Social Studies Education, grades 7-12
- Life Science Education, grades 7-12
- Physical Science Education, grades 7-12
- Early Childhood Education, Pre-Kindergarten level through grade 3
- Intervention Specialist Education – (Mild/Moderate) Kindergarten level through grade 12
- Middle Childhood Education, (Select 2 Teaching Areas) - Language Arts, Social Studies, Mathematics, Science, grades 4-9
- Music Education, K-12 (In collaboration with the College of Humanities, Arts and Social Sciences)
- Recreation

The Teacher Education Programs in Music Education is coordinated by the College of Education and the Department of Professional Education. The Program is offered by the Department of Fine and Performing Arts in the College of Humanities, Arts and Social Sciences. Information about the program is also available in the College of Humanities, Arts, and Social Sciences section of this Catalog.

**Post Baccalaureate Route**
The Department of Professional Education offers a post-baccalaureate route to teacher licensure. The post-baccalaureate route is designed for individuals who have completed the baccalaureate degree from an accredited institution with a minimum cumulative grade point average of 2.75, and who wish to obtain an initial teaching license. Individuals interested in seeking admission to Post Baccalaureate status should consult the University Office of Admissions or the appropriate College of Education Department.

**Transfer Students**
Students transferring from another institution must submit an official transcript, pay confirmation fee, and obtain a transcript evaluation before program admission.

## Degree Programs

**Integrated Language Arts Education Program**
**Program Liaison: Dr. Joshua Singer,**
**Room 213**
**Phone: (937) 376-6315**
The Integrated Language Arts Education Program leads to the Bachelor of Science in Education Degree and prepares candidates to qualify for the Ohio license

to teach Integrated English and Language Arts in grades 7 – 12.

In addition to general education and professional pedagogy, candidates are required to complete content courses in Communication; Drama; Literature courses in African, African-American, American, World, and British. Minimum 12 weeks of clinical experience through Student Teaching are required.

**Program Requirements**

To pursue a major in Integrated Language Arts Education Program, students must first be admitted to Teacher Education (see Admission to Teacher Education section of this Catalog). Following admission to Teacher Education, candidates will complete content and pedagogy courses and all clinical experiences (see Suggested Program of Study). A cumulative grade point average of 3.00 is required for admission. Candidates must maintain a cumulative grade point average of 3.00 for graduation. Effective Spring Semester, 2016, candidates must satisfactorily complete the Ohio Assessments for Educators (OAE) before admission to Student Teaching is approved. A grade of less than "C" in any professional education course or clinical experience will not be accepted. In addition, candidates must submit to TEAP-C the results of a current BCII/FBI Background Check that clears the candidate for Program participation. Each Background Check is valid for one calendar year. Therefore, a candidate may need a minimum of two BCII/FBI Background Checks before completing the Program. For more information about BCII/FBI Background Checks, candidates should contact their advisors and/or TEAP-C.

**Field and Clinical Experiences**

The Program requires three levels of field and clinical experiences in the appropriate school setting: Level 1 - observation and data collection; Level 2 - application of methods strategies practicum; and Level 3 - Student Teaching Clinical. Successful completion of all Field and Clinical experiences are required for graduation. Candidates should consult the appropriate Suggested Program of Study to identify those courses that require field work.

**Candidate Monitoring**

The Unit Assessment System collects data that are analyzed to monitor candidates' academic progression from admission through successful completion of the Program. Data on candidates' progression are collected at various points of Program delivery, including different Program courses, Field Experiences and Student Teaching.

***BACHELOR OF SCIENCE IN Education – Integrated Language Arts –*** ENG 1100 or ENG 1101 and ENG 1102; MTH 1750; HIS 1110 or HIS 1121 or 1122 plus 3 Humanities credit hours from List B; Social and Behavioral Sciences - 6 hours from 2 different disciplines from List C; Natural and Physical Sciences- 6 credit hours from 2 different disciplines from List D, USS 2000, 5-6 hours electives and 1 credit hour of Physical Activity from List A.
The following Language Arts Education requirements: COM 2200, COM 2214, DRM 2201 or DRM 2202, EDU 2200, EDU 2300, EDU 2500, EDU 2600 or EDU 3262, EDU 3263, EDU 3264, EDU 3265, EDU 3266, EDU 3325, EDU 3310,EDU 3325, EDU 3330, EDU 3361, EDU 4491, and EDU 4895. Also, the following English requirements: ENG elective, ENG 2020, ENG 2200, ENG 2020 or ENG3021, ENG 3030, ENG 3040, ENG 3100, ENG 4015, ENG 4050 or ENG 4060, ENG 4080, and ENG 4895. Students are required to earn all C's or better in their major and education courses and also maintain at least a GPA of 3.00 in their degree program.

**SUGGESTED CURRICULUM FOR THE DEGREE OF BACHELOR OF SCIENCE IN EDUCATION DEGREE**

**Integrated Language Arts Education Program**

The curriculum below is to be used in consultation with the student's advisor. The student must be familiar with the University requirements, the General Education Requirements and Special Requirements for the above degree.

| **FIRST YEAR** | | | |
|---|---|---|---|
| **Fall Semester** | **Credit Hours** | **Spring Semester** | **Credit Hours** |
| ENG 1100 –Intro to Writing/Reading for College **OR** ENG 1101 – Intro to Writing for College | 4/5 | ENG 1102 – Writing/Researching the Essay | 4 |
| MTH 1750 – College Algebra **OR** 1550 – Modern Applications of Mathematics | 3 | List C - COM 2200 – Intro to Mass Communication | 3 |
| HIS 1110 – Into to History of Africans in U.S **OR** HIS 1121 – Global History to 1877 **OR** HIS 1122 – Global History Since 1877 **OR** List B Course | 3 | HIS 1110 – Into to History of Africans in U.S **OR** HIS 1121 – Global History to 1877 **OR** HIS 1122 – Global History Since 1877 **OR** List B Course | 3 |
| USS 1000 – Undergraduate Success Seminar | 2 | ENG 2200 – Intro to Literary Studies | 3 |
| EDU 2600 – Introduction to Teacher Education OR EDU 3262 –Educational Foundations | 3 | Elective List D – Science From two or more disciplines | 3 |
| ***Total Credits*** | **15/16** | ***Total Credits*** | **16** |
| **SECOND YEAR** | | | |
| **Fall Semester** | **Credit Hours** | **Spring Semester** | **Credit Hours** |
| Elective List D – Science From two or more disciplines | 3 | List E -HHP 1000 – Health and Wellness | 2 |
| List C- EDU 2300 – Educational Psychology | 3 | ENG 2020 – Vocabulary Development and Applications | 3 |
| ENG 3040 - British Literature I (Fall) | 3 | ENG 3020 – African American Literature I OR ENG 3021 – African American Literature II | 3 |
| DRM 2201 – Dev. Of Drama Tragedy (Fall) Or DRM 2202 – Development of Drama Comedy | 3 | ENG 4015–Advanced Research Writing | 3 |
| EDU 2500 Professional Education Seminar | 2 | List C- Elective | 3 |
| Elective – English | 3 | List A- HHP- Physical Activity | 1 |
| ***Total Credits*** | **17** | ***Total Credits*** | **15** |
| **THIRD YEAR** | | | |
| **Fall Semester** | **Credit Hours** | **Spring Semester** | **Credit Hours** |
| COM 2214 – Public Speaking | 3 | ENG 4080-Shakespeare & His Influence (Spring) | 3 |
| EDU 3263 – Classroom Management/Field | 3 | EDU 3264 – Multicultural Education | 3 |
| ENG 3030 - American Literature I (Fall) | 3 | EDU 3266 – Individuals w/Special Needs/Field | 3 |
| ENG 3100- Literary Criticism Theory/Practice | 3 | EDU 3265 – Educational Technology | 3 |
| EDU 2200 – Intro to Teaching Reading | 3 | EDU 3310 –Language and Literacy/Microteaching | 3 |
| ***Total Credits*** | **15** | ***Total Credits*** | **15** |
| **FOURTH YEAR** | | | |
| **Fall Semester** | **Credit Hours** | **Spring Semester** | **Credit Hours** |
| EDU 3361 – MCE & AYA Language Arts Methods/Field | 3 | EDU 4491 - Student Teaching | 9 |
| ENG 4050–Forms/Genres: Novel OR ENG 4060 – Forms/ Genres: Poetry | 3 | EDU 4895 - Capstone Seminar | 3 |
| ENG 4895 – Senior Capstone Seminar | 3 | | |
| EDU 3330 – Reading in the Content Area/Microteaching | 3 | ***Total Credits*** | **12** |
| EDU 3325 – Measurement & Assessment | 3 | | |
| ***Total Credits*** | **15** | **Total Degree Hours** | **120** |

Effective Fall 2019 See Course Description Section for descriptions of the courses

* FBI = Federal Bureau of Investigation; BCII = Ohio Bureau of Criminal Identification and Investigation

Candidates are advised to obtain a Suggested Program of Study from their advisor. Students must complete Core Professional Education courses successfully.

***Ohio Assessments for Educators* (OAE) Assessment of Professional Knowledge Assessment of Content Knowledge**

The OAE assesses candidates' mastery of professional knowledge and content knowledge. Passing scores are required before placement in Student Teaching and Program completion. Detailed information about the OAE is available at http://www.oh.nesinc.com. Additional information and supplemental instruction sessions are provided by TEAP-C. Candidates are encouraged to consult with TEAP-C to prepare for successful completion of the OAE requirement.

**Student Responsibility**

Candidates in the Program are required to meet regularly with their advisor. Candidates are required to comply with all regulations stipulated by the University, the College of Education, and the Department of Professional Education. Though expected to seek academic advisement and guidance, candidates are ultimately responsible for satisfying all degree and licensure requirements.

Candidates, in consultation with their advisor, must submit an application for graduation at a time stipulated by the Department and the University.

**Integrated Mathematics Education Program**
**Program Liaison: Dr. Rajeev Swami**
**Room 213 A**
**Phone: (937) 376-6643**

The Integrated Mathematics Education Program leads to the Bachelor of Science in Education Degree and prepares candidates to qualify for the Ohio license to teach Integrated Mathematics, grades 7 – 12.

In addition to general education and professional pedagogy, candidates are required to complete content courses in Computer Science, Probability & Statistics, Trigonometry, Calculus, Linear Algebra, Multivariate Calculus, Differential Equations, Algebraic Structures, Discrete Structures and the History of Mathematics, Mathematics Methods Practicum. Fifteen weeks of clinical experience through Student Teaching are required.

**Program Requirements:**

To pursue a major in Integrated Mathematics Education Program, students must first be admitted to Education Preparation (see Admission to Educator Preparation section of this catalog). Following admission to Educator Preparation, candidates will complete content and pedagogy courses and all clinical experiences (see Suggested Program of Study). A cumulative grade point average of 3.00 is required for admission. Candidates must maintain a cumulative grade point average of 2.75 for graduation. Effective Spring Semester 2016, candidates must satisfactorily complete the Ohio Assessments for Educators (OAE) before admission to Student Teaching is approved. A grade of less than "C" in any professional education course or clinical experience will not be accepted. In addition, candidates' must submit to TEAP-C the results of a current BCII/FBI Background Check that clears the candidate for Program participation. Each Background Check is valid for one calendar year. Therefore, a candidate may need a minimum of two BCII/FBI Background Checks before completing the Program. For more information about BCII/FBI Background Check, candidates should contact their advisor and/or TEAP-C.

**Field and Clinical Experiences**

The Program requires three levels of field and clinical experiences in the appropriate school setting: Level 1 - observation and data collection; Level 2 - application of methods strategies practicum; and Level 3 - Student Teaching Clinical experience. Successful completion of all Field and Clinical experiences is required for graduation. Candidates should consult the appropriate Suggested Program of Study to identify those courses that require field work.

**Candidate Monitoring**

The Unit Assessment System collects data that are analyzed to monitor candidates' academic progression from admission through successful completion of the Program. Data on candidates' progression are collected at various points of Program delivery, including different Program courses, Field Experiences, and Student Teaching.

***BACHELOR OF SCIENCE IN Education – Integrated Mathematics –*** ENG 1100 or ENG 1101 and ENG 1102; MTH 1750; HIS 1110 or HIS 1121 or 1122 plus 3 Humanities credit hours from List B; Social and Behavioral Sciences - 6 hours from 2 different disciplines from List C; Natural and Physical Sciences- 6 credit hours from 2 different disciplines from List D, USS 2000, 5-6 hours electives and 1 credit hour of Physical Activity from List A.

The following Mathematics Education requirements: CPS 1191, EDU 2200, EDU 2300, EDU 2500, EDU 2600 or EDU 3262, EDU 3263, EDU 3264, EDU 3265, EDU 3266, EDU 3325, EDU 3330, EDU 3362, EDU 4491, and EDU 4895, HHP 1000. Also, the following Mathematics requirements: MTH 2001, MTH 2002, MTH 2501, MTH 2502, MTH 2503, MTH 3000, MTH 3001, MTH 3002, MTH 3110, MTH 3510, and MTH 3610. Students are required to earn all C's or better in their major and education courses and also maintain at least a GPA of 3.00 in their degree program.

**SUGGESTED CURRICULUM FOR THE DEGREE OF BACHELOR OF SCIENCE IN EDUCATION DEGREE**
**Integrated Mathematics Education Program**

The curriculum below is to be used in consultation with the student's advisor. The student must be familiar with the University requirements, the General Education Requirements and Special Requirements for the above degree.

| **FIRST YEAR** | | | |
|---|---|---|---|
| **Fall Semester** | **Credit Hours** | **Spring Semester** | **Credit Hours** |
| ENG 1100 –Intro to Writing/Reading for College **OR** ENG 1101 – Intro to Writing for College | 5/4 | ENG 1102 – Writing/Researching the Essay | 4 |
| MTH 1750 – College Algebra | 3 | MTH 2501 - Trigonometry | 4 |
| HIS 1110 – Into to History of Africans in U.S **OR** HIS 1121 – Global History to 1877 **OR** HIS 1122 – Global History Since 1877 **OR** List B Course | 3 | HIS 2201 – History of the U.S. to 1877 **OR** HIS 2202 – History of the U.S. since 1877 **OR** List B Course | 3 |
| USS 1000 – Undergraduate Success Seminar | 2 | List A - HHP Activity Elective | 1 |
| EDU 2600 –Introduction to Teacher Education **OR** EDU 3262 – Educational Foundations | 3 | List D- BIO 1100–Organismal Biology **OR** CHM 1650- Intro to Forensic Science | 4 |
| ***Total Credits*** | **15/16** | ***Total Credits*** | **16** |
| **SECOND YEAR** | | | |
| **Fall Semester** | **Credit Hours** | **Spring Semester** | **Credit Hours** |
| MTH 2001 - Probability & Statistics I | 3 | MTH 2002 - Probability & Statistics II | 3 |
| MTH 2502 – Calculus I | 4 | MTH 2503 – Calculus II | 5 |
| List A- CPS 1191 – Computer Science I | 4 | List D – Natural/Physical Sciences Elective | 3 |
| EDU 2500 Professional Education Seminar | 2 | EDU 3265 – Educational Technology | 3 |
| List C- EDU 2300 – Educational Psychology | 3 | HHP – 1000- Health & Wellness | 2 |
| ***Total Credits*** | **16** | ***Total Credits*** | **16** |
| **THIRD YEAR** | | | |
| **Fall Semester** | **Credit Hours** | **Spring Semester** | **Credit Hours** |
| MTH 3001 – Linear Algebra | 3 | List C - Social/Behavioral Sciences Elective | 3 |
| MTH 3110 – Differential Equations | 4 | MTH 3002 – Calculus III | 3 |
| EDU 3263 – Classroom Management/Field | 3 | MTH 3610 – Intro to Discrete Structures | 3 |
| EDU 2200 – Intro to teaching of reading | 3 | EDU 3330 – Reading in the Content Area | 3 |
| EDU 3263– Multicultural Education | 3 | EDU 3266 –Individual w/Special Needs/Field | 3 |
| ***Total Credits*** | **16** | ***Total Credits*** | **15** |
| **FOURTH YEAR** | | | |
| **Fall Semester** | **Credit Hours** | **Spring Semester** | **Credit Hours** |
| EDU 3362 – AYA/MCE Math Methods/Field | 3 | EDU 4491 - Student Teaching | 9 |
| EDU 3325 – Measurement & Assessment | 3 | EDU 4895 - Capstone Seminar | 3 |
| MTH 3510 – Abstract Algebra I | 3 | | |
| MTH 3000 – Geometry for Teachers | 3 | ***Total Credits*** | **12** |
| Elective - | 3 | | |
| ***Total Credits*** | **15** | **Total Degree Hours** | **121-122** |

Effective Fall 2019 See Course Description Section for descriptions of the courses

* FBI = Federal Bureau of Investigation; BCII = Ohio Bureau of Criminal Identification and Investigation

Candidates are advised to obtain a Suggested Program of Study from their advisor.

Students must complete Core Professional Education courses successfully.

**Ohio Assessments for Educators (OAE)**
**Assessment of Professional Knowledge**
**Assessment of Content Knowledge**
The OAE assesses candidates' mastery of content knowledge and professional knowledge. Passing scores are required before placement in Student Teaching and Program completion. Detailed information about the OAE is available at http://www.oh.nesinc.com. Additional information and supplemental instruction sessions are provided by TEAP-C. Candidates are encouraged to consult with TEAP-C to prepare for successful completion of the OAE requirement.

**Student Responsibility**
Candidates in the Program are required to meet regularly with their advisor. Candidates are required to comply with all regulations stipulated by the University, the College of Education, and the Department of Professional Education. Though expected to seek academic advising and guidance, candidates are ultimately responsible for satisfying all degrees and licensure requirements. Candidates, in consultation with their advisor, must submit an application for graduation at a time stipulated by the department and the university.

**Social Studies Education Program**
**Program Liaison: Dr. Kwabena Ofori-Attah**
**Room 213C**
**Phone: (937) 376-6175**
The Integrated Social Studies Education Program leads to the Bachelor of Science in Education Degree and prepares candidates to qualify for Ohio license to teach Integrated Social Studies, grades 7 – 12.

In addition to general education and professional pedagogy, candidates are required to complete content courses in Economics, History, Political Science, Sociology and Geography, Social Studies Practicum. Fifteen weeks of Clinical Experiences through Student Teaching are required.

**Program Requirements**
To pursue a major in Integrated Social Studies Education Program, students must first be admitted to Educator Preparation (see Admission to Education Preparation section of this Catalog). A cumulative grade point average of 2.75 is required for admission. Following admission to Teacher Education, candidates will complete content and pedagogy courses and all clinical experiences (see Suggested Program of Study). Candidates must maintain a cumulative grade point average of 3.00 for graduation. Effective Spring Semester, 2016, candidates must satisfactorily complete the Ohio Assessments for Educators (OAE) before admission to Student Teaching is approved. A grade of less than "C" in any professional education course or clinical experience will not be accepted. In addition, candidates must submit to TEAP-C the results of a current BCII/FBI Background Check that clears the candidate for Program participation. Each Background Check is valid for one calendar year; therefore, a candidate may need a minimum of two BCII/FBI Background Checks before completing the Program. For more information about BCII/FBI Background Check, candidates should contact their advisor and/or TEAP-C.

**Field and Clinical Experience**
The Program requires three levels of field and clinical experiences in the appropriate school setting: Level 1 - observation and data collection; Level 2 - application of methods strategies practicum; and Level 3 - Student Teaching Clinical experience. Successful completion of all Field and Clinical experiences is required for graduation. Candidates should consult the appropriate Suggested Program of Study to identify those courses that require field work.

**Candidate Monitoring**
The Unit Assessment System collects data that are analyzed to monitor candidates' academic progression from admission through successful completion of the Program. Data on candidates' progression are collected at various points of Program delivery, including different Program courses, Field Experiences, and Student Teaching.

***BACHELOR OF SCIENCE IN Education – Integrated Social Studies –*** ENG 1100 or ENG 1101 and ENG 1102; MTH 1750; HIS 1110 or HIS 1121 or 1122 plus 3 Humanities credit hours from List B; Social and Behavioral Sciences - 6 hours from 2 different disciplines from List C; Natural and Physical Sciences- 6 credit hours from 2 different disciplines from List D, USS 2000, 5-6 hours electives and 1 credit hour of Physical Activity from List A.

The following Social Studies Education requirements: ECO 2210, ECO 2220, EDU 2300, EDU 2500, EDU 2600 or EDU 3262, EDU 3263, EDU 3264, EDU 3265, EDU 3266, EDU 3325, EDU 3330, EDU 3371, EDU 4491, EDU 4895, HHP 1010, PSC 2202, PSC 2205, PSC 3304, PSC 3310, and SOC 3343. Also, the following History requirements: HIS 1100, HIS 1122, HIS 2201, HIS 3320, HIS 3321, HIS 4370, HIS 4371, and HIS 4995. Students are required to earn all C's or better in their major and education courses and also maintain at least a GPA of 3.00 in their degree program.

**SUGGESTED CURRICULUM FOR THE DEGREE OF BACHELOR OF SCIENCE IN EDUCATION DEGREE**
**Integrated Social Studies Education Program**

The curriculum below is to be used in consultation with the student's advisor. The student must be familiar with the University requirements, the General Education Requirements and Special Requirements for the above degree.

| **FIRST YEAR** | | | |
|---|---|---|---|
| **Fall Semester** | **Credit Hours** | **Spring Semester** | **Credit Hours** |
| ENG 1100 –Intro to Writing/Reading for College **OR**<br>ENG 1101 – Intro to Writing for College | 5<br>4 | ENG 1102 – Writing/Researching the Essay | 4 |
| List B MTH 1750 – College Algebra **OR**<br>1550 – Modern Applications of Mathematics | 3 | List D- GEO 1110 – Fundamentals of Geography | 3 |
| HIS 1110 – Into to History of Africans in U.S **OR**<br>HIS 1121 – Global History to 1500 | 3 | HIS 1121 – Global History to 1500 **OR**<br>HIS 1122 – Global History Since 1500<br>List B Course | 3 |
| USS 1000 – Undergraduate Success Seminar | 2 | List C PSC 2205 – Introduction to Africa | 3 |
| EDU 2600 – Introduction to Teacher Education OR<br>EDU 3262 –Educational Foundations | 3 | List A - HHP Physical Activity | 1 |
| ***Total Credits*** | **15/16** | ***Total Credits*** | **14** |
| **SECOND YEAR** | | | |
| **Fall Semester** | **Credit Hours** | **Spring Semester** | **Credit Hours** |
| PSC 2202 – International Politics | 3 | ECO 2220- Principles of Macroeconomics | 3 |
| HIS 2201-History of the U.S. to 1877 | 3 | List D - Natural/Physical Sciences | 3 |
| HIS 1100 - History | 3 | HIS 3321 – History of Europe Since 1500 (Spr) | 3 |
| EDU 2500 Professional Education Seminar | 2 | PSC 3310 Public Policy Analysis (Spring: Odd) | 3 |
| List C ECO 2210 - Principles of Microeconomics | 3 | Elective | 3 |
| Elective | 3 | HHP 1000 – Health & Wellness | 2 |
| ***Total Credits*** | **17** | ***Total Credits*** | **17** |
| **THIRD YEAR** | | | |
| **Fall Semester** | **Credit Hours** | **Spring Semester** | **Credit Hours** |
| EDU 2300 – Educational Psychology | 3 | HIS 4371– Recent America 1941-Present | 3 |
| EDU 3263 – Classroom Management/Field | 3 | EDU 3330 – Reading in the Content Area | 3 |
| EDU 3264 – Multicultural Education | 3 | EDU 3266 – Inclusion/Individual w/Special/Field | 3 |
| PSC 3304 – American/State/Local Government | 3 | EDU 3265 – Educational Technology | 3 |
| SOC 3343 – Social Stratification* | 3 | HIS 4995 – Global History Capstone Seminar | 3 |
| ***Total Credits*** | **15** | ***Total Credits*** | **15** |
| **FOURTH YEAR** | | | |
| **Fall Semester** | **Credit Hours** | **Spring Semester** | **Credit Hours** |
| EDU 3371 MCE/AYA Social Studies Methods | 3 | EDU 4491 - Student Teaching | 9 |
| HIS 4370 – Recent America 1900-1941 (Fall) | 3 | EDU 4895 - Capstone Seminar | 3 |
| Elective | 3 | | |
| HIS 3320 – History of Europe to 1500 (Fall) | 3 | ***Total Credits*** | **12** |
| EDU 3325 – Measurement & Assessment | 3 | | |
| ***Total Credits*** | **15** | **Total Degree Hours** | **120** |

Effective Fall 2019 See Course Description Section for descriptions of the courses

* FBI = Federal Bureau of Investigation; BCII = Ohio Bureau of Criminal Identification and Investigation

Candidates are advised to obtain a Suggested Program of Study from their advisor.

Students must complete Core Professional Education courses successfully.

**Ohio Assessments for Educators (OAE)**
**Assessment of Professional Knowledge**
**Assessment of Content Knowledge**
The OAE assesses candidates' mastery of professional knowledge and content knowledge. Passing scores are required before placement in Student Teaching and Program completion. Detailed information about the OAE is available at http://www.oh.nesinc.com. Additional information and supplemental instruction sessions are provided by TEAP-C. Candidates are encouraged to consult with TEAP-C to prepare for successful completion of the OAE requirement.

**Student Responsibility**
Candidates in the Program are required to meet regularly with their advisor. Candidates are required to comply with all regulations stipulated by the University, the College of Education and the Department of Professional Education. Though expected to seek academic advisement and guidance, candidates are ultimately responsible for satisfying all degree and licensure requirements. Candidates, in consultation with their advisor must submit an application for graduation at a time stipulated by the Department and the University.

**Life Science Education Program;**
**Physical Science Education Program**
**Program Liaison: Rajeev Swami, Ed.D**
**Room 213 A**
**Phone: (937) 376-6643**

The Life Science Education Program and the Physical Science Education Programs lead to the Bachelor of Science in Education Degree and prepare candidates to qualify for Ohio license to teach Life Science subjects or Physical Science subjects, grades 7 – 12.

In addition to general education and professional pedagogy, Life Science candidates are required to complete content courses in Biology, Evolution, Human Anatomy, Microbiology, Zoology, Plant Biology, Molecular Genetics, Ecology, Chemistry, Earth Science, Probability & Statistics, Calculus, and Basic Physics. Physical Science candidates are required to complete courses in Chemistry, Earth Science Mathematics, and Physics. Fifteen weeks of Clinical Experiences through Student Teaching are required.

**Program Requirements**
To pursue a major in either the Life Science Education Program, or the Physical Science Education Program, students must first be admitted to Educator Preparation (see admission to Education Preparation in the TEAP-C section of this Catalog). A cumulative grade point average of 3.00 is required for admission. Following admission to Teacher Education, candidates will complete all content and pedagogy courses and all clinical experiences (see Program of Study for each major). Candidates must maintain a cumulative grade point average of 2.75 for graduation. Effective Spring Semester, 2016, candidates must satisfactorily complete the Ohio Assessments for Educators (OAE) before admission to Student Teaching is approved. A grade of less than "C" in any professional education course or clinical experience will not be accepted. In addition, candidates must submit to TEAP-C the results of a current BCII/FBI Background Check that clears the candidate for participation in either Program. Each Background Check is valid for one calendar year. Therefore, a candidate may need a minimum of two BCII/FBI Background Checks before completing either program. For more information about the BCII/FBI Background Check, candidates' should contact their advisor and/or TEAP-C.

**Field and Clinical Experiences**
The Programs require three levels of field and clinical experiences in the appropriate school setting: Level 1 - observation and data collection; Level 2 - application of methods strategies practicum; and Level 3 - Student Teaching Clinical. Successful completion of all Field and Clinical Experiences are required for graduation. Candidates should consult the appropriate Suggested Program of Study to identify those courses that require field work.

**Candidate Monitoring**
The Unit Assessment System collects data that are analyzed to monitor candidates' academic progression from admission through successful completion of the Program. Data on candidates' progression are collected at various points of program delivery, including different Program Courses, Field Experiences, and Student Teaching.

***BACHELOR OF SCIENCE IN Education – Life Science –*** ENG 1100 or ENG 1101 and ENG 1102; MTH 1750; HIS 1110 or HIS 1121 or 1122 plus 3 Humanities credit hours from List B; Social and Behavioral Sciences - 6 hours from 2 different disciplines from List C; BIO 1500, and PHY 1100 from List D, USS 2000, 5-6 hours electives and 1 credit hour of Physical Activity from List A.

The following Life Science Education requirements: CHM 1201, EDU 2300, EDU 2500, EDU 2600 or EDU 3262, EDU 3263, EDU 3264, EDU 3265, EDU 3266, EDU 3325, EDU 3330, EDU 3372, EDU, EDU 4491, EDU 4895. Also, the following Biology requirements: BIO 1750, BIO 1801, BIO 1802, BIO 2000, BIO 2400, BIO 2650, BIO 2750, BIO 2850, BIO 3500, and BIO 4500, and EXS 2301 and EXS 2302. Students are required to earn all C's or better in their major and education courses and also maintain at least a GPA of 3.00 in their degree program.

**SUGGESTED CURRICULUM FOR THE DEGREE OF BACHELOR OF SCIENCE IN EDUCATION DEGREE**
**Life Science Education Program**

The curriculum below is to be used in consultation with the student's advisor. The student must be familiar with the University for the above degree.

| **FIRST YEAR** | | | |
|---|---|---|---|
| **Fall Semester** | **Credit Hours** | **Spring Semester** | **Credit Hours** |
| ENG 1100 –Intro to Writing/Reading for College<br>**OR** ENG 1101 – Intro to Writing for College | 5<br>4 | ENG 1102 – Writing/Researching the Essay | 4 |
| List B MTH 1750 – College Algebra **OR**<br>1550 – Modern Applications of Mathematics | 3 | BIO 1750 – Biological Concepts | 4 |
| HIS 1110 – Into to History of Africans in U.S OR<br>HIS 1121 – Global History to 1877 OR<br>HIS 1122 – Global History Since 1877 OR<br>List B Course | 3 | HIS 2201 – History of the U.S. to 1877 OR<br>HIS 2202 – History of the U.S. since 1877 OR<br>List B Course | 3 |
| USS 1000 – Undergraduate Success Seminar | 2 | List D PHY 1110 - Physical Science | 3 |
| EDU 2600 –Introduction to Teacher Education<br>OR EDU 3262 – Educational Foundations | 3 | List A -HHP Activity | 1 |
| ***Total Credits*** | **15/16** | ***Total Credits*** | **15** |
| **SECOND YEAR** | | | |
| **Fall Semester** | **Credit Hours** | **Spring Semester** | **Credit Hours** |
| List D BIO 1500 – Environmental Science w/Lab | 4 | List C- EDU 2300 – Educational Psychology | 3 |
| List C Elective – Social & Behavioral Sciences | 3 | BIO 1802 - Fundamentals of Biology II w Lab | 4 |
| BIO 1801 – Fundamentals of Biology I w Lab | 4 | BIO 2000 – Evolution | 2 |
| CHM 1201 General Chemistry I | 4 | BIO 2650 Microbiology | 4 |
| EDU 2500 Professional Education Seminar | 2 | Elective- Science | 3 |
| ***Total Credits*** | **17** | ***Total Credits*** | **16** |
| **THIRD YEAR** | | | |
| **Fall Semester** | **Credit Hours** | **Spring Semester** | **Credit Hours** |
| EDU 3263 – Classroom Management/Field | 3 | EDU 3266 – Individual with Special Needs/Field | 3 |
| EXS 2301 –Anatomy & Physiology w Lab I | 4 | EXS 2302 - Anatomy & Physiology w Lab II | 4 |
| BIO 2400 – Molecular Genetics | 4 | EDU 3265 – Intro to Educational Technology | 3 |
| BIO 2750 – Zoology | 2 | EDU 3264 – Multicultural Education | 3 |
| EDU 3330 – Reading in the Content Area | 3 | EDU 3325 – Measurement & Assessment | 3 |
| ***Total Credits*** | **16** | ***Total Credits*** | **16** |
| **FOURTH YEAR** | | | |
| **Fall Semester** | **Credit Hours** | **Spring Semester** | **Credit Hours** |
| BIO 2850 – Plant Biology | 2 | EDU 4491 Student Teaching | 9 |
| Elective - | 3 | EDU 4895 Capstone Seminar | 3 |
| EDU 3372 MCE/AYA Science Methods/Field | 3 | | |
| BIO 3500 – Ecology (Fall) | 4 | ***Total Credits*** | **12** |
| BIO 4500 – Undergraduate Research in Biology | **2** | | |
| ***Total Credits*** | **14** | **Total Degree Hours** | **123-124** |

Effective Fall 2019 See Course Description Section for descriptions of the courses
* FBI = Federal Bureau of Investigation; BCII = Ohio Bureau of Criminal Identification and Investigation
Candidates are advised to obtain a Suggested Program of Study from their advisor.
Students must complete Core Professional Education courses successfully.

***BACHELOR OF SCIENCE IN Education – Physical Science –*** ENG 1100 or ENG 1101 and ENG 1102; MTH 1750; HIS 1110 or HIS 1121 or 1122 plus 3 Humanities credit hours from List B; Social and Behavioral Sciences - 6 hours from 2 different disciplines from List C; BIO 1500, GEO 1110 from List D, USS 2000, 5-6 hours electives and 1 credit hour of Physical Activity from List A.

The following Physical Science Education requirements: CHM 1201, CHM 1202, CHM 1600, CHM 2200, CHEM 2401, CHM 4791, and CHM elective 4 hours, EDU 2300, EDU 2500, EDU 2600 or EDU 3262, EDU 3263, EDU 3264, EDU 3265, EDU 3266, EDU 3325, EDU 3330, EDU 3372, EDU 4491, and EDU 4895, HHP 1000, MTH 2001. Also, the following Physics requirements: PHY 1183, PHY 2611, PHY 2612, PHY 4431 and PHY elective 3 hours. Students are required to earn all C's or better in their major and education courses and also maintain at least a GPA of 3.00 in their degree program.

**SUGGESTED CURRICULUM FOR THE DEGREE OF BACHELOR OF SCIENCE IN EDUCATION DEGREE**
**Physical Science Education Program**

The curriculum below is to be used in consultation with the student's advisor. The student must be familiar with the University requirements, the General Education Requirements and Special Requirements for the above degree.

**FIRST YEAR**

| Fall Semester | Credit Hours | Spring Semester | Credit Hours |
|---|---|---|---|
| ENG 1100 –Intro to Writing/Reading for College<br>**OR** ENG 1101 – Intro to Writing for College | 5<br>4 | ENG 1102 – Writing/Researching the Essay | 4 |
| MTH 1750 – College Algebra | 3 | MTH 2001- Probability and Statistics I | 3 |
| HIS 1110 – Into to History of Africans in U.S **OR**<br>HIS 1121 – Global History to 1877 **OR**<br>HIS 1122 – Global History Since 1877 **OR**<br>List B Course | 3 | HIS 2201 – History of the U.S. to 1877 **OR**<br>HIS 2202 – History of the U.S. since 1877 **OR**<br>List B Course | 3 |
| USS 1000 – Undergraduate Success Seminar | 2 | List D - GEO 3313 – Weather and Climate | 3 |
| EDU 2600 –Introduction to Teacher Education<br>**OR** EDU 3262 – Educational Foundations | 3 | List C- Educational Psychology | 3 |
| ***Total Credits*** | **15/16** | ***Total Credits*** | **16** |

**SECOND YEAR**

| Fall Semester | Credit Hours | Spring Semester | Credit Hours |
|---|---|---|---|
| CHM 1201 – General Chemistry I | 4 | List C – Social & Behavioral Sciences | 3 |
| EDU 2500 Professional Education Seminar | 2 | CHEM 1202 – General Chemistry II | 4 |
| PHY 1183 – Intro to Astronomy | **2** | EDU 3265 – Educational Technology | 3 |
| PHY 2611 – College Physics I | 4 | PHY 2612- College Physics II | 4 |
| List D – BIO 1500 – Environmental Science | 4 | HHP 1000 – Health & wellness | 2 |
| ***Total Credits*** | **16** | ***Total Credits*** | **16** |

**THIRD YEAR**

| Fall Semester | Credit Hours | Spring Semester | Credit Hours |
|---|---|---|---|
| EDU 3263 – Classroom Management/Field | 3 | EDU 3266 – Individual w Special Needs/Field | 3 |
| CHEM 2401– Organic Chemistry | 4 | EDU 3264 – Multicultural Education | 3 |
| PHY - Elective | 3 | CHEM - Elective | 4 |
| CHM 1610- Introduction to Forensic Science | 4 | CHM 2200 – Quantitative Analysis | 4 |
| LIST A - Physical Activity | 1 | Elective | 3 |
| ***Total Credits*** | **15** | ***Total Credits*** | **17** |

**FOURTH YEAR**

| Fall Semester | Credit Hours | Spring Semester | Credit Hours |
|---|---|---|---|
| EDU 3330 – Reading in the Content Area | 3 | EDU 4491 Student Teaching | 9 |
| EDU 3372 MCE/AYA Science Methods/Field | 3 | EDU 4895 Capstone Seminar | 3 |
| CHM 4791 Undergraduate Research I | 2 | | |
| EDU 3325 – Measurement & Assessment | 3 | ***Total Credits*** | **12** |
| PHY 4431 - Modern Physics | **3** | | |
| ***Total Credits*** | **14** | **Total Degree Hours** | **120** |

**Effective Fall 2015 See Course Description Section for descriptions of the courses

* FBI = Federal Bureau of Investigation; BCII = Ohio Bureau of Criminal Identification and Investigation

Candidates are advised to obtain a Suggested Program of Study from their advisor.

Students must complete Core Professional Education courses successfully..

**Ohio Assessments for Educators (OAE)**
**Assessment of Professional Knowledge**
**Assessment of Content Knowledge**
The OAE assesses candidates' mastery of content knowledge and professional knowledge. Passing scores achieved by all candidates are required before placement in Student Teaching and Program completion. Detailed information about the OAE is available at http://www.oh.nesinc.com. Additional information and supplemental instruction sessions are provided by TEAP-C. Candidates are encouraged to consult TEAP-C to prepare for successful completion of the OAE requirements.

**Student Responsibility**
Candidates in the Programs are required to meet regularly with their advisor. Candidates are required to comply with all regulations stipulated by the University, the College of Education, and the Department of Professional Education. Though expected to seek academic advisement and guidance, candidates are ultimately responsible for satisfying all degrees and licensure requirements. Candidates, in consultation with their advisor, must submit an application for graduation at a time stipulated by the Department and the University.

**Early Childhood Education Program**
**Program Liaison: Dr. Lap Nguyen**
**Room 213E**
**Phone: (937) 376 - 6065**
The Early Childhood Education Program leads to a Bachelor of Science Education Degree and prepares candidates to qualify for the Ohio license to teach levels Pre-Kindergarten to grade 3.

In addition to general education and professional pedagogy, candidates are required to complete the content courses: Introduction to Early Childhood Education; Child Growth and Development; Curriculum and Instruction in Mathematics, Curriculum and Instruction in Science; Learning Environments and Creative Play; Observing, Documenting, and Assessing Young Children; Professional Ethics; Family and Community Relationships; Art for Early Childhood; Physical Education for Early Childhood; Music for Early Childhood; and Geometry for Teachers. Fifteen weeks of clinical experiences through Student Teaching are required.

**Program Requirements**
To pursue a major in the Early Childhood Education Program, students must first be admitted to Educator Preparation (see admission to Education Preparation in the TEAP-C section of this Catalog). A cumulative grade point average of 2.75 is required for admission. Following admission to Teacher Education, candidates will complete all content and pedagogy courses and all clinical experiences (see Program of Study for each major). Candidates must maintain a cumulative grade point average of 3.00 for graduation. Effective Spring Semester, 2016, candidates must satisfactorily complete the Ohio Assessments for Educators (OAE) before admission to Student Teaching is approved. A grade of less than "C" in any professional education course or clinical experience will not be accepted In addition, candidates must submit to TEAP-C the results of a current BCII/FBI Background Check that clears the student for Program participation. Each BCII/FBI Background Check is valid for one calendar year. Therefore, a candidate may need a minimum of two BCII/FBI Background Checks before completing the Program. For more information about BCII/FBI Background Check candidates should contact their advisor and/or TEAP-C.

**Field and Clinical Experiences**
The Program requires three levels of field and clinical experiences in the appropriate school setting: Level 1 - observation and data collection; Level 2 - application of methods strategies practicum; and Level 3 - Student Teaching Clinical experience. Successful completion of all field and clinical experiences is required for graduation. Candidates should consult the appropriate Suggested Program of Study to identify those courses that require field work.

**Candidate Monitoring**
The Unit Assessment System collects data that are analyzed to monitor candidates' academic progression from admission through successful completion of the Program. Data on candidates' progression are collected at various points of Program delivery, including different Program courses, Field Experiences, and Student Teaching.

***BACHELOR OF SCIENCE IN Education – Early Childhood Education*** ENG 1100 or ENG 1101 and ENG 1102; MTH 1750; HIS 1110 or HIS 1121 or 1122 plus 3 Humanities credit hours from List B; Social and Behavioral Sciences –COM 2214, and EDU 2300 from List C; Natural and Physical Sciences- 6 credit hours from 2 different disciplines from List D, USS 2000, 5-6 hours electives and 1 credit hour of Physical Activity from List A.

The following Early Childhood Education requirements: EDU 2200, EDU 2300, EDU 2500, EDU 2600 or EDU 3262, EDU 3263, EDU 3264, EDU 3265, EDU 3266, EDU 3310, EDU 3315, EDU 3320, EDU 3325, EDU 4491, EDU 4895, HHP 1000, and MTH 3000. Also, the following Early Childhood requirements: ECE 2210, ECE 3240, ECE 3302, ECE 3315, ECE 3320, ECE 3561, ECE 3562, ECE 3571, ECE 3572, ECE 4420, ECE 4430, ECE 4435. Students are required to earn all C's or better in their major and education courses and also maintain at least a GPA of 3.00 in their degree program.

**SUGGESTED CURRICULUM FOR THE DEGREE OF BACHELOR OF SCIENCE IN EDUCATION DEGREE**
**Early Childhood Education Program**

The curriculum below is to be used in consultation with the student's advisor. The student must be familiar with the University requirements, the General Education Requirements and Special Requirements for the above degree.

| **Freshman Fall Semester** | **Credit Hours** | **Freshman Spring Semester** | **Credit Hours** |
|---|---|---|---|
| ENG 1100 –Intro to Writing/Research **OR** ENG 1101 – Intro to Writing | 4/5 | ENG 1102 – Writing/Researching the Essay | 4 |
| MTH 1550 **OR** MTH 1750 – College Algebra | 3 | List D - Course | 3 |
| HIS 1110 – Into to History of Africans in U.S **OR** HIS 1121 – Global History to 1877 **OR** HIS 1122 – Global History Since 1877 **OR** List B Course | 3 | HIS 2201 – History of the U.S. to 1877 **OR** HIS 2201 – History of the U.S. since 1877 List B Course | 3 |
| USS 1000 – Undergraduate Success Seminar | 2 | List C- COM 2214 Public Speaking | 3 |
| EDU 2600 – Introduction to Teacher Education OR EDU 3262 – Educational Foundations | 3 | ECE 2210-Introduction to Early Childhood | 3 |
| ***Total Credits*** | **15** | ***Total Credits*** | **16** |
| **Sophomore Fall Semester** | **Credit Hours** | **Sophomore Spring Semester** | **Credit Hours** |
| HIS 1100- Ohio History | 3 | List C_EDU 2300 – Educational Psychology | 3 |
| EDU 2200 – Introduction to Teaching Reading | 3 | ECE 3240 – Early Childhood Nutrition & Safety | 3 |
| ECE 3315- Curriculum/Instruction in Math/Science | 3 | MTH 3000 – Geometry for Teachers | 3 |
| EDU 2500 Professional Education Seminar | 3 | ECE 3302 – Learning Environments & Creative Play | 3 |
| EDU 3265 – Educational Technology | 3 | EDU 3325 – Assessment & Evaluation | 3 |
| List A - Physical Activity | 1 | | |
| ***Total Credits*** | **16** | ***Total Credits*** | **15** |
| **Junior Fall Semester** | **Credit Hours** | **Junior Spring Semester** | **Credit Hours** |
| EDU 3264 – Multicultural Education/Field | 3 | EDU 3320 – Phonics & Reading (Microteaching) | 3 |
| EDU 3310 - Language & Literacy/ Microteaching | 3 | EDU 3315 – Teaching Reading/ Children's Literature/Microteaching | 3 |
| EDU 3263 – Classroom Management/Field | 3 | ECE 3562 – Mathematic Methods/Field | 3 |
| ECE 3320 – Child Growth & Development/Field | 3 | ECE 3572 – Science Methods/Field | 3 |
| ECE 4435- Observe /Document/Assess Young Children/Field | 3 | EDU 3266 –Individuals with Special Needs | 3 |
| HHP 1000 – Health and Wellness | 2 | | |
| ***Total Credits*** | **17** | ***Total Credits*** | **15** |
| **Senior Fall Semester** | **Credit Hours** | **Senior Spring Semester** | **Credit Hours** |
| ECE 3561 – Language Arts Methods/Field | 3 | EDU 4491 - Student Teaching | 9 |
| ECE 3571 – Social Studies Methods/Field | 3 | EDU 4895 – Capstone Seminar | 3 |
| ECE 4420 – Professional Ethics | 3 | | |
| ECE 4430 – Family & Community Relationships | 3 | | |
| List D- Course | **3** | | |
| ***Total Credits*** | **15** | ***Total Credits*** | **12** |
| | | ***Total Degree Hours*** | **121** |

Effective Fall 2019 See Course Description Section for descriptions of the courses

* FBI = Federal Bureau of Investigation; BCII = Ohio Bureau of Criminal Identification and Investigation

Candidates are advised to obtain a Suggested Program of Study from their advisor.

Students must complete Core Professional Education courses successfully.

**Ohio Assessments for Educators (OAE)**
**Assessment of Professional Knowledge**
**Assessment of Content Knowledge**
The OAE assesses candidates' mastery of content knowledge and professional knowledge. Passing scores achieved by all candidates are required before placement in Student Teaching and Program completion. Detailed information about the OAE is available at http://www.oh.nesinc.com. Additional information and supplemental instruction sessions are provided by TEAP-C. Candidates are encouraged to consult TEAP-C to prepare for a successful completion of the OAE requirements.

**Student Responsibility**
Candidates in the Program are required to meet regularly with their advisor. Candidates are required to comply with all regulations stipulated by the University, the College of Education, and the Department of Professional Education. Though expected to seek academic advisement and guidance, candidates are ultimately responsible for satisfying all degree and licensure requirements. Candidates, in consultation with their advisor, must submit an application for graduation at a time stipulated by the Department and University.

**Intervention Specialist Education Program**
**Program Liaison: Mr. Nathan Boles**
**Room 213F**
**Phone: (937) 376-6041**
The Intervention Specialist Education Program leads to the Bachelor of Science in Education Degree and qualifies the candidate to obtain an Ohio license as an Intervention Specialist for the Kindergarten level through grade 12.

In addition to general education and professional pedagogy, candidates are required to complete content courses in Special Education Law, Introduction to Moderate/Intensive, Instructional Strategies/Mild-Moderate, Collaboration with Parents/Professional Ethics and Responsibilities, Intervention Specialist Curriculum and Assessment, Behavior Management, Careers and Transitions. Fifteen weeks of clinical experience through Student Teaching are required.

**Program Requirements**
To pursue a major in the Intervention Specialist Education Program, students must first be admitted to Educator Preparation (see admission to Education Preparation in the TEAP-C section of this Catalog). A cumulative grade point average of 2.75 is required for admission. Following admission to Teacher Education, candidates will complete all content and pedagogy courses and all clinical experiences (see Program of Study for each major). Candidates must maintain a cumulative grade point average of 3.00 for graduation. Effective Spring Semester, 2016, candidates must satisfactorily complete the Ohio Assessments for Educators (OAE) before admission to Student Teaching is approved. A grade of less than "C" in any professional education course or clinical experience will not be accepted. In addition, candidates must submit to TEAP-C the results of a current BCII/FBI Background Check that clears the candidate for Program participation. Each Background Check is valid for one year. Therefore, a candidate may need a minimum of two BCII/FBI Background Checks before completing the Program. For more information about the BCII/FBI Background Check, Candidates should contact their advisor and/or TEAP-C.

**Field and Clinical Experience**
The Program requires three levels of field and clinical experiences in the appropriate school setting: Level 1 - observation and data collection; Level 2 - application of methods strategies practicum; and Level 3 - Student Teaching Clinical experience. Successful completion of all Field and Clinical experience is required for graduation. Candidates should consult the appropriate
Suggested Program of Study to identify those courses that require field work.

**Candidate Monitoring**
The Unit Assessment System collects data that are analyzed to monitor candidates' academic progression from admission through successful completion of the Program. Data on candidates' progression are collected at various points of Program delivery, including different Program courses, Field Experiences, and Student Teaching.

***BACHELOR OF SCIENCE IN Education – Intervention Specialist*** – ENG 1100 or ENG 1101 and ENG 1102; MTH 1750; HIS 1110 or HIS 1121 or 1122 plus 3 Humanities credit hours from List B; Social and Behavioral Sciences EDU 2300, SOC 1125- 6 hours from List C; Natural and Physical Sciences- BIO 1100 or CHM 1650, and GEL 1110 or PHY 1140 6 credit hours from List D, USS 2000, 5-6 hours electives and 1 credit hour of Physical Activity from List A.
The following Intervention Specialist Education requirements: ECE 3561, ECE 3562, ECE 3571, ECE 3572, EDU 2200, EDU 2300, EDU 2500, EDU 2600 or EDU 3262, EDU 3263, EDU 3264, EDU 3265, EDU 3266, EDU 3310, EDU 3315, EDU 3320, EDU 3325, EDU 3330, EDU 3340, EDU 3341, EDU 4491, EDU 4895, and MTH 3000. Also, the following Intervention Specialist requirements: INS 3001, INS 3002, INS 3003, and INS 3004, SOC 3325, and SWK 2200. Students are required to earn all C's or better in their major and education courses and also maintain at least a GPA of 3.00 in their degree program.

**SUGGESTED CURRICULUM FOR THE DEGREE OF BACHELOR OF SCIENCE IN EDUCATION DEGREE**
**Intervention Specialist Education Program**

The curriculum below is to be used in consultation with the student's advisor. The student must be familiar with the University requirements, the General Education Requirements and Special Requirements for the above degree.

| **FIRST YEAR** | | | |
|---|---|---|---|
| **Fall Semester** | **Credit Hours** | **Spring Semester** | **Credit Hours** |
| ENG 1100 –Intro to Writing/Reading for College **OR** ENG 1101 – Intro to Writing for College | 4 | ENG 1102 – Writing/Researching the Essay | 4 |
| List B MTH 1750 – College Algebra **OR** 1550 – Modern Applications of Mathematics | 3 | List C- SOC 1125 – Social Problems | 3 |
| HIS 1110 – Into to History of Africans in U.S **OR** HIS 1121 – Global History to 1877 **OR** List B Course | 3 | HIS 2201 – History of the U.S. to 1877 **OR** HIS 2202 – History of the U.S. since 1877 **OR** List B Course | 3 |
| USS 1000 – Undergraduate Success Seminar | 2 | List D- BIO 1100–Organismal Biology **OR** CHM 1650- Intro to Forensic Science | 4 |
| EDU 2600 –Introduction to Teacher Education OR EDU 3262 – Educational Foundations | 3 | HHP 1000 – Health and Wellness | 2 |
| ***Total Credits*** | **15** | ***Total Credits*** | **16** |
| **SECOND YEAR** | | | |
| **Fall Semester** | **Credit Hours** | **Spring Semester** | **Credit Hours** |
| EDU 2500 – Professional Education Seminar | 2 | List D – GEL 1110- Oceanography OR PHY 1140 – Experimental Science | 2or 3 |
| SWK 2200 - Intro to Social Welfare | 3 | EDU 2200 – Intro to Teaching Reading | 3 |
| EDU 2300 – Educational Psychology | 3 | EDU 3341 – Intro to Mild/Moderate (Fall) | 3 |
| EDU 3340 – Special Education Law (Fall) | 3 | EDU 3265 – Educational Technology | 3 |
| MTH 3000 – Geometry for Teachers | 3 | List A - Physical Activity | 1 |
| SOC 3325- Race and Ethnic Relations | 3 | EDU 3310 - – Language & Literacy | 3 |
| ***Total Credits*** | **17** | ***Total Credits*** | **15/16** |
| **THIRD YEAR** | | | |
| **Fall Semester** | **Credit Hours** | **Spring Semester** | **Credit Hours** |
| EDU 3315 –Teaching Reading Child Lit/ teaching | 3 | ECE 3572 ECE Science Methods | 3 |
| EDU 3264 – Multicultural Education | 3 | ECE 3562 ECE Math Methods | 3 |
| INS 3001–Plan Assess Emotional Behavior | 3 | EDU 3320 – Phonics & Reading | 3 |
| INS 3002-Plan Assess Speech/Hearing/Visual | 3 | INS 3003-PlanAssess Intellectual/Orthopedic | 3 |
| EDU 3266–Individuals w/Special Needs/Field | 3 | INS 3004-PlanAssess Multi-Disabilities/Brain | 3 |
| ***Total Credits*** | **15** | ***Total Credits*** | **15** |
| **FOURTH YEAR** | | | |
| **Fall Semester** | **Credit Hours** | **Spring Semester** | **Credit Hours** |
| ECE 3571 or EDU 3371 Social Studies Methods | 3 | EDU 4491 - Student Teaching | 9 |
| ECE 3561 or EDU 3361 Lang Arts Methods | 3 | EDU 4895 - Capstone Seminar | 3 |
| EDU 3330 – Reading in the Content Area | 3 | ***Total Credits*** | **12** |
| EDU 3325 – Measurement & Assessment | 3 | | |
| EDU 2263 – Classroom Management/Field | 3 | | |
| ***Total Credits*** | **15** | ***Total Degree Credits*** | **120/121** |

Effective Fall 2019 See Course Description Section for descriptions of the courses
* FBI = Federal Bureau of Investigation; BCII = Ohio Bureau of Criminal Identification and Investigation
Candidates are advised to obtain a Suggested Program of Study from their advisor.
Students must complete Core Professional Education courses successfully.

**Ohio Assessments for Educators (OAE)**
**Assessment of Professional Knowledge**
**Assessment of Content Knowledge**
The OAE assesses candidates' mastery of content knowledge and professional knowledge. Passing scores achieved by all candidates are required before placement in Student Teaching and Program completion. Detailed information about the OAE is available at http://www.oh.nesinc.com. Additional information and supplemental instruction sessions are provided by TEAP-C. Candidates are encouraged to consult TEAP-C to prepare for a successful completion of the OAE requirement.

**Student Responsibility**
Candidates in the Program are required to meet regularly with their advisor. Candidates are required to comply with all regulations stipulated by the University, the College of Education, and the Department of Professional Education. Though expected to seek academic advisement and guidance, candidates are ultimately responsible for satisfying all degree and licensure preparation requirements. Candidates, in consultation with their advisor, must submit an application for graduation at a time stipulated by the Department and the University.

**Middle Childhood Education Program**
**Program Liaison: Dr. Rajeev Swami**
**Room 213A**
**Phone: (937) 376-6643**

The Middle Childhood Education Program leads to the Bachelor of Science in Education Degree and prepares candidates to qualify for the Ohio license to teach language arts, social studies, science and mathematics as may be appropriate, grades 4 - 9. In addition, to general education and professional pedagogy candidates are required to complete content courses pertinent to selected teaching areas. Candidates majoring in Middle Childhood Education are required to select two teaching areas from the following list: language arts, social studies, science, and mathematics. Curriculum content will vary based on the candidate's selected teaching areas. Fifteen weeks of clinical experience through student teaching are required.

**Program Requirements**
To pursue a major in Middle Childhood Education~~,~~ Program, students must first be admitted to Educator Preparation (see admission to Education Preparation in the TEAP-C section of this Catalog). A cumulative grade point average of 3.00 is required for admission. Following admission to Teacher Education, candidates will complete all content and pedagogy courses and all clinical experiences (see Program of Study for each major). Candidates must maintain a cumulative grade point average of 3.00 for graduation. Effective Spring Semester, 2016, candidates must satisfactorily complete the Ohio Assessments for Educators (OAE) before admission to Student Teaching is approved. A grade of less than "C" in any professional education course or clinical experience will not be accepted In addition, candidates must submit to TEAP-C the results of a current BCII/FBI Background Check that clears the candidate for Program participation. Each Background Check is valid for one calendar year. Therefore, a candidate may need a minimum of two BCII/FBI Background Checks before completing the Program. For more information about the BCII/FBI Background Check, candidates should contact their advisor and/or TEAP-C.

**Field and Clinical Experiences**
The Program requires three levels of field and clinical experiences in the appropriate school setting: Level 1 - observation and data collection; Level 2 - application of methods strategies practicum; and Level 3 - Student Teaching Clinical experience. Successful completion of all Field and Clinical experience is required for graduation. Candidates should consult the appropriate Suggested Program of Study to identify those courses that require field work.

**Candidate Monitoring**
The Unit Assessment System collects data that are analyzed to monitor candidates' academic progression from admission through successful completion of the Program. Data on candidates' progression are collected at various points of Program delivery, including different Program courses, Field experiences, and Student Teaching.

***BACHELOR OF SCIENCE IN Education* – Middle Childhood (Language Arts/Social Studies) –** ENG 1100 or ENG 1101 and ENG 1102; MTH 1750; HIS 1110 or HIS 1121 or 1122 plus 3 Humanities credit hours from List B; Social and Behavioral Sciences - 6 hours from 2 different disciplines from List C; Natural and Physical Sciences- 6 credit hours from 2 different disciplines from List D, USS 2000, 5-6 hours electives and 1 credit hour of Physical Activity from List A.

The following Middle Childhood Education requirements: COM 2200, EDU 2200, EDU 2300, EDU 2500, EU 2600 or EDU 3262, EDU 3263, EDU 3264, EDU 3265, EDU 3266, EDU 3310, EDU 3320, EDU 3325, EDU 3330, EDU 3361, EDU 3371, EDU 4491, and EDU 4895. Also, the following Integrated Language Arts requirements: ENG 2200, ENG 3021, ENG 3030, ENG 3051, ENG 3200, ENG 3051, ENG 4200, and ENG 4895. The following Social Studies requirements: ECO 2210, ECO 2220, HIS 1100, HIS 2201, HIS 2202, HIS 3321, HIS 4371, PSC 1100, PSC 2202, and PSC 3304. Students are required to earn all C's or better in their major and education courses and also maintain at least a GPA of 3.00 in their degree program.

**SUGGESTED CURRICULUM FOR THE DEGREE OF BACHELOR OF SCIENCE IN EDUCATION DEGREE**
**Middle Childhood Education Program (Language Arts/Social Studies)**

The curriculum below is to be used in consultation with the student's advisor. The student must be familiar with the University requirements, the General Education Requirements and Special Requirements for the above degree.

| **FIRST YEAR** | | | |
|---|---|---|---|
| **Fall Semester** | **Credit Hours** | **Spring Semester** | **Credit Hours** |
| ENG 1100 –Intro to Writing/Reading for College **OR** ENG 1101 – Intro to Writing for College | 5<br>4 | ENG 1102 – Writing/Researching the Essay | 4 |
| HIS 1110 – Into to History of Africans in U.S **OR**<br>HIS 1121 – Global History to 1877 **OR**<br>HIS 1122 – Global History Since 1877 **OR**<br>List B Course | 3 | HIS 2201 – History of the U.S. to 1877 **OR**<br>HIS 2202 – History of the U.S. since 1877 **OR**<br>List B Course | 3 |
| Math 1750- College Algebra | 3 | List D – Natural/Physical Sciences w/lab | 4 |
| USS 1000 – Undergraduate Success Seminar | 2 | List C SOC 1125-Social Problems | 3 |
| EDU 2600 –Introduction to Teacher Education **OR** EDU 3262 – Educational Foundations | 3 | GEO 1110 – Fundamentals of Geography | 3 |
| ***Total Credits*** | **15/16** | ***Total Credits*** | **17** |
| **SECOND YEAR** | | | |
| **Fall Semester** | **Credit Hours** | **Spring Semester** | **Credit Hours** |
| ENG 2200-Intro to Literary Studies | 3 | ECO 2210 Principles of Microeconomics | 3 |
| HIS 2201-History of the U.S. to 1877 | 3 | List D - Natural/Physical Sciences | 3 |
| HIS 1100 - Ohio History | 3 | HIS 3321 – History of Europe Since 1500 | 3 |
| EDU 2500 Professional Education Seminar | 2 | HIS 2202-History of the US Since 1877 | 3 |
| List C ECO 2220–Principles of Macroeconomics | 3 | EDU 2300- Educational Psychology | 3 |
| PSC 1100-American Nation Government | 3 | List A - Physical Activity | 1 |
| ***Total Credits*** | **17** | ***Total Credits*** | **16** |
| **THIRD YEAR** | | | |
| **Fall Semester** | **Credit Hours** | **Spring Semester** | **Credit Hours** |
| EDU 3263 – Classroom Management/Field | 3 | EDU 3266 – Inclusion/Individual w/Special Needs/Field | 3 |
| COM 2200 – Intro to Mass Communication | 3 | EDU 3264 – Multicultural Education | 3 |
| EDU 2200 – Introduction to the Teaching of Reading | 3 | EDU 3265 – Educational Technology | 3 |
| EDU 3310 – Language & Literacy/ Microteaching | 3 | ENG 3021 African Am Literate II (Spring) | 3 |
| ENG 3030 American Literature I | 3 | EDU 3320 – Phonics & Reading/Microteaching | 3 |
| ***Total Credits*** | **15** | ***Total Credits*** | **15** |
| **FOURTH YEAR** | | | |
| **Fall Semester** | **Credit Hours** | **Spring Semester** | **Credit Hours** |
| EDU 3325 – Measurement & Assessment | 3 | ENG 4895 – Senior Seminar | 3 |
| PSC 2202-International Politics | 3 | HIS 4371-Recent America 1941-Present | 3 |
| PSC 3304-American State/Local Government | 3 | EDU 3361 – MCE/AYA Language Arts Methods | 3 |
| EDU 3330 – Reading in the Content Area | 3 | EDU 3371 – MCE/AYA Social Studies Methods | 3 |
| ENG 3200 – History of English Language | 3 | ENG 4200–General Linguistics/Am. Grammar(S) | 3 |
| | | ENG 3051-World Literature | 3 |
| ***Total Credits*** | **15** | ***Total Credits*** | **18** |
| **FIFTH YEAR** | | | |
| **Senior Spring Semester** | **Credit Hours** | | |
| EDU 4491 - Student Teaching | 9 | | |
| EDU 4895 - Capstone Seminar | 3 | | |
| ***Total Credits*** | **12** | **Total Degree Hours** | **135-140** |

Effective Fall 2019 See Course Description Section for descriptions of the courses

* FBI = Federal Bureau of Investigation; BCII = Ohio Bureau of Criminal Identification and Investigation

Candidates are advised to obtain a Suggested Program of Study from their advisor.

Students must complete Core Professional Education courses successfully.

***BACHELOR OF SCIENCE IN Education* – Middle Childhood (Science/Mathematics)** ENG 1100 or ENG 1101 and ENG 1102; MTH 1750; HIS 1110 or HIS 1121 or 1122 plus 3 Humanities credit hours from List B; Social and Behavioral Sciences - 6 hours from 2 different disciplines from List C; Natural and Physical Sciences- 6 credit hours from 2 different disciplines from List D, USS 2000, 5-6 hours electives and 1 credit hour of Physical Activity from List A.
The following Middle Childhood Education requirements: EDU 2200, EDU 2300, EDU 2500, EDU 2600 or EDU 3262, EDU 3263, EDU 3264, EDU 3265, EDU 3266, EDU 3310, EDU 3320, EDU 3325, EDU 3330, EDU 3362, EDU 3372, EDU 4491, and EDU 4895. Also, the following Science requirements: BIO 1801, BIO 1802, BIO 2000, CHM 1150, CHM 1201, CHM 1202, CHM 4791, GEL 1101, GEL 1105, GEO 3313, PHY 2611, and PHY 2612, The following Mathematics requirements: MTH 2001, MTH 2502, MTH 2503, and MTH 3000. Students are required to earn all C's or better in their major and education courses and also maintain at least a GPA of 3.00 in their degree program.

**SUGGESTED CURRICULUM FOR THE DEGREE OF BACHELOR OF SCIENCE IN EDUCATION DEGREE**
**Middle Childhood Education Program (Science/Mathematics)**

The curriculum below is to be used in consultation with the student's advisor. The student must be familiar with the University requirements, the General Education Requirements and Special Requirements for the above degree.

| **FIRST YEAR** | | | |
|---|---|---|---|
| **Fall Semester** | **Credit Hours** | **Spring Semester** | **Credit Hours** |
| ENG 1100 –Intro to Writing/Reading for College **OR** ENG 1101 – Intro to Writing for College | 5<br>4 | ENG 1102 – Writing/Researching the Essay | 4 |
| MTH 1750 – College Algebra | 3 | MTH 2001 – Probability & Statistics I | 3 |
| HIS 1110 – Into to History of Africans in U.S OR<br>HIS 1121 – Global History to 1877 OR<br>HIS 1122 – Global History Since 1877 OR<br>List B Course | 3 | HIS2201 – History of the U.S. to 1877 OR<br>HIS 2202 – History of the U.S. since 1877 OR<br>List B Course | 3 |
| USS 1000 – Undergraduate Success Seminar | 2 | LIST A - Physical Activity | 1 |
| EDU 2600 –Introduction to Teacher Education **OR** EDU 3262 – Educational Foundations | 3 | CHM 1150 Elements of Chemistry | 3 |
| ***Total Credits*** | **15/16** | ***Total Credits*** | **14** |

| **SECOND YEAR** | | | |
|---|---|---|---|
| **Fall Semester** | **Credit Hours** | **Spring Semester** | **Credit Hours** |
| BIO 1801 – Fundamentals of Biology | 4 | BIO 1802 – Fundamentals of Biology II | 4 |
| CHM 1201 - General Chemistry I | 4 | CHM 1202 – General Chemistry II | 4 |
| EDU 2500 - Professional Education Seminar | 2 | List C - EDU 2300 Educational Psychology | 3 |
| MTH 2502 – Calculus I | 4 | MTH 3000 -Geometry for Teachers | 3 |
| EDU 3265 – Educational Technology | 3 | PHY 1183 – Introductory Astronomy | 2 |
| ***Total Credits*** | **17** | ***Total Credits*** | **16** |

| **THIRD YEAR** | | | |
|---|---|---|---|
| **Fall Semester** | **Credit Hours** | **Spring Semester** | **Credit Hours** |
| EDU 3263 – Classroom Management/Field | 3 | EDU 3266 –Individual w/Special Needs/Field | 3 |
| EDU 2200 – Introduction to the Teaching of Reading | 3 | EDU 3264 – Multicultural Education | 3 |
| EDU 3310 – Language & Literacy/ Microteaching | 3 | BIO 2000 – Evolution Or Online course | 3 |
| GEL 1101- Physical Geology | 4 | EDU 3320 –Phonics & Reading/Microteaching | 3 |
| PHY 2611- College Physics I | 4 | PHY 2612 - College Physics II | 4 |
| ***Total Credits*** | **17** | ***Total Credits*** | **16** |

| **FOURTH YEAR** | | | |
|---|---|---|---|
| **Fall Semester** | **Credit Hours** | **Spring Semester** | **Credit Hours** |
| EDU 3372 – MCE/AYA Science Methods/Field | 3 | List C – Social/Behavioral Sciences | 3 |
| EDU 3325 – Measurement & Assessment | 3 | EDU 3362 – MCE/AYA Math Methods/Field | 3 |
| GEO 3313 - Weather and Climate | 3 | GEL 1105 – Historical Geology | 3 |
| EDU 3330 – Reading in the Content Area | 3 | MTH 2503 – Calculus II | 5 |
| CHM 4791 - Undergraduate Research I | 2 | | |
| ***Total Credits*** | **14** | ***Total Credits*** | **14** |

| **FIFTH YEAR** | | | |
|---|---|---|---|
| **Fall Semester** | **Credit Hours** | | |
| EDU 4491 - Student Teaching | 9 | | |
| EDU 4895 - Capstone Seminar | 3 | | |
| ***Total Credits*** | **12** | **Total Degree Hours** | **135-140** |

Effective Fall 2019 See Course Description Section for descriptions of the courses
* FBI = Federal Bureau of Investigation; BCII = Ohio Bureau of Criminal Identification and Investigation
Candidates are advised to obtain a Suggested Program of Study from their advisor.
Students must complete Core Professional Education courses successfully.

# SCHOOL OF AGRICULTURAL EDUCATION

**Director: School of Agricultural Education and Food Science**
Mr. Jon Henry
Director
937-376-6038
jhenry@centraslstate.edu

**Assistant Professor of Agricultural Education**
Ms. Katrina Swinehart
Assistant Professor
937-376-6036
kswinehart@centralstate.edu

**Program Coordinator:**
Program Coordinator
(937) 376-6035

**Administrative Assistant:**
Mrs. Ginger King
Administrative Assistant
(937) -376-6037
gking@centralstate.edu

**Accreditation:**
The School of Agricultural Education and Food Science was established in 2016. The Agricultural Education degree programs were first offered in the Fall 2017.

**Our Purpose:**
To prepare diverse Agricultural Educators.

**By:**
Providing diverse experiences to students with diverse backgrounds

**In order to:**

1. Address the immediate shortage of qualified/credentialed agricultural educators in existing agricultural programs
2. Provide qualified/credentialed agricultural educators to address the demand for future programs in urban areas
3. Address the need for a global agricultural perspective
4. Provide students with skills to be successful in the Agricultural Industry.

**Degree Programs:**

**B.S in Agriculture Education (Extension Pathway non-licensure):**
The extension pathway to a Bachelor of Science in Agricultural Education will have students plan and deliver effective instruction that advances the learning of individuals interested in agriculture and agricultural issues. Students will be prepared to work in careers requiring the skills necessary to train, and develop others, including adult education and youth leadership development. Students who complete the requirements for the degree pathway will obtain a Bachelor of Science in Agricultural Education and a Minor in Sustainable Agriculture.

**B.S in Agricultural Education (Agriscience Licensure Pathway)**:
The primary role of this program is to prepare diverse agricultural educators, address the need for a global agriculture perspective and meet the demand for qualified and credentialed agricultural educators for expanding high school Agriscience programs in existing and underserved areas. Students who complete the requirements of the degree pathway will obtain a Bachelor of Science in Agricultural Education with a Minor in Sustainable Agriculture, and earn a Secondary Ohio Teaching License in Agriscience for grades 7-12.

**Teaching Licensure Requirement (Licensure Path only)**
To pursue a teaching license in the Agricultural Education Program, students must first be admitted to Educator Preparation (see admission to Education Preparation in the TEAP-C section of this Catalog)., Candidates will complete all content and pedagogy courses and all clinical experiences (see Program of Study for each major). Candidates must satisfactorily complete the Ohio Assessments for Educators (OAE) before admission to Student Teaching is approved. A grade of less than "C" in any professional education course or clinical experience will not be accepted In addition, candidates must submit to TEAP-C the results of a current BCII/FBI Background Check that clears the candidate for Program participation. Each Background Check is valid for one calendar year. Therefore, a candidate may need a minimum of two BCII/FBI Background Checks before completing the Program
For more information about the BCII/FBI Background Check, candidates should contact their advisor and/or TEAP-C.

Once a student has been admitted to the Education Preparation Program (EPP), Students must demonstrate competency on the Ohio Assessment for Educator Exam in order to pursue the Secondary 7-12, or 4-9 Ohio Teaching License issued by The Ohio Department of Education. Competency on these

exams is demonstrated by meeting the state benchmark on the following assessments:

**OAE Pedagogy Assessment**
002 Assessment of Professional Knowledge: Middle Childhood (4–9) **OR** 003 Assessment of Professional Knowledge: Adolescence to Young Adult (7–12) As part of the pathway completion, Student will complete related courses to prepare them for the exam. Including EDU 3263, EDU 3264, EDU 3265, AGED 4100.

**OAE Content Assessment**
005 Agriscience
As part of the pathway completion, Students will complete related courses to prepare them for the exam. Including, AGB 2300, AGR 3120, AGR 3250, AGR 1150, AGR 1220, AGR 2450, AGR 2150, and AGED 3110.

The OAE assesses candidates' mastery of content knowledge and professional knowledge. Passing scores achieved by all candidates are required before placement in Student Teaching and Program completion. Detailed information about the OAE is available at http://www.oh.nesinc.com. Additional information and practice sessions are provided by TEAP-C. Candidates are encouraged to consult TEAP-C to prepare for a successful completion of the OAE requirement.

**Student Responsibility**

Candidates in the Program are required to meet regularly with their advisor. Candidates are required to comply with all regulations stipulated by the University, the College of Education, and the Department of Professional Education. Though expected to seek academic advisement and guidance, candidates are ultimately responsible for satisfying all degree and licensure preparation requirements. Candidates, in consultation with their advisor, must submit an application for graduation at a time stipulated by the Department and the University.

**Field and Clinical Experiences**

The Program requires three levels of field and clinical experiences in the appropriate school setting: Level 1 - observation and data collection; Level 2 - application of methods strategies practicum; and Level 3 - Student Teaching Clinical experience. Successful completion of all Field and Clinical experience is required for graduation. Candidates should consult the appropriate Suggested Program of Study to identify those courses that require field work.

**Candidate Monitoring**

The Unit Assessment System collects data that are analyzed to monitor candidates' academic progression from admission through successful completion of the Program. Data on candidates' progression are collected at various points of Program delivery, including different Program courses, Field experiences, and Student Teaching.

***BACHELOR OF SCIENCE IN Agricultural Education*** —ENG 1101, ENG 1102; MTH 1750; HIS 1110, HIS 1121; Computer Skills - List A - CPS1110; Humanities and Fine Arts – List B; Social and Behavioral Sciences – List C ECO 2210 plus 3 semesters hours from a different discipline; BIO 1801, BIO 1802; CHM 1201; PHY 2611; FYS 1101; Health – List E -HHP 1000 and 1 semester credit from HHP 1101-1121.
***Major Requirements****:* AGR 1150, AGR 1220, AGR 2150, AGR 2450, AGB 2300, AGR3120; AGR3250; AGED3110; AGED4110; AGED4100; EDU2300; EDU2500; EDU3265; EDU3330; EDU3263; EDU3264; EDU3266; EDU4491; EDU4895, *a minimum of 8 related electives credits from list. Minimum 124 credit hours.*

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF SCIENCE**
**MAJOR IN AGRICULTURAL EDUCATION – AGRISCIENCE LICENSURE PATHWAY**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| **Freshman Fall Semester** | **Credit Hours** | **Freshman Spring Semester** | **Credit Hours** |
|---|---|---|---|
| ENG 1101 – Intro to Writing | 4 | ENG 1102 – Writing/Researching the Essay | 4 |
| MTH 1750 – College Algebra | 3 | HIS 1110 – Intro to History of Africans in U.S | 3 |
| BIO 1801 - Fundamentals of Biology 1 | 4 | AGR 1220 – Introduction to Horticulture | 4 |
| AGR 1150 – Introduction to Sustainable Agriculture | 3 | HHP 1000- Health and Wellness | 2 |
| FYS 1101 – First Year Seminar | 1 | BIO 1802 – Fundamentals of Biology 2 | 4 |
| List E -HPR – Activity Elective | 1 | | |
| ***Total Credits*** | **16** | ***Total Credits*** | **17** |
| **Sophomore Fall Semester** | **Credit Hours** | **Sophomore Spring Semester** | **Credit Hours** |
| List C : Social and Behavioral Science | 3 | HIS 1121 – Global History to 1500 | 3 |
| PHY 2611 - Physics 1 List D | 4 | CHM 1201 – General Chemistry w/Lab | 4 |
| EDU 2300 – Educational Psychology | 3 | AGR - Agriculture Elective (See List) | 1-4 |
| AGB 2300 – Introduction to Ag Business | 3 | List C – ECO 2210 Principles of Microeconomics | 3 |
| EDU 2500 - Professional Education Seminar | 2 | EDU 3265 – Educational Technology | **3** |
| CPS 1110 – Computer Literacy | 2 | | |
| ***Total Credits*** | **17** | ***Total Credits*** | **17** |
| **Junior Fall Semester** | **Credit Hours** | **Junior Spring Semester** | **Credit Hours** |
| AGED3110 –Agriscience Foundations | 3 | EDU 3263 – Classroom Management/Field | 3 |
| EDU 3330 – Reading in the Content Area | 3 | EDU 3266 – Individuals w/Special Needs | 3 |
| EDU 3264 – Multicultural Education/Field | 3 | AGED 4110 - Student Leadership Organizations | 3 |
| AGR 2150 – Introduction to Animal Science | 4 | AGR - Agriculture Elective ( See list) | 1-4 |
| AGR 2450 – Soil Science | 4 | AGR - Agriculture Elective (See list) | **1-4** |
| ***Total Credits*** | **17** | | **16** |
| **Senior Fall Semester** | **Credit Hours** | **Senior Spring Semester** | **Credit Hours** |
| AGED 4100- Methods of Teaching Agriculture Education. | 3 | EDU 4491 - Student Teaching | 9 |
| AGR 3250 – Grain Crops | 4 | EDU 4895 - Capstone | 3 |
| AGR 3120 – Ag Machines and Mech | 3 | | |
| Humanities and Fine Arts Elective List B | **3** | ***Total Credits*** | **12** |
| ***Total Credits*** | **13** | **Total Degree Hours** | **120** |

***BACHELOR OF SCIENCE IN Agricultural Education*** —ENG 1101, ENG 1102; MTH 1750; HIS 1110, HIS 1121; Computer Skills - List A - CPS1110; Humanities and Fine Arts – List B; Social and Behavioral Sciences – List C ECO 2210 plus 3 semesters hours from a different discipline; BIO 1801, BIO 1802; CHM 1201; PHY 2611; FYS 1101; Health – List E -HHP 1000 and 1 semester credit from HHP 1101-1121.

***Major Requirements****:* AGR 1150, AGR 1220, AGR 2150, AGR 2450, AGB 2300, AGR3120; AGR3250; AGED3110; AGED4110; AGED4100; PSY 1200; PSY 2220;EDU2500; COM 2219; AGED3100;AGED3415; COE4499 Alternating Cooperative Experience; *a minimum of 8 related electives credits from list. Minimum 124 credit hour.*

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF SCIENCE**
**MAJOR IN AGRICULTURAL EDUCATION EXTENSION PATHWAY NON-LICENSURE**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| **Freshman Fall Semester** | **Credit Hours** | **Freshman Spring Semester** | **Credit Hours** |
|---|---|---|---|
| ENG 1101 – Intro to Writing | 4 | ENG 1102 – Writing/Researching the Essay | 4 |
| MTH 1750 – College Algebra | 3 | HIS 1110 – Intro to History of Africans in U.S | 3 |
| BIO 1801 - Fundamentals of Biology 1 | 4 | AGR 1220 – Introduction to Horticulture | 4 |
| AGR 1150 – Introduction to Sustainable Agriculture | 3 | HHP 1000- Health and Wellness | 2 |
| FYS 1101 – First Year Seminar | 1 | BIO 1802 – Fundamentals of Biology 2 | 4 |
| List E -HPR – Activity Elective | 1 | | |
| ***Total Credits*** | **16** | ***Total Credits*** | **17** |
| **Sophomore Fall Semester** | **Credit Hours** | **Sophomore Spring Semester** | **Credit Hours** |
| List C : Social and Behavioral Science | 3 | HIS 1121 – Global History to 1500 | 3 |
| PHY 2611 - Physics 1 List D | 4 | CHM 1201 – General Chemistry w/Lab | 4 |
| PSY 1200– Intro to Psychology | 3 | AGR - Agriculture Elective (See List ) | 1-4 |
| AGB 2300 – Introduction to Ag Business | 3 | List C – ECO 2210 Principles of Microeconomics | 3 |
| EDU 2500 - Professional Education Seminar | 2 | COM 2219- Introduction to Media Writing | **3** |
| CPS 1110 – Computer Literacy | 2 | | |
| ***Total Credits*** | **17** | ***Total Credits*** | **17** |
| **Junior Fall Semester** | **Credit Hours** | **Junior Spring Semester** | **Credit Hours** |
| AGED3110 –Agriscience Foundations | 3 | AGED 3100- The Adult Classroom | 3 |
| AGR – Agricultural Elective (See List) | 3 | PSY2220 - Human Growth and Development | 3 |
| AGED3415- Addressing Diverse Populations in Agriculture | 3 | AGED 4110 - Student Leadership Organizations | 3 |
| AGR 2150 – Introduction to Animal Science | 4 | AGR - Agriculture Elective ( See list) | 1-4 |
| AGR 2450 – Soil Science | 4 | AGR - Agriculture Elective (See list in ) | **1-4** |
| ***Total Credits*** | **17** | | **16** |
| **Senior Fall Semester** | **Credit Hours** | **Senior Spring Semester** | **Credit Hours** |
| AGED 4100- Methods of Teaching Agriculture Education. | 3 | COE 4499- Alternating Cooperative Experience | 12 |
| AGR 3250 – Grain Crops | 4 | | |
| AGR 3120 – Ag Machines and Mech | 3 | ***Total Credits*** | **12** |
| Humanities and Fine Arts Elective List B | **3** | | |
| ***Total Credits*** | **13** | **Total Degree Hours** | **120** |

**Approved Electives to satisfy the B.S. in Agricultural Education**

Choose a minimum of 8 credits from approved agricultural electives

| | |
|---|---|
| **AGR1250** | Principles of Precision Agriculture (I; 3) |
| **AGR2340** | Careers in Sustainable Agriculture (I; 1) |
| **AGR2350** | Community Agriculture (II, III; 3) |
| **AGR3450** | Agriculture Extension (II; 3) |
| **AGR4350** | Principles of Integrated Pest Management (I; 4) |
| **AGR4430** | Topics in Sustainable Agriculture (On Demand; 3) |
| **AGR4500** | Internship in Sustainable Agriculture (I, II, III; 2) |
| **AGR/WRM3308** | Environmental Law (II; 3) |
| **AGR/WRM3330** | Soil and Water Conservation (II; 4) |
| **AGR/WRM3335** | Irrigation and Drainage (I; 3) |
| **AGR/WRM4406** | Agricultural Development (I; 3) |
| **AGB3220** | Agricultural Marketing (I; 3) |
| **AGB3240** | Farm Management (II; 3) |
| **AGB3415** | Agricultural Finance (I; 3) |
| **AGB4445** | Agricultural Economics (II; 3) |
| **AGB4745** | Agricultural Policy (II; 3) |

# DEPARTMENT OF HEALTH AND HUMAN PERFORMANCE

**Ms. Rosie Turner, Department Chair**
**James Walker Gymnasium**
**Room 161**
**Phone: (937) 376-6219**
**E-mail: rturner@centralstate.edu**

**The Department of Health and Human Performance offers educator preparation programs, an Exercise Science program, and a program that prepares students for professional careers in the recreation industry. The Department has established clinical sites through partnerships with area schools and community agencies and organizations that provide recreation services.**

**FACULTY**
Rosie Turner, Assistant Professor, Chair
Jennifer Turpin Stanfield, Assistant Professor

The Department also offers the Recreation Program that leads to the Bachelor of Science Degree. The Recreation Program prepares students for employment with recreation agencies, YMCA, YWCA, and as a program coordinator in the leisure industry.

The goals of the Department of Health and Human Performance are:

1. To prepare students for professional careers in recreation.

2. To provide basic instruction in lifetime sports and activities that enable students to develop knowledge and skills leading to life-long knowledge.

**Transfer Students**
All Students transferring from another institution must submit an official transcript and obtain a transcript evaluation for program admission.

**Recreation Program**
**Program Liaison: Rosie Turner**
**Room: 161 Walker Gym**
**Phone: 937 376-6219**

The Recreation Program leads to the Bachelor of Science Degree and prepares students for professional careers with recreation agencies and as recreation coordinators in the leisure industry. In addition to general education courses, students in the Recreation Program are required to complete courses in leadership and programming; history and principles of recreation; organization and administration; therapeutic recreation; and legal and financial aspects of recreation. Fifteen weeks of Clinical Experience through field work with an appropriate agency is required.

**Program Requirements**
To pursue a major in the Recreation Program, students must maintain a cumulative grade point average of 2.0. A fifteen week clinical experience with an area recreation agency that serves various age groups is required for graduation. Because clinical assignment is usually with an agency that serves different age groups, students are required to submit to the Department the results of a current BCII/FBI Background Check* that clears the student for participation in the Program. Each Background Check is valid for one calendar year. Therefore, a candidate may need a minimum of two BCII/FBI Background Checks before completing the Program. For more information about BCII/FBI Background Checks, candidates should contact their advisors and/or TEAP-C.

**Student Responsibility**
Students in the Recreation Program are required to meet regularly with their advisor. Students are required to comply with all regulations stipulated by the University, the College of Education, and the Department of Health and Human Performance. Though expected to seek academic advisement and guidance, students are ultimately responsible for satisfying all the degree requirements. Students, in consultation with their advisor, must submit an application for graduation at a time stipulated by the Department and the University.

**Student Monitoring**
The Unit Assessment System collects data that are analyzed to monitor students' progression from admission through successful completion of the Program. Data on students' progression are collected at various points of the Program delivery, including Program courses and Field Experiences.

* FBI = Federal Bureau of Investigation; BCII = Ohio Bureau of Criminal Identification and Investigation

***BACHELOR OF SCIENCE IN RECREATION* –** ENG 1100 or ENG 1101 and ENG 1102; MTH 1750, or MTH 1550; HIS 1110, HIS 1121 or 1122 plus 3 Humanities credit hours from List B; Social and Behavioral Sciences - 9 hours from 2 different disciplines from List C; Natural and Physical Sciences- 7 credit hours from 2 different disciplines from List D (NOTE: one choice must include a lab); USS 1000; HHP 1000 and 1 HHP Activity from List E.

The following major requirements are listed for Recreation: HHP 1110, 1130, 1131, 1132, 1133, 2222, 2230, 2243, 2255, 3312, 3320, 3322, 3355, 3361, 4455, 4470, 4471, 4472, 4486, 4490; ART 2400, BUS 2200, MUS 2215, PSC 1120, SOC 2230. NOTE: Grade of C or better in all major courses and overall grade point average of a 2.5 must be maintained in order to do the Field Experience, HHP 4490. NOTE: BUS 2203, HHP 3317, HHP 3318, HHP 3343, HHP 3362 and HMP 1100 are recommended as electives as well as any course from List B - Humanities or List C - Social Sciences.

**SUGGESTED CURRICULUM FOR THE DEGREE OF BACHELOR OF SCIENCE IN RECREATION**

The curriculum below is to be used in consultation with the student's academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| **FIRST YEAR** | | | |
|---|---|---|---|
| **Fall Semester** | **Credit Hours** | **Spring Semester** | **Credit Hours** |
| ENG 1100 –Intro to Writing/Reading for College **OR** ENG 1101 – Intro to Writing for College | 5/4 | ENG 1102 – Writing/Researching the Essay | 4 |
| MTH 1550 **OR** MTH 1750 | 3 | Elective | 3 |
| HIS 1110 – Into to History of Africans in U.S OR 1121 – Global History to 1500 OR HIS 1122 – Global History Since 1500 | 3 | HHP 1000 – Health and Wellness | 2 |
| HHP 1130 – Introduction to HHP | 2 | HHP 1131 – Skills I (Gymnastics & Dance) | 2 |
| List B Humanities and Fine Arts | 3 | HHP 2230 – First Aid & Terminology | 3 |
| USS 1000 –University Student Success | 2 | List C Social & Behavioral Sciences | 3 |
| | | | |
| ***Total Credits*** | **17/18** | ***Total Credits*** | **17** |
| **SECOND YEAR** | | | |
| **Fall Semester** | **Credit Hours** | **Spring Semester** | **Credit Hours** |
| List D Natural/Physical Science with Lab | 4 | List D Natural/Physical Science | 3 |
| HHP 1132 – Skills II (Volleyball & Soccer) | 2 | HHP 1110 – Intermediate Swimming | 1 |
| List C Social & Behavioral Sciences | 3 | HHP 3312 – Sports Psychology | 2 |
| ELECTIVE | 3 | HHP 1133 – Skills III (Track & Field) | 2 |
| HHP 2222 – History & Principles of Recreation | 2 | ELECTIVE | 3 |
| HHP Activity | 1 | ART 2400 – Beginning Ceramics | 3 |
| | | HHP 3318 – Principles of Coaching | 2 |
| ***Total Credits*** | **15** | ***Total Credits*** | **16** |
| **THIRD YEAR** | | | |
| **Fall Semester** | **Credit Hours** | **Spring Semester** | **Credit Hours** |
| HHP 2255 – Clinical Teaching I | 1 | HHP 3320 – PE for the Elementary School | 3 |
| HHP 3317 – Sports Officiating | 3 | HHP 4471 – Outdoor Education | 3 |
| PSC 1120 – Introduction to Public Administration | 3 | SOC 2230 – Intro to Gerontology | 3 |
| BUS 2200 – Legal Environments in Business | 3 | HHP 2243 – Lifeguard Training | 2 |
| MUS 2215 – Music Methods/Materials | 2 | HHP 4470 – Organization/Administration Rec | 3 |
| HHP 3361 – Intro to Therapeutic Recreation | 2 | HHP 4455 – Clinical Teaching III | 1 |
| HHP 3355 – Clinical Teaching II | 1 | HHP 4472 – Legal & Financial Aspects | 2 |
| ***Total Credits*** | **15** | ***Total Credits*** | **17** |
| **FOURTH YEAR** | | | |
| **Fall Semester** | **Credit Hours** | **Spring Semester** | **Credit Hours** |
| Elective | 3 | HHP Elective | 2 |
| HHP 3322 – Recreational Leadership/Programming | 3 | HHP 4490 – Field Experience | 10 |
| HHP 4463 Management of Recreation & Intramural Sports | 3 | ***Total Credits*** | **12** |
| HHP 4486 – Senior Problems | 3 | | |
| ***Total Credits*** | **12** | **Total Degree Hours** | **123** |

**Effective Fall 2015

See Course Description Section for descriptions of the courses

Candidates are advised to obtain a copy of the Suggested Program of Study from their advisor.

# TEACHER EDUCATION ADVISEMENT AND PARTNERSHIP CENTER (TEAP-C)
# ADMISSION TO EDUCATOR PREPARATION PROGRAMS
# STUDENT MONITORING AND ADVISEMENT

**Ms. Shirley Farrar, Director**
**Ms. Renita Tolbert, Administrative Coordinator**
**Joshua I. Smith Center for Education and Natural Sciences**
**Suite 217**
**Phone: (937) 376-6227**
**E-mail:** sfarrar@centralstate.edu

The Teacher Education Advisement and Partnership Center (TEAP-C) is a support unit within the College of Education that fosters candidate retention and timely graduation. The Center's primary purpose is to provide services to candidates as they complete their programs of study. Admission to Educator Preparation is coordinated by TEAP-C. Candidates seeking admission are advised and monitored by TEAP-C staff throughout the process. Specifically, the Center:

- Provides assistance to candidates in academic planning from admission to graduation.
- Provides advising to candidates on selection of teacher education major, course scheduling, and career goals.
- Provides activities to strengthen candidates' academic skills.
- Provides information to candidates regarding the availability of appropriate University resources.
- Provides supplemental materials that assist candidates in satisfying professional testing requirements (Ohio Assessments for Educators.)
- Provides coordination for the implementation of the College of Education candidate appeals process
- Maintains academic records of candidates enrolled in Educator Preparation Programs

## Admission to Educator Preparation

Admission to Educator Preparation is required before candidates can enter a major in a teacher education program and enroll in upper division education courses. . To be eligible to submit an admission application, candidates must first satisfy 1 and 2 then meet remaining items below:

1. Earn a minimum GPA of 2.75
2. Earn a minimum of 32 hours in general education courses (20 hours for Art & Music)
3. Successfully complete designated courses:
   - **EDU 2500** – Education majors (except art and music)
   - **ART 1421**- Art Education majors
   - **MUS 2280** – Music Education majors
4. Meet basic academic skills minimum requirements on Praxis Core exams:
   - Reading (Exam #5712) score ≥156
   - Writing (Exam #5722) – score ≥162
   - Math (Exam #5732) score ≥150

   **OR**
   - Praxis Core composite score of 468

   Exemption status for PRAXIS CORE EXAMS:
   - Minimum ACT scores:
     - ☐ Reading 20
     - ☐ English 20
     - ☐ Math 21

     **OR**
   - SAT composite score of 860
5. Submit two acceptable faculty recommendations and have no violations of the University's Code of Conduct as verified by the University's Dean of Students. Recommendation forms are available in the TEAP-C
6. Attend prescribed Majors' meetings, professional workshops/seminars or other professional activities to be determined by TEAP-C
7. Successfully complete admission interview
8. Submit current and clear results from BCII/FBI check

# CLINICAL EXPERIENCES FIELD WORK ASSIGNMENT STUDENT TEACHING

Clinical experiences are a critical component of the preparation of future teachers. The experiences serve as opportunities for candidates to develop their teaching skills as they enhance their understanding of the teaching profession. Clinical experiences also provide the opportunity to assess the candidates' mastery of pedagogy and content knowledge and their emerging professionalism as evidenced through the development of professional dispositions. Students should consult the College of Education's *Teacher Education Handbook* for additional information regarding the requirements associated with Clinical Experiences.

After admission to Teacher Education, candidates participate in field experiences that introduce the practical aspects of the teaching profession. The field work requirements provide candidates with sequentially-designed, performance-based experiences that 1) allow candidates to develop an understanding of the role of the classroom teacher as presented from the teacher's perspective; 2) allow candidates to realize the connection of theory to the practical application; and 3) allow candidates to develop teaching competencies through actual classroom application and practice. Field Work requirements are connected to individual courses in the professional education sequence (See Course Description section to identify professional education courses that require field work assignments). Further information regarding field work assignment and placements is provided during candidates' enrollment in the applicable professional education courses.

Student Teaching is the capstone event of the teacher education process. During the student teaching assignment, candidates complete 15 weeks engaged in the practical world of the teaching profession. The student teaching experience places candidates under the direct supervision of both the University supervisor and the classroom teacher. During the Student Teaching experience, opportunities are provided for candidates to bridge theory and practice in the professional setting that is authentic, real life, and real time. As the culminating requirement of the teacher preparation program, candidates are provided guidance as they demonstrate their mastery of the professional expectations and requirements of being an effective teacher. Also, as mastery is demonstrated, candidates are provided the results of constructive assessments throughout the process.

**ADMISSION TO STUDENT TEACHING**

To be approved for Student Teaching, candidates must have been previously admitted to Teacher Education and completed all required coursework. Specifically, for admission to Student Teaching, candidates must satisfy the following requirements:

1. A cumulative grade point average of 2.75 or better;
2. All other course work completed as included on the Suggested Program of Study;
3. Passing score on the OAE, content and pedagogy sections (effective Spring Semester, 2016);
4. Results of a current BCII/FBI Background Check that clears the candidate to enroll in Student Teaching;
5. Recommendation from candidate's faculty advisor;
6. A current resume with a statement on teaching philosophy;
7. A completed Special Needs Accommodation Form, if applicable;
8. Completion of Student Teaching Interview.

Candidates are encouraged to visit the TEAP-C for additional information and directions on applying for Student Teaching.

# COLLEGE OF HUMANITIES, ARTS AND SOCIAL SCIENCES

**Dr. George Arasimowicz**
**Dean of the College of Humanities, Arts and Social Sciences**
**(937) 376-6453**

**Ms. Terri Miller, Administrative Assistant**
**Charles H. Wesley Arts & Science Building**
**Room 125**
**(937) 376-6473**


The College of Humanities, Arts, and Social Sciences (CHAS) provides students with a strong liberal arts foundation for responsible citizenship in a global community.

The College offers 18 degree programs in the fine and performing arts, humanities, and social and behavioral sciences. In addition, by offering courses to support the General Education program, the College provides students with a broad foundation in the liberal arts. The guiding principle of General Education is that each person who graduates from college should possess the ability to think carefully and analytically, to communicate information and ideas effectively, to know history and its role in shaping the present, to use technology to enhance learning, and to understand human life more deeply and productively through acquaintance with the work of writers, thinkers, and pioneers in the arts, humanities, and social sciences.

The College of Humanities, Arts, and Social Sciences is organized through academic departments of Fine and Performing Arts, Humanities, and Social and Behavioral Sciences. The College also houses the Stokes Center on Aging, an Honors Program, federal and state-funded research programs, and the Mass Communications Center. The Fine and Performing Arts program has been designated as a Center of Excellence by the Ohio Board of Regents.

Undergraduate degree offerings include Journalism and Mass Communications, English, Fine Arts, History, and Music. Through the disciplines of Criminal Justice, Political Science, Psychology, Social Work and Sociology, the College offers baccalaureate degree programs that prepare students for careers in the pure and applied sciences. The programs in International Languages, Gerontology, African Studies, Africana Studies, and Philosophy serve to support major and minor degree offerings, and the University General Education Requirements. The Music and Art programs are accredited by the National Association of Schools of Music and the National Association of Schools of Art and Design respectively.

**ADMISSION REQUIREMENTS**

Students are admitted to the College of Humanities, Arts, and Social Sciences by declaring a major in, or an intention to apply to one of the 18 degree programs in the Humanities, Arts, and Social Sciences.

**STUDENT RESPONSIBILITY**

Students in the College of Humanities, Arts, and Social Sciences are required to confer with an assigned faculty advisor within their major, or with a professional advisor in the Undergraduate Student Success Center on a regular basis. Students are personally responsible not only for selecting their academic programs, but also for adhering to all published regulations and requirements of the University. Students are expected to seek regular academic advisement and are individually responsible for completing all degree requirements.

During the semester immediately prior to the year in which a student expects to graduate, he or she must confer with his or her advisor and the chair of the major department for a final degree checkout and preparation of an application for graduation. Completed graduation applications are due in the College Dean's office prior to the end of the first semester of the year in which a student expects to graduate.

**TRANSFER OF CREDITS**

Students who transfer from other colleges of the University and from other accredited colleges and universities must meet with the **department chairperson to review and determine the acceptability of transfer credits to the intended degree program.** The chairperson may decline to accept the transfer credit(s) for any course which does not meet an approved course description, or for which

the grade is lower than a "C," or which does not meet the University General Education Requirements.

Students who have completed the Ohio Transfer Module (see pages 51-55) at another school will automatically receive credit for Central State's Transfer Module. Such students will, however, be required to meet some additional General Education Requirements not included in the Transfer Module.

**DEGREE REQUIREMENTS**

The General Education Program, a common curriculum of 42-46 semester hours, is central to the University's mission of providing students with a liberal arts background.

The remaining hours that must be taken to earn a minimum of 121 semester hours come from the departmental major requirements and student's choice of free electives. However, majors in the College are urged to choose, with an advisor, courses that provide the student with a second field of interest or a strong minor concentration. Minimum graduation requirements include:

- Completion of at least 124 semester hours with a grade point average of 2.00. Some departments or programs may require additional hours and a higher grade point average,
- Completion of at least 30 semester hours in a major field. Some departments may require additional hours,
- Completion of the University General Education Requirements. See complete description on pages 47-50 of this catalog, and
- Successful completion of the University's English Proficiency Requirement for Graduation. See complete description on page 56 of this Catalog.

**PRE-LAW OPTIONS**

Students interested in law school may minor in pre-law. This option is designed for students who wish to pursue any career related to law. Aside from a career as an attorney-at-law, such careers might include public policy, government leadership, criminal justice, education, and related fields.

**MAJORS**

FINE AND PERFORMING ARTS
Graphic Design
Art Education
Studio Art
Jazz Studies
Music Education
Music Performance (Classical)

HUMANITIES
Communication (Print Journalism)
Communication (Broadcast Media)
English Literature
English Pre-Law
History

*In addition, minors are offered in Communication (Broadcast Media), Communication (Print Journalism), Creative Writing, International Languages, Philosophy, Public Relations, Literature Sound Engineering and Recording, Speech Theatre, Africana Studies, and Pre-Law. COM minors are not open to COM Majors.*

SOCIAL AND BEHAVIORAL SCIENCES
Criminal Justice
Political Science

Political Science (Public Administration)
Psychology
Sociology
Social Work
*A minor is offered in criminal justice, gerontology, political science, psychology, and sociology.*

# DEPARTMENT OF FINE AND PERFORMING ARTS

**Dr. Kathleen Allen, Chair**
**Department of Fine and Performing Arts**
**Paul Robeson Cultural & Performing Arts Center**
**Room 218**
**(937) 376-6404**

**Ms. Jennifer Hathaway (937) 376-6403**
**Admin Secretary/Building Manager**

**Professors:** Dr. George Arasimowicz, Dr. Jennifer Cruz
**Associate Professors:** Dr. Ronald Claxton, Mr. Dwayne M. Daniel, Mr. Mitchell Eismont Dr. William M. Denza, Dr. Mervyn R. Joseph, Mr. Harold Melia, Dr. Kathleen Allen.
**Assistant Professors:** Mr. Ramon Key, Dr. Neil Nanyi Qiang, Ms. Erin Smith-Glenn, and Mr. James Champion

The Department of Fine and Performing Arts offers majors in the disciplines of art and music. In addition to its primary role of providing professional and pre-professional training to its majors and minors, the department serves as a major cultural center and resource for the University and offers a wide range of concerts, performances, exhibitions, lectures and courses which promote the aesthetic development of the community.

Central State University is an accredited institutional member of the National Association of Schools of Music and National Association of Schools of Art & Design. The department offers programs leading to the following degrees: the Bachelor of Arts in Graphic Design, the Bachelor of Arts in Studio Art, the Bachelor of Science in Art Education, the Bachelor of Music in Music Education, the Bachelor of Music in Performance, and the Bachelor of Music in Jazz Studies. All majors and minors in the department are expected to participate in co-curricular organizations and/or activities of respective programs (e.g., art exhibits, concerts, student organizations, professional organizations, etc.).

All majors in the department must fulfill the General Education Requirements as stated in the degree requirements below (which vary depending upon the degree) and the specific requirements of the college in which the student is enrolled (College of Humanities, Arts, and Social Sciences or College of Education). Students enrolled in teacher education degree programs begin as majors in the College of Humanities, Arts, and Social Sciences and then must apply to be admitted to the College of Education. Students are responsible for knowing and adhering to published schedules for the administration of the above tests and for applying for graduation.

**ART and DESIGN**
The art and design programs are designed to produce graduates who are thoughtful, articulate, and literate artist scholars, who possess a broad liberal arts background and the skills necessary to compete in a technologically sophisticated world. The curriculum is constructed to meet the individual needs of students (who may have unique and diverse career aspirations) and is designed to enable each student to acquire a broad range of aesthetic experiences (both in and out of the classroom). Small class sizes allow the necessary one-to-one contact with instructors to develop creative thoughts into strong visual statements. Central State University is an accredited institutional member of the National Association of Schools of Art and Design.

**SPECIAL REQUIREMENTS FOR ART and DESIGN MAJORS**
All art and design majors must meet the following requirements:

- Upon entering the department, each major is required to meet with an art faculty advisor to determine a course of study.
- Students majoring in art/design are required to exhibit selected works in student exhibitions organized by the department.
- The department reserves the right to retain, for its student collection, one example of each student's work done in any scheduled class.
- Students must participate in a senior art exhibition as partial fulfillment of department requirements.
- The student enrolled in the Bachelor of Arts in any Arts degree program is required to take the core program first.
- After students have completed the core program they begin, usually in their third year, concentrated work in a major area of study. A student may elect to focus

in one of three areas of study: Graphic Design, Painting or Drawing, and Art Education.

***BACHELOR OF ARTS IN STUDIO ARTS - Drawing and Painting Concentration*** - Students in the studio arts – drawing and painting concentration program must take the following general education requirements (25-26 hours): ENG 1100 or ENG 1101, ENG 1102; MTH 1550; HIS 1110 or HIS 1121 or HIS 1122; HHP Activity; USS 1000, 3 semesters hours from Social and Behavioral Sciences and 3 credit hours from Natural and Physical Sciences (must include a lab), and 3 Humanities Elective credit hours.

All students must take the following major requirements: (See ACADEMIC PROGRAM) including special requirements for the B.A. (six additional semester hours in humanities and ten credits of foreign language), and the following major requirements: ART 1001, ART 1002, ART 1101, ART 1102, ART 1200, ART 1210, ART 2100, ART 2200, ART 2400, ART 3100; *Drawing Option* - ART 3200, ART 3300, ART 4200, ART 4300, or *Painting Option* - ART 3200, ART 3400, ART 4200, ART 4400; and twelve credits from the following: ART 1100, ART 1110, ART 1120, ART 2130, ART 2140, ART 3150, ART 3160.

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF ARTS**
**MAJOR (with Concentration in Drawing and Painting) IN STUDIO ART**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| FALL SEMESTER | | | SPRING SEMESTER | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE#** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| ART 1001 | Fundamentals & Design I | 3 | ART 1002 | Fundamentals & Design II | 3 |
| ART 1101 | Beginning Drawing I | 3 | ART 1102 | Beginning Drawing II | 3 |
| ART 1210 | Introduction to Art | 3 | ART 1200 | Introduction to Photography | 3 |
| ENG 1101 | Introduction to Writing for College | 4 | ART 2010 | Intro to 2D Computer Graphics | 3 |
| USS 1000 | Undergraduate Success Seminar | 2 | ENG 1102 | Writing and Research the Essay | 4 |
| | | | HHP 1xxx | HHP Activity | 1 |
| | | **15** | | | **17** |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| ART 2130 | Arts of Africa | 3 | ART 3160 | Modern & Contemp Art Hist II | 3 |
| ART 3150 | Modern & Cont Art History I | 3 | ART 2400 | Beginning Ceramics | 3 |
| ART 2200 | Figure Drawing and Painting I | 3 | ART 1120 | Later European Art History | 3 |
| | | | ART2100 | Figure Drawing and Sculpture | 3 |
| HIS 1110/1121/1122 | Intro History of Africans in the U.S Global History I or II | 3 | MTH 1550 | Modern Applications of Math | 3 |
| ELECTIVE | From General Education List C | 4 | ELECTIVE | University Elective | 3 |
| | | 16 | | | 18 |
| **JUNIOR** | | | **JUNIOR** | | |
| ART 3100 | Advanced Drawing | 3 | ART 3300 | Figure and Advanced Drawing I | 3 |
| ART 3200 | Figure Drawing and Painting II | 3 | ART 3400 | Advanced Drawing & Painting I | 3 |
| FLA 1xxx | Foreign Languages | 4 | FLA 1xxx | Foreign Languages | 4 |
| ELECTIVE | From General Education List B | 3 | ELECTIVE | From General Education List B | 3 |
| ELECTIVE | From General Education List C | 4 | ELECTIVE | From General Education List B | 3 |
| | | **17** | | | **16** |
| **SENIOR** | | | **SENIOR** | | |
| ART 4200 | Figure Drawing & Painting III | 3 | ART 4300 | Figure and Advanced Drawing II | 3 |
| ART 4400 | Advanced Drawing & Painting II | 3 | ELECTIVES | From General Education List A | 9 |
| ELECTIVE | Electives | 9 | ELECTIVES | Electives | 3 |
| | | **15** | ART 4751 | Senior Art Show | 0 |
| | | | | | **15** |

***Minimum hours needed to obtain a Bachelor of Arts in Studio Arts - Drawing and Painting Concentration – 124***

***BACHELOR OF ARTS IN GRAPHIC DESIGN*** - Students in the graphic design program must take the following general education requirements (25-26 hours): ENG 1100 or 1101, 1102; MTH 1550; HIS 1110 or HIS 1121 or HIS 1122; HHP Activity; USS 1000, 3 semesters hours from Social and Behavioral Sciences and 3 credit hours from Natural and Physical Sciences (must include a lab), and 3 Humanities Elective credit hours.

All students must take the following major requirements: (See ACADEMIC PROGRAM) including special requirements for the B.A. (six additional semester hours in humanities and ten credits of foreign language), and the following major requirements: ART 1001, 1002, 1101, 1102, 1200, 1210, 2100, 2200, 2400, 3100; ART 2020, 3010, 3061, 3062, 3065, 4061, 4062, and twelve credits from the following: ART 1100, 1110, 1120, 2130, 2140, 3150, 3160.

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF ARTS**
**MAJOR IN GRAPHIC DESIGN**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| FALL SEMESTER | | | SPRING SEMESTER | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE#** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| ART 1001 | Fundamentals & Design I | 3 | ART 1002 | Fundamentals & Design II | 3 |
| ART 1101 | Beginning Drawing I | 3 | ART 1102 | Beginning Drawing II | 3 |
| ART 1210 | Introduction to Art | 3 | ART 1200 | Introduction to Photography | 3 |
| ENG 1101 | Introduction to Writing for College | 4 | ART 2010 | Intro to 2D Computer Graphics | 3 |
| USS 1000 | Undergraduate Success Seminar | 2 | ENG 1102 | Writing and Research the Essay | 4 |
| | | | HHP 1xxx | HHP Activity | 1 |
| | | **15** | | | **17** |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| ART 1110 | Ancient & Early Eur. Art Hist | 3 | ART 2140 | African American Art History | 3 |
| ART 1120 | Later European Art History | 3 | ART 3150 | Modern & Contemp Art Hist I | 3 |
| ART 2100 | Figurative Drawing and Sculpture | 3 | ART 2400 | Introduction to Ceramics | 3 |
| ART 2200 | Figure Drawing and Painting I | 3 | HIS 1110/1121/1122 | Intro History of Africans in the U.S/ Global History I or II | 3 |
| ELECTIVE | From General Education List C | 3 | MTH 1550 | Modern Applications of Math | 3 |
| HHP 1XXX | HHP Activity | 1 | | | |
| | | **16** | | | **15** |
| **JUNIOR** | | | **JUNIOR** | | |
| ART 3100 | Advanced Drawing | 3 | ART 3062 | Graphic Design II | 3 |
| ART 3061 | Graphic Design I | 3 | FLA 1xxx | Foreign Languages | 4 |
| FLA 1xxx | Foreign Languages | 4 | ELECTIVES | From General Education List B | 9 |
| ELECTIVE | From General Education List B | 3 | | | **16** |
| ART 2020 | Image Processing for Artists | 3 | | | |
| | | **16** | | | |
| **SENIOR** | | | **SENIOR** | | |
| ART 3010 | Com. Presentation Graphics | 3 | ART 3065 | Intro to Illustration | 3 |
| ART 4061 | Advanced Graphic Design I | 3 | ART 4062 | Advanced Graphic Design II | 3 |
| ELECTIVE | From General Education List C (lab) | 4 | ELECTIVE | Electives | 7 |
| ELECTIVE | From General Education List A | 6 | ELECTIVE | From General Education List A | 3 |
| | | | ART 4751 | Senior Art Show | 0 |
| | | **16** | | | **16** |

***Minimum hours needed to obtain a Bachelor of Arts in Graphic Design – 124***

***BACHELOR OF SCIENCE IN EDUCATION – ART EDUCATION*** - Students in the art education program must take the following general education requirements (25-26 hours): ENG 1100 or 1101, 1102; MTH 1550; HIS 1110 or HIS 1121 or HIS 1122; HHP Activity; USS 1000, 3 semesters hours from Social and Behavioral Sciences and 3 credit hours from Natural and Physical Sciences (must include a lab), and 3 Humanities Elective credit hours.

All students must take the following major requirements: (See ACADEMIC PROGRAM) including special requirements for the B.A. (six additional semester hours in humanities and ten credits of foreign language), and the following major requirements and professional education requirements: ART 1001, 1002, 1101, 1102, 1200, 1210, 1320, 1321, 1421, 1422, 1423, 1523, 2100, 2200, 2400, 3100; EDU 2262, 2264, 2266, 3330, 3350, 4491, 4895, and twelve credits from the following: ART 1110, 1120, 2130, 2140, 3150, 3160. **NOTE:** Changes in the course requirements are subject to change to meet NASAD accreditation standards.

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF SCIENCE IN EDUCATION**
**MAJOR IN ART EDUCATION**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| FALL SEMESTER | | | SPRING SEMESTER | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE#** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| ART 1001 | Fundamentals & Design I | 3 | ART 1002 | Fundamentals & Design II | 3 |
| ART 1101 | Beginning Drawing I | 3 | ART 1102 | Beginning Drawing II | 3 |
| ART 1210 | Introduction to Art | 3 | ART 1320 | Intro to Art Education | 3 |
| ENG 1101 | Introduction to Writing for College | 4 | ART 2010 | Intro to 2D Computer Graphics | 3 |
| USS 1000 | Undergraduate Success Seminar | 2 | ENG 1102 | Writing and Research the Essay | 4 |
| | | | HHP 1xxx | HHP Activity | 1 |
| | | **15** | | | **17** |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| ART 1110 | Ancient & Early Eur. Art History | 3 | ART 2140 | African American Art History | 3 |
| ART 1421 | Art Education for Teachers | 3 | EDU 3262 | Ed Fdns & Prin of Instr & Assess | 3 |
| ART 2100 | Figurative Drawing and Sculpture | 3 | EDU 3266 | Individuals w/ Special Needs | 3 |
| ART 2200 | Figure Drawing and Painting I | 3 | ELECTIVE | From General Education List B | 3 |
| EDU 3264 | Multicultural Education | 3 | ELECTIVE | From General Education List B | 3 |
| MTH 1550 | Modern Applications of Math | 3 | | | |
| | | **18** | | | **15** |
| **JUNIOR** | | | **JUNIOR** | | |
| ART 1422 | Secondary Art Education | 3 | ART 1200 | Intro to Photography | 3 |
| ART 3100 | Advanced Drawing | 3 | ART 1523 | Creative Art Teaching | 3 |
| HIS 1110/1121/1122 | Intro History of Africans in the U.S/ Global History I or II | 3 | ART 2400 | Beginning Ceramics | 3 |
| ART 3150 | Modern & Contemp Art Hist I | 3 | ART 1422 | Secondary Art Education | 3 |
| ELECTIVE | From General Education List C(Lab) | 4 | ART 2130 | Arts of Africa | 3 |
| | | **16** | | | **15** |
| **SENIOR** | | | **SENIOR** | | |
| EDU 3330 | Reading in the Content Reading | 3 | EDU 4491 | Student Teaching | 9 |
| EDU 3350 | Field Based Experience | 3 | EDU 4895 | Capstone Seminar | 3 |
| ELECTIVE | From General Education List C | 3 | ART 4751 | Senior Art Show | 0 |
| ELECTIVE | From General Education List A | 3 | | | |
| ELECTIVE | From General Education List B | 3 | | | |
| | | **15** | | | **12** |

***Minimum hours needed to obtain a Bachelor of Science in Education –Art Education - 124***

## MUSIC

The music programs are designed to produce graduates who are thoughtful, articulate, and literate artist-scholars, who possess a broad liberal arts background and the skills necessary to compete in a technologically sophisticated world. Students master the language of music (and a number of its diverse dialects), demonstrate a detailed knowledge of the history of music, the arts, and civilization from a world (multicultural) perspective, and critically evaluate music and the arts using both personal and established criteria.

Music graduates educate, perform, improvise, compose and publish. Their teaching and their original artistic expressions are informed by knowledge of musical syntax, vocabulary, form, history, style, and aesthetics. The curriculum, the faculty, and all aspects of the academic program work together to create a nurturing, artistic environment in which students develop confidence, discipline, and independence, and become mature individuals who are actively engaged in their professions and assume responsibility for their lifelong development and learning.

## MISSION OF MUSIC UNIT

The mission of the Music Program is to create and sustain a nurturing intellectual and artistic environment in which students find learning to be satisfying and in which each student's intellectual curiosity is stimulated to engage in a continuous search for knowledge. Within the framework of this mission, the music faculty strives to:

- Develop in students the ability to perceive, react to, write about, perform, conceptualize, analyze, evaluate, and value music;
- Provide students with opportunities to develop critical thinking skills in their chosen discipline
- Expose students to the music of other cultures to clarify music's significance and role in those cultures, and explore the influences cultures have had on each other through the arts, especially music;
- Prepare students for professions related to their degree program, while addressing the challenges of a technologically oriented world;
- Prepare students for graduate studies by addressing areas of weakness while emphasizing strengths and by instilling in students an aspiration for excellence
- Promote the serious study of the various genres of African-American music;
- Enhance music performance skills through student performance in ensembles: concert band, marching band, chorus, university singers, ethnic-based ensembles, jazz ensembles, wind ensembles, percussion ensembles, opera workshop, and musical theatre;
- Expose students to outstanding scholars, teachers, and performers in the field of music by collaborating with other educational institutions, business organizations, major orchestras, the professional music community, and government agencies.

## SPECIAL REQUIREMENTS FOR MUSIC MAJORS

The department publishes a *Student Handbook* containing detailed information about graduation and other requirements for all three music degrees. Students must read this information and work with their faculty advisors to ensure that each requirement is fulfilled before graduation.

All music majors must meet the following requirements (other additional requirements specific to each degree are outlined in the *Student Handbook*):

- All students must audition on their instrument and receive departmental approval before registering for a principal applied class.
- Each student enrolled in a degree program in music must pass comprehensive junior and senior examinations.
- Music students are required to participate in department ensembles (please see the *Student Handbook* for information about the ensemble requirements for each degree program).
- Music Education majors must register for and pass seven semester hours of Student Recital MUS 1000 and Music Performance majors must register for and pass eight semester hours of Student Recital MUS 1000.
- Music students must perform on a Student Recital program once each semester they are enrolled in principal applied courses, except for the first semester they are registered.
- Music students must attend studio classes organized by their principal applied instructors.
- Students must apply for graduation during the fall semester of the academic year in which they plan to graduate (information about application procedures, deadlines and fees is available from the Registrar's Office).
- Students may not take any of the following courses more than two times: MUS 1100 Fundamentals of Theory, MUS 1101 Music Theory I, MUS 1102 Music Theory II, MUS 1151 Piano Class I, MUS 1152 Piano Class II, MUS 2271 Jazz Keyboard Harmony I, MUS 2272 Jazz Keyboard Harmony II, MUS 2280 Intro to Music Education, and MUS 3391 Jazz Improvisation I.

**SPECIAL REQUIREMENTS FOR MUSIC EDUCATION MAJORS**

Students enrolled in the Bachelor of Music in Music Education degree program should be aware of the following requirements:

- Students are enrolled first in the College of Humanities, Arts, and Social Sciences and then must apply for acceptance into the College of Education before being allowed to fulfill the student teaching requirement (information about application procedures and deadlines are available from the College of Education).
- Music Education majors must complete the application procedure required by the College of Education for a Student Teaching assignment.
- Music Education majors must complete all requirements of the Teacher Education and Licensure Program as stated by the Ohio Department of Education.
- Music Education majors develop competencies required by the Ohio Department of Education's *Teacher Education and Licensure Standards.* Exact standards for each course are included with the syllabus.
- Music Education majors (except for those students who are piano majors) must pass a piano proficiency exam before they will be allowed to register for Student Teaching.
- Music Education majors must receive department approval to present a Senior Recital (the faculty will listen to the student perform the recital repertory at least two weeks prior to the planned recital date to judge whether the student is prepared) and must pass the Senior Recital requirement before a student will be allowed to register for Student Teaching (exceptions to this will be made only with the approval of the entire department faculty).
- Music Education majors must submit a clinical/field-based experience inventory form documenting the hours the student has been involved in clinical/field-based experience before the student will be allowed to register for Student Teaching.

***BACHELOR OF MUSIC IN JAZZ STUDIES*** — ENG 1100 or 1101, 1102; MTH 1550; HIS 1110 or HIS 1121 or HIS 1122; USS 1000, 3 semesters hours from Social and Behavioral Sciences and 3 credit hours from Natural and Physical Sciences (must include a lab), and 3 Humanities Elective credit hours;, and meet the following major requirements: MUS 1101, 1102, 1151, 1152, 2201, 2202, 2233, 2236, 2271, 2272, 3311, 3312, 3381, 3382, 3386, 3391, 3392, 4341, 4342, 4490, 4495; 16 semester hours in principal applied; and 12 semester hours in jazz ensembles. 12 semester hours in ensembles; and 8 semester hours of MUS 1000. A grade of "C" or better is required. NOTE: A grade of "B" or better is required in Principal Applied courses.

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF MUSIC**
**MAJOR IN JAZZ STUDIES**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| FALL SEMESTER | | | SPRING SEMESTER | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE#** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| ENG 1101 | Intro to Writing for College | 4 | ENG 1102 | Write & Research the Essay | 4 |
| MUS 1101 | Music Theory I | 5 | MUS 1102 | Music Theory II | 5 |
| MUS 1151 | Piano Class I | 1 | MUS 1152 | Piano Class II | 1 |
| MUS 1187 | Jazz Ensemble | 1 | MUS 1187 | Jazz Ensemble | 1 |
| MUS 1xx1 | Principal Applied | 2 | MUS 1xx2 | Principal Applied | 2 |
| USS 1000 | Undergraduate Success Seminar | 2 | MUS 2210 | Jazz Band Lab | 1 |
| | | | ELECTIVE | Elective | 3 |
| MUS 1000 | Student Recital | 0 | MUS1000 | Student Recital | 0 |
| | | **15** | | | **17** |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| HIS 1110/1121/1122 | Intro History of Africans in the U.S Gobal History I or II | 3 | MUS 1187 | Jazz Ensemble | 1 |
| MUS 1187/2210 | Jazz Ensemble | 1 | MUS 2202 | Music Theory IV | 5 |
| MUS 2201 | Music Theory III | 5 | MUS 2210 | Jazz Band Lab | 1 |
| MUS 2271 | Jazz Keyboard Harmony I | 2 | MUS 2233 | History of Jazz | 3 |
| MUS 2xx1 | Principal Applied | 2 | MUS 2272 | Jazz Keyboard Harmony II | 2 |
| MUS 3391 | Jazz Improvisation I | 2 | MUS 2xx2 | Principal Applied | 2 |
| MUS 1000 | Student Recital | 0 | MUS1000 | Student Recital | 0 |
| | | | ELECTIVE | From General Education List A | 3 |
| | | **15** | | | **17** |
| **JUNIOR** | | | **JUNIOR** | | |
| MUS 1000 | Student Recital | 0 | MTH 1550 | Modern Applications of Math | 3 |
| MUS 1187/2210 | Jazz Ensemble | 1 | MUS 1187/2210 | Jazz Ensemble | 1 |
| MUS 3381 | Music History I | 3 | MUS 3382 | Music History II | 3 |
| MUS 3386 | Ethnomusicology | 2 | MUS 3392 | Jazz Improvisation II | 2 |
| MUS 3xx1 | Principal Applied | 2 | MUS 3xx2 | Principal Applied | 2 |
| MUS 4341 | Form and Analysis | 2 | MUS 4342 | Counterpoint | 2 |
| ELECTIVE | Electives | 6 | MUS 2236 | Computer Music Tech. | 2 |
| | | | MUS 3495 | Junior Recital | 0 |
| | | | MUS 1000 | Student Recital | **0** |
| | | **16** | | | **15** |
| **SENIOR** | | | **SENIOR** | | |
| MUS 1187 | Jazz Ensemble | 1 | HHP 1xxx | HHP Activity | 1 |
| MUS 2210 | Jazz Band Lab | 1 | MUS 1187 | Jazz Ensemble | 1 |
| MUS 3311 | Jazz Composition & Arranging I | 3 | MUS 2210 | Jazz Band Lab | 1 |
| MUS 4xx1 | Principal Applied | 2 | MUS 3312 | Jazz Composition & Arrang II | 3 |
| ELECTIVE | From General Education List B | 3 | MUS 4490 | Recording Studio Practicum | 3 |
| ELECTIVE | From General Education List C(Lab) | 4 | MUS 4495 | Senior Recital | 0 |
| ELECTIVE | Electives | 3 | MUS 4xx2 | Principal Applied | 2 |
| MUS1000 | Student Recital | 0 | | Electives | 4 |
| | | **17** | MUS1000 | Student Recital | **0** |
| | | | | | **15** |

***Minimum hours needed to obtain a Bachelor of Music in Jazz Studies - 124***

***BACHELOR OF MUSIC IN MUSIC EDUCATION*** —Students in the music education program must take the following general education requirements (35-37 hours): ENG1100 (or 1101), 1102; MTH 1550; HIS 1110 or HIS 1121 or HIS 1122; USS 1000, 3 semesters hours from Social and Behavioral Sciences and 3 credit hours from Natural and Physical Sciences (must include a lab) see page 50, and 3 Humanities Elective credit hours. All students must take: MUS 1101, 1102, 1151, 1152, 2201, 2202, 2226, 2228, 2229, 2230, 2231, 2232, 2236, 2251, 2252, 2280, 3341, 3342 or 3343, 3375 or 4477, 3376, 3379, 3380, 3381, 3382, 3386, 4341, 4476, 4479, 4480, 4495, 14 semester credit hours in principal applied, 7 semester credit hours in ensembles, and 7 semester hours of MUS 1000. Also, EDU 3262, 3264, 3266, 2300, 3330, 4491, and 4895. A grade of "C" or better is required.

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF MUSIC**
**MAJOR IN MUSIC EDUCATION**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| FALL SEMESTER | | | SPRING SEMESTER | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE#** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| ENG 1101 | Introduction to Writing for College | 4 | ELECTIVE | From General Education List A | 3 |
| USS 1000 | Undergraduate Success Seminar | 2 | ENG 1102 | Writing and Research the Essay | 4 |
| MTH 1550 | Modern Applications of Math | 3 | MUS 1000 | Student Recital | 0 |
| MUS 1000 | Student Recital | 0 | MUS 1102 | Music Theory II | 5 |
| MUS 1101 | Music Theory I | 5 | MUS 1152 | Piano Class II | 1 |
| MUS 1151 | Piano Class I | 1 | MUS 1xx2 | Principal Applied | 2 |
| MUS 1xx1 | Principal Applied | 2 | MUS xxxx | Ensemble | 1 |
| MUS xxxx | Ensemble | 1 | | | |
| | | **18** | | | **16** |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| HIS 1110/1121/1122 | Intro History of Africans in the U.S/Global History I or II | 3 | EDU 2300 | Ed. Psychology - List B | 3 |
| MUS 2228 | Brass Class | 2 | MUS 1000 | Student Recital | 0 |
| MUS 1000 | Student Recital | 0 | MUS 2236 | Computer Music Technology – List D | 2 |
| MUS 2201 | Music Theory III | 5 | MUS 2202 | Music Theory IV | 5 |
| MUS 2251 | Piano Class III | 1 | HHP 1xxx | HHP Activity – List E | 2 |
| MUS 2280 | Introduction to Music Education | 3 | MUS 2252 | Piano Class IV | 1 |
| MUS 2xx1 | Principal Applied | 2 | MUS 2xx2 | Principal Applied | 2 |
| MUS xxxx | Ensemble | 1 | MUS xxxx | Ensemble | 1 |
| | | **17** | | | **15** |
| **JUNIOR** | | | **JUNIOR** | | |
| MUS 1000 | Student Recital | 0 | EDU 3266 | Ed Exceptional Child | 3 |
| MUS 2231 | Woodwind Class I | 2 | MUS 1000 | Student Recital | 0 |
| MUS 3341 | Beginning Conducting | 2 | MUS 2229 | Percussion Class | 2 |
| MUS 3482 | Music Methods & Materials/Elementary | 2 | MUS 3342/43 | Adv Vocal/Instrum Conduct | 2 |
| MUS 3381 | Music History I | 3 | MUS 3376 | Instrumental Methods | 2 |
| MUS 3386 | Ethnomusicology | 2 | MUS 3382 | Music History II | 3 |
| MUS 3xx1 | Principal Applied | 2 | MUS 3xx2 | Principal Applied | 2 |
| EDU 3262 | Ed Fdns & Classroom Management | 2 | MUS xxxx | Ensemble | 1 |
| MUS xxxx | Ensemble | 1 | MUS 3495 | Junior Recital | 3 |
| | | **16** | | | **15** |
| **SENIOR** | | | **SENIOR** | | |
| EDU 3330 | Reading in the Content Area | 4 | EDU 3264 | Multicultural Education | 3 |
| MUS 4341 | Form & Analysis | 3 | MUS 1000 | Student Recital | 0 |
| MUS xxxx | Ensemble | 1 | MUS 2226 | String Class | 2 |
| MUS 1000 | Student Recital | 0 | MUS 2230 | Voice Class | 2 |
| MUS 3375/4477 | Band & Orch or Choral Lit. & Arr. | 4 | MUS 2232 | Woodwind Class II | 2 |
| MUS 4482 | Music Methods & Materials/Secondary | 2 | MUS 4476 | Choral Methods | 2 |
| MUS 4xx1 | Principal Applied | 2 | MUS 4495 | Senior Recital | 0 |
| | | | ELECTIVE | From General Education List B | 3 |
| | | **16** | ELECTIVE | From Gen Ed List C, with lab | 3 |
| | | | | | **17** |

**FIFTH YEAR FALL**

| | | |
|---|---|---|
| EDU 4491 | Student Teaching | 9 |
| EDU 4895 | Capstone Senior | 3 |
| | | **12** |

***Minimum hours needed to obtain a Bachelor of Music in Music Education degree – 148***

***BACHELOR OF MUSIC IN PERFORMANCE*** — Students must take the following general education requirements: ENG 1100 (or 1101) and ENG 1102; MTH 1550; HIS 1110 or HIS 1121 or HIS 1122; USS 1000; 3 semesters hours from Social and Behavioral- Sciences; 3 semester hours from Natural and Physical Sciences (must include a lab), see page 50; and MUS 2236. All students must take MUS 1101, 1102, 1151, 1152, 2201, 2202, 2251, 2252, 3341, 3342 or 3343, 3381, 3382, 3386, 3397, 4341, 4342, 4400, 4497; 24 semester hours in principal applied; 12 semester hours in ensembles; and 8 semester hours of MUS 1000. In addition, vocalists must take MUS 3301. Piano majors must take four credits of accompanying class or secondary applied instead of piano class. Instrumental majors must take 11 credits of free electives; Vocal majors must take 9 credits. A grade of "C" or better is required in music courses, "B" or better in principal applied courses.

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF MUSIC**
**MAJOR IN PERFORMANCE**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| FALL SEMESTER | | | SPRING SEMESTER | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE#** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| ENG 1101 | Introduction to Writing for College | 4 | ENG 1102 | Writing and Research the Essay | 4 |
| ~~MUS xxxx~~ | ~~Ensemble~~ | ~~1~~ | MUS 1000 | Student Recital | 0 |
| USS 1000 | Undergraduate Success Seminar | 2 | ELECTIVE | Elective | 3 |
| MUS 1000 | Student Recital | 0 | MUS 1102 | Music Theory II | 5 |
| MUS 1101 | Music Theory I | 5 | MUS 1152 | Piano Class II/Piano Maj. MUS 3396 | 1 |
| MUS 1151 | Piano Class I/Piano majors take Accompanying | 1 | MUS xxxx | Ensemble | ~~1~~ |
| MUS 1xx1 | Principal Applied | 4 | MUS 1xx2 | Principal Applied | 2 |
| MUS xxxx | Ensemble | 1 | | | |
| | | **17** | | | **16** |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| HIS 1110/1121/1122 | Intro History of Africans in the U.S/ Global History I or II | 3 | MUS 1000 | Student Recital | 0 |
| MUS 1000 | Student Recital | 0 | MUS 2202 | Music Theory IV | 5 |
| MUS 2201 | Music Theory III | 5 | MUS 2252Cr | Piano Class IV/Piano majors take Accompanying | 1 |
| MUS 2236 | From General Education List D | 2 | MUS 2xx2 | Principal Applied | 4 |
| MUS 2251 | Piano Class III/Piano majors take Accompanying | 1 | MUS xxxx | Ensemble | 1 |
| MUS 2xx1 | Principal Applied | 4 | MUS xxxx | Ensemble | 1 |
| MUS xxxx | Ensemble | 1 | | Free Electives | 3 |
| | | **16** | | | **15** |
| **JUNIOR** | | | **JUNIOR** | | |
| | | | MUS 1000 | Student Recital | 0 |
| MUS 1000 | Student Recital | 0 | MUS 3342/43 | Advanced Con Inst./Choral | 2 |
| MUS 3341 | Beginning Conducting | 2 | MUS 3382 | Music History II | 3 |
| MUS 3381 | Music History I | 3 | MUS 3397 | Junior Recital/Research | 3 |
| MUS 3xx1 | Principal Applied | 4 | MUS 3xx2 | Principal Applied | 2 |
| MUS xxxx | Ensemble | 1 | MUS xxxx | Ensemble | 1 |
| ELECTIVE | From General Education List B | 3 | MUS xxxx | Ensemble | 1 |
| | | | ELECTIVE | From General Education List C w/lab | 4 |
| | | **16** | | | **16** |
| **SENIOR** | | | **SENIOR** | | |
| MTH 1550 | Modern Applications of Math | 3 | MUS xxxx | MUS 4510/4430 | 2 |
| MUS 1000 | Student Recital | 0 | HHP 1xxx | HHP Activity | 1 |
| MUS 3303 | Diction for Singers (Voice majors) | 2 | MUS 1000 | Student Recital | 0 |
| MUS 3386 | Ethnomusicology | 2 | MUS 4342 | Counterpoint | 2 |
| MUS 4xx1 | Principal Applied | 2 | MUS 4400 | Studies in Pedagogy | 2 |
| MUS 4341 | Form and Analysis | 2 | MUS 4497 | Senior Recital/Research | 3 |
| MUS xxxx | Ensemble | 1 | MUS 4xx2 | Principal Applied | 2 |
| MUS xxxx | Ensemble | 1 | MUS xxxx | Ensemble | 1 |
| | Free Electives | 2 | MUS xxxx | Ensemble | 1 |
| | | **15** | | | **14** |

***Minimum hours needed to obtain a Bachelor of Music in Performance degree – 124***

# DEPARTMENT OF HUMANITIES

**Dr. Anthony Milburn**
**Chair**
**Charles H. Wesley Arts & Science Building**
**Room 212**
**(937) 376-6459**

**Ms. Tracee Willis**
**Secretary II**
**(937) 376-6459**

**Writing Program Director:** Dr. Amy Hobbs Harris
**Professors:** Dr. Lovette A. Chinwah-Adegbola, Dr. Carol Bargeron, Dr. G. Jahwara Giddings, Dr. Amy Hobbs Harris
**Associate Professors:** Dr. Rebecca Ertel, Mr. Michael Gormley, Dr. Anthony Milburn, Dr. Obiwu Iwuanyanwu, Dr. Anne-Marie Walkowicz
**Assistant Professors:** Mr. William Abbott, Dr. Jonathan Holmes, Dr. Katie Shinkle, Dr. Yuegen David Yu, Dr. John Shaw, Dr. Ken Hayes, Dr. Vincent Haddad, Dr. P. J. Carlisle, Mr. Romeo Reese.

The Department offers the B.A. degree in the disciplines of Communication (Broadcast Media & Print Journalism), English (Literature, and Pre-Law), and History.

The Department also offers minors in Philosophy & Religion, International Languages, Sound Engineering, Public Relations, Communications (Broadcast Media), Communications (Print Journalism), Africana Studies, Literature, Creative Writing, and Pre-Law.

All majors in the department must complete the university's general education curriculum, the specific requirements of the chosen major field, and the special requirements for the Bachelor of Arts degree. In addition, all majors must meet the university's English proficiency requirement. Students are responsible for knowing and adhering to required exam schedules and for following announced deadlines for applying for graduation.

The Department of Humanities supports the larger mission of Central State University; educates students in their B.A. and Minor fields and in General Education courses; stresses critical, independent thinking in its curricula; and supports the creative and professional growth of both students and faculty.

**JOURNALISM & DIGITAL MEDIA**

1. Complete a minimum of 124 hours toward graduation.
2. Complete a minimum of 72 semester credits outside of COM courses;
3. Complete the university's general education requirements for liberal arts and sciences
4. Complete at least six semester hours of additional humanities, exclusive of the University Core requirement, selected from the following disciplines: art, drama, history, linguistics, literature, music, philosophy, and religion.
4. Attain a cumulative major field grade point average of at least 2.5.

**ENGLISH**

The English program offers a curriculum of writing courses to support the university's general education curriculum as well as two degrees: the B.A. in English with a literature option and the B.A. in English with a pre-law option. Each degree requires that students earn at least a "C" in major courses being used to satisfy graduation requirements.

**HISTORY**

The History program offers a B.A. degree in History, where majors complete at least 33 credit hours from a group of required and elective courses in the major field. The program also offers HIS 1110, 1121 and 1122 to support the university's general education program. A grade of "C" or better is required in major courses.

**INTERNATIONAL LANGUAGES AND LITERATURE**

The International Languages and Literatures program offers courses in Arabic, Chinese, French, Japanese, Spanish, and Russian to support the university's general education program and Minor concentration opportunities in Spanish and French. The objectives of the program are to provide all students the opportunity to broaden their backgrounds through the study of international language and culture and to give professional training to students majoring in areas that utilize international language skills.

Thus the program offers elementary and intermediate courses focusing on basic language structure, vocabulary development, reading, writing, translation skills, and conversation. Students expecting to use an international language in their careers are strongly urged to spend at least one semester, ideally two semesters, studying in a country in which the language is spoken. Arrangements for language study are made through the Humanities Chair and the Registrar.

**JOURNALISM AND DIGITAL MEDIA**

The Journalism and Digital Media Program offers two degrees: B.A. in Communication (Print Journalism) and B.A. in Communication (Broadcast Media). Print Journalism and Broadcast Media majors must complete 40 credit hours in the major with a grade of "C" or above in each course. Both Print Journalism and Broadcast Media majors must complete a practicum and an internship and are strongly encouraged to participate in pre-professional organizations and other related activities. All incoming freshmen and transfer students are designated as pre-majors and must apply to be admitted to the Journalism & Mass Communications Program. For students transferring from junior colleges, no more than 12 transfer credits in COM courses will be counted toward the major. Please direct all inquiries to the Department.

**DEPARTMENT OF HUMANITIES INTERNSHIPS GUIDELINES FOR ENGLISH AND HISTORY**

The following guidelines for departmental internships outline the responsibilities of the student, the supervisor, and the participating faculty members. Please consult the Director of the Journalism and Digital Media program for internship guidelines in that area.

1. You must achieve junior classification to be eligible for an internship.
2. You should have a minimum 3.0 average in the major, and the permission of an instructor in the major, to obtain an internship.
3. When preparing for an internship, you must write a proposal (three typewritten pages) which explains the specific internship desired, your experience and course work in the field, and how you want your internship to contribute to your career goals. This proposal is due to the department chair no later than the first week of class during the semester in which you begin the internship.
4. Normally you will receive academic credit for your internship (3, 4 or 5 hours) rather than payment. An employer choosing to pay a student should do so at the prevailing minimum wage rate.
5. You may do your internship during a regular academic semester, during summer school, or during winter break. It is your responsibility to make sure that you are properly registered to receive the academic credit. Up to two internships may be completed for academic credit. Retroactive credit cannot be given.
6. Each week you must participate in three to four hours of internship experience for each hour of academic credit received (based on a 17-week semester).
7. When applicable, you should develop a portfolio during the internship to be used later in interviews and as a reference source of your abilities.
8. Your supervisor must complete the Internship Evaluation Form, evaluating your performance, and return it to the department chair by the last day of class during the internship semester.
9. At the end of the internship, you must write an exit essay (three typewritten pages), in which you evaluate the experience. The essay should cover such issues as what you learned, whether it matched your expectations, whether and how it has promoted your career goals, and whether your ideas about your profession has changed as a result of the internship. The exit essay is due to the department chair by the last day of class.
10. The internship grade will be based on the supervisor's evaluation, the proposal, and the exit essay. For cases in which either the proposal or the exit essay has not been submitted to the department chair, the final grade will be adjusted accordingly.
11. Off-campus internships are limited and will be offered on a competitive basis to students based on GPA, commitment to a strong professional work ethic, ability to get along with others, dependability, and ability to project a positive image of the University. On-campus internships also may be limited and will be offered on a first-come basis, with preference given to graduating seniors.

**PHILOSOPHY AND RELIGION**

The philosophy program offers a curriculum to support the university's general education program as well as a minor in Philosophy.

**PRE-LAW**

Students pursuing a legal career must be well prepared for the academic rigors of law school and the legal profession. Essential areas of development for the

Pre-Law student are analytical thinking, critical reading, superior writing and research, and task management and organizational skills. To assist the Pre-Law student in the development of these areas, Central State University offers a Pre-Law Interdisciplinary Minor.

**MINORS**

***Minor in Africana Studies*** requires a minimum of 19-21 credit hours, including AFS 1200; a literature course focused on Africa or the African Diaspora (U.S. or Caribbean), a critical thinking course, at least one course focused on gender, race, class, ethnicity or culture, at least one course focused on Africa or non-U.S. African Diaspora (i.e., South/Central America, Caribbean), and any other course from a list of relevant university-wide courses, in consultation with the student's advisor.

***Minor in Communication - Broadcast Media-*** requires 20-21 credit hours including COM 2200, 2272, 3315; 4894; 6 additional credit hours of Broadcast Media courses, and a 2-3 credit hour course from a selected department. Communication majors may not minor in this area.

***Minor in Communication Print Journalism -*** *requires* 20-21 credit hours including COM 2200, 2219, 3319, 3327, 4894; 3 additional credit hours of Print Journalism courses, and a 2-3 credit hour course from a selected department. Communication majors may not minor in this area.

***Minor in Creative Writing -*** *requires* a minimum of 22 credit hours. The Creative Writing Core (16 cr.) includes: ENG 2300; plus two from: ENG 2310, ENG 2320, and ENG 2330; plus two from: ENG 3006, ENG 3550, ENG 3540, ENG 3560, and ENG 4020. In addition the Literature Requirement (6 cr.) includes ENG2200 and three credits*, chosen in consultation with the student's advisor, from Humanities Department literature courses. (*Note: English majors wishing to minor in Creative Writing may substitute another Creative Writing course).

***Minor in History - requires*** a minimum of 24 credit hours in history courses chosen in consultation with the student's advisor.

***Minor in Literature - requires*** a minimum of 21 credit hours as follows ENG 2200, ENG 3100, and remaining hours from Humanities department courses in literature chosen in consultation with the students advisor.

***Minor in Philosophy and Religion -*** requires a minimum of 24 credit hours in philosophy courses chosen in consultation with the student's advisor.

***Minor in Pre-Law Interdisciplinary*** – requires minimum 24 semester hours in Seven Course Areas: BUS 2200, ECO 2200, ENG 4015, HIS 2202, PHI 2240, LAW 1100, PSC 3381. Elective - 3 credit hours from the following list: ACC 2210, CHM 1600, COM 3306, COM 3326, CRJ 3310, CRJ 3340, ENG 3100, ENG 3202, HIS 4371, HMP 3310, MGT 3401, MGT 4441, PSC 1100, PSC 1120, PSC 3304, PSC 3310, PSC 3361, PSC 4493.

***Minor in Public Relations -*** requires 20-21 credit hours including COM 2200, 2204, 2214 or 3310; 2219; and 3330; 3 additional credit hours of COM courses and 6 credit hours from selected departments. Communication majors may not minor in this area

***Minor in Sound Engineering and Recording -*** requires 20 credit hours including COM 2272, 3315, 3460 and MUS 1101; and 6 credit hours from selected departments. Communication majors may not minor in this area.

***Minor in Spanish -*** requires completion of the University's B.A. language requirements (FLA 1131 and 1132); Completion of the following four core courses: FLA 2231, FLA 3300 (focused on Spanish Translation), FLA 2290, FLA 3300 (focused on Advanced Spanish Composition); FLA 3310 or FLA 3300 (focused on any other topic). A maximum of 3 semester hours of directed individual studies may be applied to the minor.

***BACHELOR OF ARTS IN COMMUNICATION – Broadcast Media*** — Students in the Journalism and Digital Media Program must take the following general education requirements: ENG 1100 or 1101, 1102; MTH 1750 or MTH 1550, depending on major; HIS 1110 or HIS 1121 or HIS 1122; USS 1000, six (6) semesters hours from Social and Behavioral Sciences; seven (7) credit hours from Natural and Physical Sciences (must include a lab), and three (3) Humanities elective credit hours. Students must complete six additional semester hours in humanities and eight (8) credits of foreign language.

Students must complete the following Communication Core courses: COM 2200, COM 2214, COM 2219, COM 3306, COM 3319, COM 4447, and COM 4892; and the following Broadcast Media courses: COM 2272, COM 3300, COM 3315, COM 3400, COM 4894, COM 4895, COM 4896, and one (1) three-hour COM elective.

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF ARTS**
**MAJOR IN COMMUNICATION (Broadcast Media)**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| FALL SEMESTER | | | SPRING SEMESTER | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE#** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| ENG 1100 | Intro to Writing and Reading (or) | 5 | ENG1102 | Writing and Research the Essay | 4 |
| ENG 1101 | Introduction to Writing for College | | FLA 1xxx | Foreign Language II | 5 |
| FLA 1xxx | Foreign Language I | 5 | HHP 1xxx | HHP Activity | 1 |
| USS 1000 | Undergraduate Success Seminar | 2 | PHI 2240 | From General Education List A | 3 |
| MTH 1550 | Modern Applications of Math | 3 | ELECTIVE | From General Education List D | 2 |
| | | **15** | | | **15** |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| COM 2200 | Intro Mass Communications | 3 | COM 2219 | Intro to Media Writing | 3 |
| COM 2204 | Introduction to Speech | 3 | ART 2010 | Two Dimensional Art | 2 |
| HIS 1110/1121/1122 | Intro History of Africans in the US/ Global History I or II | 3 | CPS 1115 | Computer Fundamentals | 2 |
| ELECTIVE | From General Education List A | 3 | ELECTIVE | From General Education List B | 3 |
| ELECTIVE | From General Education List B | 3 | ELECTIVE | From General Education List C | 4 |
| | | **15** | | | **14** |
| **JUNIOR** | | | **JUNIOR** | | |
| | | | COM 3300 | Broadcast Media Prod: Radio | 3 |
| COM 2272 | Principles of Electronic Media | 3 | COM 3306 | Comm Research Methods | 3 |
| COM 3319 | Reporting | 3 | COM 3400 | Broadcast Media Production: TV | 3 |
| ELECTIVE | From General Education List A | 3 | COM 4894 | Prac--WCSU Radio/WCSU-TV | 1 |
| ELECTIVE | From General Education List B | 3 | CPS 2215 | Internet Web Essentials | 2 |
| ELECTIVE | From General Education List C w/lab | 3 | ENG 3000 | Advanced Composition** | 2 |
| | | **15** | | | **14** |
| **SENIOR** | | | **SENIOR** | | |
| COM 4447 | Media Law and Ethics | 3 | COM 3315 | Writing for Electronic Media | 3 |
| COM 4896 | Internship | 3 | COM 4895 | Portfolio and Capstone | 3 |
| COM xxxx | COM Elective | 3 | ELECTIVE | From General Educ List A, B, C* | 3 |
| ELECTIVE | From General Educ List A, B, C* | 3 | ELECTIVE | From General Educ List A, B, C* | 3 |
| ELECTIVE | From General Educ List A, B, C* | 3 | ELECTIVE | From General Educ List A, B, C* | 3 |
| ELECTIVE | Any Digital Media Course | 2 | | | |
| | | **17** | | | **15** |

***Minimum hours needed to obtain a Bachelor of Arts in Communication – Broadcast Media – 124***

*****All communication must take at least 15 hours of liberal arts and sciences in addition to required liberal arts courses. Communications majors may take no more than 41 semester hours of COM hours.

***BACHELOR OF ARTS IN COMMUNICATION – Print Journalism*** — Students in the Journalism and Digital Media Program must take the following general education requirements: ENG 1100 or 1101, 1102; MTH 1750 or MTH 1550, depending on major; HIS 1110 or HIS 1121 or HIS 1122; USS 1000, six (6) semesters hours from Social and Behavioral Sciences; seven (7) credit hours from Natural and Physical Sciences (must include a lab), and three (3) Humanities elective credit hours. Students must complete six additional semester hours in humanities and eight (8) credits of foreign language.

Students must complete the following Communication Core courses: COM 2200, COM 2214, COM 2219, COM 3306, COM 3319, COM 4447, and COM 4892; and the following Print Journalism courses: COM 3327, COM 3340, COM 4412, COM 4894, COM 4895, and COM 4896

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF ARTS**
**MAJOR IN COMMUNICATION (Print Journalism)**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| FALL SEMESTER | | | SPRING SEMESTER | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE#** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| ENG 1100 | Intro to Writing and Reading (or) | 5 | ENG1102 | Writing and Research the Essay | 4 |
| ENG 1101 | Intro to Writing for College | | FLA 1xxx | Foreign Language II | 5 |
| FLA 1xxx | Foreign Language I | 5 | HHP 1xxx | HHP Activity | 1 |
| MTH 1550 | Modern Applications of Math | 3 | PHI 2240 | From General Education List A | 3 |
| USS 1000 | Undergraduate Success Seminar | 2 | ELECTIVE | From General Education List D | 2 |
| | | 3 | | | |
| | | **15** | | | **15** |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| COM 2200 | Introduction to Mass Communications | 3 | COM 2219 | Intro to Media Writing | 3 |
| COM 2204 | Introduction to Speech | 3 | CPS 1115 | Computer Fundamentals | 2 |
| HIS 1110/1121/1122 | Intro History of Africans in the S/Gobal HiHistory I or II | 3 | ELECTIVE | From General Education List C | 4 |
| ELECTIVE | From General Education List A | 3 | ELECTIVE | From General Education List B | 3 |
| ELECTIVE | From General Education List B | 3 | | | |
| | | **15** | | | **15** |
| **JUNIOR** | | | **JUNIOR** | | |
| ART 2010 | Two Dimensional Art | 2 | COM 3306 | Communication Research Methods | 3 |
| COM 3319 | Reporting | 3 | COM 3327 | Copy Editing | 3 |
| COM xxxx | COM Elective | 3 | COM 4412 | Advanced Reporting / Feature Writing | 3 |
| ELECTIVE | From General Education List A | 3 | COM 4894 | Practicum-Gold Torch/Gold Torch Online | 1 |
| ELECTIVE | From General Education List B | 3 | CPS 2215 | Internet Web Essentials | 2 |
| ELECTIVE | From General Education List C | 3 | ENG 3000 | Advanced Composition** | 2 |
| | | **17** | | | **14** |
| **SENIOR** | | | **SENIOR** | | |
| COM 4447 | Media Law and Ethics | 3 | COM 3340 | Online Journalism / Desktop | 3 |
| COM 4896 | Internship | 3 | COM 4895 | Portfolio and Capstone | 3 |
| COM xxxx | COM Elective | 3 | ELECTIVE | From General Educ List A, B, C* | 3 |
| ELECTIVE | From General Educ List A, B, C* | 3 | ELECTIVE | From General Educ List A, B, C* | 3 |
| ELECTIVE | From General Educ List A, B, C* | 3 | ELECTIVE | From General Educ List A, B, C* | 3 |
| ELECTIVE | Any Digital Media Course | 2 | | | |
| | | **17** | | | **15** |

***Minimum hours needed to obtain a Bachelor of Arts in Communication – Print Journalism – 124***

*****All communication must take at least 15 hours of liberal arts and sciences in addition to required liberal arts courses.

Communications majors may take no more than 41 semester hours of COM hours.

***BACHELOR OF ARTS IN ENGLISH – Literature*** — ENG 1100 or ENG 1101, ENG 1102; MTH 1550: HIS 1110 or HIS 1121 or HIS 1122; USS 1000; 1 semester credit from HHP 1101-1121; 3 Humanities semester hours from List B; Social and Behavioral Sciences – 6 hours from two different disciplines from List C; Natural and Physical Sciences 6 credit hours from two different disciplines from List D.

All students must take the following major requirements (See ACADEMIC PROGRAM) including special requirements for the B.A. (six additional semester hours in humanities and eight credits of foreign language), and the following major requirements: ENG 2200, ENG 3040, ENG 3100, ENG 4895; ENG 2300 or ENG 2400; ENG 3020 or ENG 3021; ENG 3010, ENG 3050, or ENG 3051; ENG 4080, ENG 4090, or ENG 4092. Students must also take 4 courses with an ENG prefix, 3000-level or above.

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF ARTS**
**MAJOR IN ENGLISH (Literature)**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| FALL SEMESTER | | | SPRING SEMESTER | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE#** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| ENG 1100 | Intro to Writing and Reading (or) | 5 | ENG 1102 | Writing and Research the Essay | 4 |
| ENG 1101 | Introduction to Writing for College | | ENG 2300 | Introduction to Creative Writing | 4 |
| USS 1000 | Undergraduate Success Seminar | 2 | ENG 2400 | (or) Introduction to Rhetoric | |
| ENG2200 | Introduction to Literary Studies | 3 | ELECTIVE | From General Education List B | 3 |
| MTH 1550 | Modern Applications of Math | 3 | ELECTIVE | From General Education List C | 3 |
| HIS 1110/1121/1122 | Intro History of Africans in the US/Global History I or II | 3 | HHP 1xxx | HHP Activity from List A | 1 |
| | | **16** | | | **15** |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| ENG 3040 | British Literature I | 3 | ENG3020/21 | African American Literature I (or) II | 3 |
| FLA 1xxx | Foreign Language I | 4 | FLA 1xxx | Foreign Language II | 4 |
| ELECTIVE | From General Education List B | 3 | ELECTIVE | From General Education List B | 3 |
| ELECTIVE | From General Education List C | 3 | ELECTIVE | From General Education List D | 3 |
| ELECTIVE | From General Education List D | 3 | ELECTIVE | Electives/minor | 3 |
| | | **16** | | | **16** |
| **JUNIOR** | | | **JUNIOR** | | |
| ENG 3100 | Literary Criticism | 3 | ENG3051/52 | World Literature I (or) II | 3 |
| ELECTIVE | With ENG prefix 3000 and above | 3 | ENG 3010 | (or) African Literature | |
| ELECTIVE | Electives/minor | 9 | ELECTIVE | With ENG prefix 3000 and above | 3 |
| | | | | Electives/minor | 9 |
| | | **15** | | | **15** |
| **SENIOR** | | | **SENIOR** | | |
| ENG 4895 | Senior Seminar | 4 | ENG 4080 | Shakespeare and His Influence | 3 |
| ELECTIVE | With ENG prefix 3000 and above | 3 | ENG 4090 | (or) American Literary History | |
| | Electives/minor | 9 | ENG 4092 | (or) British Literary History | |
| | | | ELECTIVE | With ENG prefix 3000 and above | 3 |
| | | | | Electives/minor | 9 |
| | | **16** | | | **15** |

***Minimum hours needed to obtain a Bachelor of Arts in English - Literature - 124***

***BACHELOR OF ARTS IN ENGLISH - Pre-Law*** ENG 1100 or ENG 1101, ENG 1102; MTH 1550: HIS 1110 or HIS 1121 or HIS 1122; USS 1000; 1 semester credit from HHP 1101-1121; 3 Humanities semester hours from List B; Social and Behavioral Sciences – 6 hours from two different disciplines from List C; Natural and Physical Sciences 6 credit hours from two different disciplines from List D.

All students must take the following major requirements (See ACADEMIC PROGRAM) including special requirements for the B.A. (six additional semester hours in humanities and eight credits of foreign language), and the following major requirements to include 12 hours from the following: BUS 2200; COM 3310, COM 3323, COM 3326, COM 4447; PSC 3381; SOC 3333 (See ACADEMIC PROGRAM) including special requirements for the B.A. (six additional semester hours in humanities and ten credits of foreign language), and the following major requirements: ENG 2200, ENG 3020 or ENG 3021, ENG 3030 or ENG 3031, ENG 3040 or ENG 3041, ENG 3010, ENG 3100, ENG 4080, ENG 4895 plus choose 4 courses from: ENG 3006, ENG 3200, ENG 3202, ENG 4050, ENG 4060, ENG 4070, ENG 4090, ENG 4092, ENG 4200.

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF ARTS**
**MAJOR IN ENGLISH (Pre-Law)**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| FALL SEMESTER | | | SPRING SEMESTER | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE#** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| ENG 1100 | Intro to Writing and Reading (or) | 5 | ENG 1102 | Writing and Research the Essay | 4 |
| ENG 1101 | Intro to Writing for College | | ENG 2200 | Introduction to Literary Studies | 3 |
| FLA 1xxx | Foreign Language I | 4 | FLA 1xxx | Foreign Language II | 4 |
| USS 1000 | Undergraduate Success Seminar | 2 | HIS 1110 | Intro History of Africans in the U.S. | 3 |
| MTH 1550 | Modern Applications of Math | 3 | HHP 1xxx | HHP Activity Course | 1 |
| | | **14** | | | **15** |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| HIS 1110/1121/1122 | Intro History of Africans in the U.S/ Global History I or II | 3 | BUS 2200 | Legal Environment of Business | 3 |
| ENG 3020/21 | African American Literature I or II | 3 | ENG 3031 | American Literature II | 3 |
| ELECTIVE | From General Education List B | 3 | ELECTIVE | From General Education List B | 3 |
| ELECTIVE | From General Education List C | 3 | ELECTIVE | From General Education List C | 3 |
| ELECTIVE | From General Education List D | 3 | ELECTIVE | From General Education List D | 3 |
| | | **15** | | | |
| **JUNIOR** | | | **JUNIOR** | | **15** |
| ENG 3040/1 | British Literature I or II | 3 | COM 3323 | Voice and Diction (or) | |
| ENG 3200 | History of the English Language | 3 | COM 3326 | Argumentation & Debate | 3 |
| ELECTIVE | From General Education List B | 3 | ENG 3006 | Creative Writ: Poetry & Short Story | |
| ELECTIVE | From General Education List B | 3 | ENG 3052 | World Literature II | 3 |
| ELECTIVE | From General Education List C | 4 | ENG 4200 | Linguistics and American Grammar | 3 |
| | | | PHI 3300 | Logic | 4 |
| | | **16** | | | 3 |
| **SENIOR** | | | **SENIOR** | | **17** |
| ENG 3010 | African Literature | 4 | ENG 4050 | Forms and Genres: The Novel (or) | |
| ENG 3100 | Literary Critic: Theory & Pract | 3 | ENG 4060 | Forms and Genres: Poetry (or) | 3 |
| ENG 4070 | Forms & Genres: Drama (and) | 3 | ENG 4080 | Shakespeare and His Influence | |
| ENG 4090 | American Literary History (or) | 3 | ENG 4895 | Senior Capstone Seminar | |
| | Electives (6) | | | Electives | 4 |
| PSC 3381 | Constitutional Law (or) | 3 | | | 6 |
| SOC 3333 | Criminology | | | | |
| | | **16** | | | **13** |

***Minimum hours needed to obtain a Bachelor of Arts in English - Pre-Law – 124***

***BACHELOR OF ARTS IN HISTORY*** — ENG 1100 or ENG 1101, ENG 1102; MTH 1550; HIS 1110 or HIS 1121 or HIS 1122; USS 1000, 9 semesters hours from Social and Behavioral Sciences and 7 credit hours from Natural and Physical Sciences (must include a lab), see page 50, and 3 Humanities Elective credit hours.

All students must take the following major requirements (See ACADEMIC PROGRAM) including special requirements for the B.A. (six additional semester hours in humanities and eight credits of foreign language), and the following major requirements: HIS 1121 or HIS 1122, HIS 2100, HIS 2201, HIS 2202, HIS 3301, HIS 3302, HIS 4995. In consultation with the advisor, students must also choose 9 credit hours of history electives.

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF ARTS**
**MAJOR IN HISTORY**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| FALL SEMESTER | | | SPRING SEMESTER | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE#** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| ENG 1100 / ENG 1101 | Introduction to Writing & Reading(or) Introduction to Writing for College | 4 | ENG 1102 | Writing and Research the Essay | 4 |
| | | | HIS 1110 | Intro His of Africans in U.S. | 3 |
| USS 1000 | Undergraduate Success Seminar | 2 | HIS 1122 | Global History II | 3 |
| HIS 1121 | Global History I | 3 | HHP 1xxx | HHP Activity | 1 |
| HHP 1xxx | HHP Activity | 1 | MTH 1550 | College Algebra | 3 |
| USS 1000 | | | | | |
| MTH 1550 | Modern Applications of Math | 3 | ELECTIVE | From General Education List D | 2 |
| ELECTIVE | From General Education List A | 3 | | | |
| | | **16** | | | **16** |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| FLA 1xxx | Foreign Language I | 4 | ENG 3000 | Advanced Composition | 2 |
| HIS 2100 | Research Methods in History | 3 | FLA 1xxx | Foreign Language II | 4 |
| HIS 2201 | History of U.S. to 1877 | 3 | HIS 2202 | History of the U.S. since 1877 | 3 |
| ELECTIVE | From General Education List B | 3 | HIS 2250 | Survey History of Africa | 3 |
| ELECTIVE | From General Education List C w/lab | 4 | ELECTIVE | From General Education List B | 3 |
| | | **17** | ELECTIVE | From General Education List C | 3 |
| | | | (Summer Internship Recommended) | | |
| | | | | | **18** |
| **JUNIOR** | | | **JUNIOR** | | |
| HIS 3301 | Africans in America to 1877 | 3 | HIS 3302 | Africans in America since 1877 | 3 |
| HIS xxxx | History Elective | 3 | HIS xxxx | History Elective | 3 |
| ELECTIVE | From General Education List A | 3 | HIS xxxx | History Elective | 3 |
| ELECTIVE | From General Education List B | 3 | ELECTIVE | From General Electives List A | 3 |
| ELECTIVE | From General Education List C | 3 | | Electives | 3 |
| | (English Proficiency Test Required) | | (Summer Internship Recommended) | | |
| | | **15** | | | **15** |
| **SENIOR** | | | **SENIOR** | | |
| HIS 4497 | Special Topics in History | 3 | HIS 4995 | Global History Seminar | 3 |
| | Electives | 9 | | Electives | 9 |
| | | **12** | | | **12** |

***Minimum hours needed to obtain a Bachelor of Arts in History – 124***

# DEPARTMENT OF SOCIAL AND BEHAVIORAL SCIENCES

**Dr. W. Lynn Rigsbee, II**
**Chair**
**Charles H. Wesley Arts & Science Building**
**Room 219**
**(937)-376-6597**

**Mr. Derrick T. Johnson**
**Secretary II**
**(937) 376-6144**

**Professor**: Dr. Greta Winbush
**Associate Professors**: Dr. Liza Abram-Benham, Dr. Charlla Allen, Dr. Edison Perdomo,
Dr. W. Lynn Rigsbee II,
**Assistant Professors:** Mr. Solomon Hill, Dr. Omesh Johar

The Department of Social and Behavioral Sciences offers major concentrations in the disciplines of criminal justice, political science, psychology, social work, and sociology, and minor concentrations in criminal justice, gerontology, political science, psychology, and sociology. In addition to the offerings for students whose major or minor interest is in the social sciences, the department provides general education courses and service to other departments (e.g., communications, secondary education, and health and recreation).

The department offers programs leading to the following degrees: Bachelor of Arts in Political Science, Political Science (Public Administration), Psychology, Social Work, and Sociology; Bachelor of Science in Criminal Justice, Psychology, Social Work, or Sociology. All majors in the department must fulfill the stipulated General Education Requirements and the specific requirements of the College of Humanities, Arts and Social and Behavioral Sciences, as well as any special requirements for the Bachelor of Arts or Bachelor of Science degrees.

## CRIMINAL JUSTICE

The Criminal Justice program provides an overview of the criminal justice system, the causes of crime and issues relating to social control. The major is structured around a core of criminal justice courses that include topics in law enforcement, the judicial process and correctional system. The course of study consists of a general overview of the components of the criminal justice system with the overall goal of exposing students to a wide variety of academic disciplines: business, political science, psychology, social work and sociology.

Within the major, students may choose to emphasize one of three areas. The law enforcement emphasis is designed primarily for students who wish to become local, state or federal law enforcement officers (e.g., city police officers, state highway patrol officers or Federal Bureau of Investigation agents). The judicial emphasis is for those students who wish to continue their education in law school or other areas of this branch of the criminal justice system (e.g., victim advocate, pretrial investigator, etc). Finally, the corrections emphasis is best suited for students who wish to work in a correctional setting for juveniles or adults (e.g., correctional caseworker, correctional officer, drug counselor, parole officer or probation officer). Students must make a "C" or better in all criminal justice courses and SOC 2206, SOC 2208, SOC 3333, SOC 3415, and SOC 3510. Students are also required to take two consecutive courses in foreign language.


## POLITICAL SCIENCE

The Political Science program offers a Bachelor of Arts in Political Science and a Bachelor of Arts in Political Science (Public Administration). The discipline offers a broad range of courses that permit specialization in American government and politics, international politics and comparative politics, or public administration. Individual programs combining the required 33 credit hours of political science courses with related courses from other disciplines allow students to prepare for different careers. The BA in Political Science is a traditional preparation for law school. The option in Public Administration combines general knowledge, administrative concepts, and skills courses in a curriculum designed to prepare students for careers in public agencies.

The political science faculty support the development of a sound liberal arts foundation and appropriate pre-professional skills for all majors. Courses are designed to further understanding of the institutions and processes of government and the behavior of decision-

makers, to promote awareness of the perennial questions of political inquiry and the concepts useful in responding to them; and to develop analytical skills.

As a discipline, Political Science is divided into areas of study based on subject matter. At CSU, political science courses are placed in the following groupings: American National Government and Political Theory (PSC 1100, PSC 2223, PSC 3304, 3351, PSC 3353, PSC 3361, PSC 3362, PSC 3365, PSC 3381); Public Administration (PSC 1120, PSC 3310, PSC 3390, PSC 4403, PSC 4493); and Comparative Politics and International Relations (PSC 2202, PSC 2205, PSC 2405, PSC 3311, PSC 3371). Students are to use these groupings to select their three areas of study.

**PSYCHOLOGY**

The Psychology program is designed to provide students with a broad knowledge of the field of psychology. In addition to ensuring the development of professional skills, the program prepares students for graduate study in psychology or other academic disciplines and employment in the fields of mental health, social services, criminal justice, gerontology, education, and related areas and industry. Courses are offered for both majors and non-majors. Extensive use of speakers and extracurricular activities allow students to explore a wide range of views of issues related to the field of psychology.

The faculty possesses diverse professional expertise in psychology, is involved in research and pursues working relationships with other professional institutions. Students also have the opportunity for experiential learning through field experience and research projects. In collaboration with the University's Career Services, the department provides field placement opportunities for practical experience in various agencies and organizations. Research opportunities are available through independent study with faculty or conducting research projects on the student's topic of choice.

**SOCIAL WORK**

The primary objective of the social work curriculum is to prepare students for entry-level professional practice. Students are provided opportunities for the study and development of generalist knowledge of social work, skills, values, and ethics required of professional social workers.

The content courses, along with field practicum, are designed to provide students with a broad and comprehensive theoretical knowledge base integrated with practical experience. Graduates of the program may seek beginning level social work employment or pursue graduate study. Students who plan to major in social work may take the introductory courses and are considered pre-social work students until they are formally accepted into the program. Transfer students must meet with a social work adviser to determine acceptable transfer courses for the social work major.

The major in social work consists of 49 credit hours. Students must complete a formal application to the program at the end of their freshman year and after the completion of SWK 1100, SWK 2200, ENG 1102, and MTH 1750 with a grade of "C" or above and have completed 30 semester hours. To be accepted into the program, students must have a cumulative grade point average of 2.5. Students must have a cumulative grade point average of 2.5 or better to graduate with a degree in social work. Students who fail to earn a "C" or better in all social work courses must repeat these courses.

The social work practicum consists of one semester and is designed to provide students with appropriate practice experiences to ensure their professional development. Students must complete a formal application for the field education courses, SWK 4595 and SWK 4596. The social work faculty will determine students' readiness for the field practicum courses. Applications for the Social Work Program are located in room 311, Wesley Hall. The applications are reviewed by the social work faculty and students may also be interviewed prior to final decisions. Course offerings and program policies regarding requirements for majors are subject to continuous review and may be changed.

**SOCIOLOGY AND GERONTOLOGY**

The area offers a Bachelor of Arts or a Bachelor of Science in Sociology and minors in Sociology and Gerontology. The courses are diverse and represent a broad range of practical and theoretical issues in the discipline. Opportunities exist for students to engage in research under the supervision of faculty members.

Faculty members work with students on an individual basis, providing them with counseling, research suggestions and other assistance. They are determined to develop and maintain an academically nurturing relationship with each student in the program.

Employment opportunities are available to students with a major in Sociology and a minor in Criminal Justice, Business Administration, or Gerontology. Courses have been designed to allow students to acquire skills for careers in the criminal justice system or in agencies working with youth, the elderly, and families.

## CRIMINAL JUSTICE AND SOCIOLOGY INTERNSHIPS

Internships provide opportunities for students to obtain practical training off campus. Students should work out details for obtaining placement with their academic advisor.

Internships will be recommended only for students who have achieved at least junior status and have an overall grade point average of at least 2.5. The maximum number of credit hours a student may earn for an internship are 8, during two separate semesters. However, for Sociology students, no more than 4 credit hours may be used to fulfill the requirement for the major. For each credit hour earned, the student is expected to spend approximately 3 hours per week on the internship site. Criteria such as student attitude, ability to work with others, classification, and the minimum GPA will be used to select the most qualified students. **Students should apply for an internship the semester prior to taking this course.**

## MINORS

***Minor in Criminal Justice*** — A minimum of 24 semester hours in Criminal Justice to include CRJ 2210, CRJ 2310, CRJ 2330, CRJ 3310, CRJ 3340, CRJ 4655; SOC 3333 and SOC 3510 and additional courses selected in consultation with the academic advisor. Criminal Justice minors will also have to complete CHM 1610. A grade of "C" or better is required for all Criminal Justice courses, as well as SOC 3333 and SOC 3510.

***Minor in Gerontology*** - The minor in Gerontology is a multidisciplinary program that consists of a minimum of 20 semester hours to include the following courses: BIO 2200; SOC 2230; PSY 3385and SOC 4596. Additional elective courses may be selected from SOC 3370, 3380; SWK 3320; HHP 1202, HHP 2230, HHP 3301, HHP 3361, HHP 4401; PSY 2320, PSY 3380, & PSY3420, in consultation with the academic advisor. A grade of "C" or better is required in all courses taken for the minor.

***Minor in Political Science*** — A minimum of 20 semester hours in Political Science including PSC 1100, PSC 2223, PSC 3304, PSC 3381, SOC 2206. At least nine of the remaining hours are to be taken from 3000 or 4000 level courses. A grade of "C" or better is required in all Political Science courses.

***Minor in Psychology*** - A minimum of 24 hours including the following courses: PSY 1100, PSY 1200, PSY 2220, PSY 2320, PSY 3334 and SOC 2206 and additional courses selected in consultation with the academic advisor. A grade of "C" or better is required in all Psychology courses.

***Minor in Sociology*** — A minimum of 20 semester hours in Sociology to include SOC 1105, SOC 1111 or SOC 1125, SOC 2206, SOC 2800, SOC 3800 and additional courses selected in consultation with the academic advisor. A grade of "C" or better is required in all Sociology courses.

***BACHELOR OF SCIENCE IN CRIMINAL JUSTICE*** — ENG 1100 or ENG 1101 and ENG 1102; MTH 1550; USS 1000; HIS 1110 or HIS 1121 or HIS 1122 plus 3 Humanities credit hours (Critical Thinking is required) - Social and Behavioral Sciences - 6 hours from two different disciplines from List C; Natural and Physical Sciences (7 credit hours from two different disciplines from List D; one choice must include a lab.); Computer Skills (2-4 credit hours) from List A; 1 HHP Activity from List E as well as 8 hours in a foreign language (must be consecutive courses).

A minimum of 52 credit hours to include the following courses: CRJ 2210, CRJ 2310, CRJ 2330, CRJ 3310, CRJ 3340, CRJ 4655, CRJ 4895; SOC 2206, SOC 2800, SOC 3333, SOC 3415, SOC 3510; ENG 2020 or COM **2214** and 12 hours in general criminal justice and university courses, which are selected in consultation with the academic advisor. Criminal Justice majors will also have to complete PHI 2240, CHM 1610, **PSY 1200** and SOC 1105; these courses may also be counted toward the completion of other University requirements. Criminal Justice majors must repeat all required criminal justice and sociology courses in which a grade of "D" or "F" is received.

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF SCIENCE**
**MAJOR IN CRIMINAL JUSTICE**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| **FALL SEMESTER** | | | **SPRING SEMESTER** | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE#** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| MTH 1550 | Modern Applications of Math | 3 | CHM 1610 | Intro to Forensic Science I w/lab | 4 |
| CRJ 2210 | Introduction to Criminal Justice | 3 | ENG 1102 | Writing and Research the Essay | 4 |
| ENG 1101 | Introduction to Writing for College | 4 | HHP xxxx | HHP Activity | 1 |
| SOC 1105 | Introduction to Sociology | 3 | CPS xxxx | From General Education List A | 2 |
| USS 1000 | Undergraduate Success Seminar | 2 | PSY 1200 | Introduction to Psychology | 3 |
| | | 15 | COM **2214** | Public Speaking (or) | |
| | | | ENG 2020 | Vocabulary Development | 3/2 |
| | | | | | **16/17** |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| PHI 2240* | Critical Thinking | 3 | CRJ 2310 | Corrections in America | 3 |
| HIS xxxx | 1110/1121/1122 | 3 | CRJ 2330 | Police and Society | 3 |
| SOC 2206 | Social Statistics | 4 | SOC 2800 | Methods of Research | 4 |
| SOC 3333 | Criminology | 3 | ELECTIVE | CRJ General Elective | 6 |
| ELECTIVE | CRJ General Elective | 3 | | | **16** |
| | | **16** | | | |
| **JUNIOR** | | | **JUNIOR** | | |
| CRJ 3310 | Criminal Procedures | 3 | CRJ 3340 | Criminal Law | 3 |
| CRJ xxxx | CRJ Electives | 3 | CRJ xxxx | CRJ Elective | 3 |
| FLA xxxx | Foreign Language I | 4 | FLA xxxx | Foreign Language II | 4 |
| ELECTIVE | From General Education List | 3 | SOC 3510 | Sociology of Deviance | 3 |
| ELECTIVE | From General Education List C | 3 | ELECTIVE | From General Education List D | 3 |
| | | **16** | | | **16** |
| **SENIOR** | | | **SENIOR** | | |
| CRJ xxxx | See List Criminal Justice Electives | 6 | CRJ 4655 | Juvenile Justice | 3 |
| SOC 3415 | Juvenile Delinquency | 3 | CRJ 4895 | Senior Capstone for CRJ | 3 |
| ELECTIVE | University Electives | 6 | CRJ xxxx | CRJ General Elective | 3 |
| | | | ELECTIVE | University Electives | 3 |
| | | **15** | | | **12** |

***Minimum hours needed to obtain a Bachelor of Science in Criminal Justice – 124***

*PHI 2240 **will** satisfy General Education List A

***BACHELOR OF ARTS IN POLITICAL SCIENCE*** **–** ENG 1100 or ENG 1101 and ENG 1102; USS 1000; MTH 1550; HIS 1110 or HIS 1121 or HIS 1122 plus 3 Humanities credit hours from List B ; Social and Behavioral Sciences - 6 hours from two different disciplines from List C (ECO 2210 Principles of Microeconomics and ECO 2220 Principles of Macroeconomics fulfill this requirement); Natural and Physical Sciences (7 credit hours from two different disciplines from List D; one choice must include a lab.); Computer Skills (2-4 credit hours) from List A; 1 HHP Activity from List E as well as 8 hours in a foreign language.

A minimum of 33 credit hours in political science courses to include the following: PSC 1100, PSC 2223, PSC 3304, PSC 3381 and PSC 4895. Students are also required to take, and receive Political Science credit for, SOC 2206. A grade of "C" or better is required in all political science classes and in SOC 2206. Students are required to take ECO 2210 and ECO 2220 as **to fulfill** their social science component in the general education requirements. Each political science major is to have one area of concentration (9 credit hours), and two sub-areas of study, one with 6 credit hours and one with 3 credit hours. Required classes are not included as part of these hours.

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF ARTS**
**MAJOR IN POLITICAL SCIENCE**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| **FALL SEMESTER** | | | **SPRING SEMESTER** | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE#** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| ENG 1101 | Introduction to Writing for College | 4 | ENG 1102 | Writing and Research the Essay | 4 |
| USS 1000 | Undergraduate Success Seminar | 2 | PSC 2223 | Introduction to Political Science | 3 |
| HIS 1110/1121/1122 | Intro History of Africans in the U.S/ Global History I or II | 3 | ELECTIVE | University Electives | 6 |
| MTH 1550 | Modern Applications of Math | 3 | ELECTIVE | From General Education List A | 2 |
| PSC 1100 | American National Government | 3 | | | **15** |
| HHP 1xxx | HHP Activity | 1 | | | |
| | | **16** | | | |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| SOC 2206 | Social and Behavioral Statistics | 4 | ECO 2210 | Microeconomics | 3 |
| ELECTIVE | From General Education List ~~-~~B | 3 | PSC xxxx | Primary Area, Political Science | 3 |
| ELECTIVE | From General Education List D w/lab | 4 | PSC xxxx | Secondary Area, Political Science | 3 |
| ELECTIVE | University Electives | 4 | ELECTIVE | From General Education List ~~C~~ D | 3 |
| ELECTIVE | University Electives | 3 | ELECTIVE | University Elective | 3 |
| | | **18** | | | **15** |
| **JUNIOR** | | | **JUNIOR** | | |
| ECO 2210 | Principles of Microeconomics | 3 | PSC xxxx | Secondary Area, Political Science | 3 |
| FLA 1xxx | Foreign Language I | 4 | ELECTIVES | From General Education List ~~A~~ B | 6 |
| PSC xxxx | Primary Area, Political Science | 3 | ELECTIVES | University Electives | 3 |
| ELECTIVE | University Elective | 3 | FLA 1xxx | Foreign Language II | 4 |
| PSCXXXX | Primary Area Elective | 3 | | | |
| | | **16** | | | **16** |
| **SENIOR** | | | **SENIOR** | | |
| PSC 3381 | Constitutional Law | 3 | PSC 4895 | Senior Capstone Seminar | 3 |
| PSC xxxx | Political Science Elective | 3 | PSC xxxx | Tertiary Area, Political Science | 3 |
| ELECTIVE | University Electives | 9 | ELECTIVE | University Electives | 6 |
| | | **15** | | | **12** |

***Minimum hours needed to obtain a Bachelor of Arts in Political Science – 124***

***BACHELOR OF ARTS IN POLITICAL SCIENCE – Public Administration*** — ENG 1100 or ENG 1101 and ENG 1102; USS 1000; MTH 1550; HIS 1110 or HIS 1121 or HIS 1122 plus 3 Humanities credit hours from List A; Social and Behavioral Sciences - 6 hours from two different disciplines from List C; Natural and Physical Sciences (7 credit hours from two different disciplines from List D; one choice must include a lab.); Computer Skills (2-4 credit hours) from List A; 1 HHP Activity from List E as well as 8 hours in a foreign language.

A minimum of 30 credit hours in Political Science to include the following courses: PSC 1100, PSC 1120, PSC 2223, PSC 3304, PSC 3310, PSC 3381, PSC 3390, PSC 4403, PSC 4493, PSC4895. Other required courses are: ACC 2210 and ACC 2220; BUS 1100 and BUS 2343; ECO 2210, ECO 2220, ECO 3350; ENG 3000; BUS 3381; MGT 3343 or SOC 2206. A grade of "C" or better is required.

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF ARTS**
**MAJOR IN POLITICAL SCIENCE – Public Administration**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| FALL SEMESTER | | | SPRING SEMESTER | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE#** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| ENG 1101 | Introduction to Writing for College | 4 | BUS 1100 | Contemporary American Business | 3 |
| USS 1000 | Undergraduate Success Seminar | 2 | ENG 1102 | Writing and Research the Essay | 4 |
| HIS 1110/1121/1122 | Intro History of Africans in the U.S/ Global History I or II | 3 | ELECTIVE | From General Education List D | 3 |
| MTH 1550 | Modern Applications of Math | 3 | PSC 2223 | Introduction to Political Science | 3 |
| PSC 1100 | American National Government | 3 | ELECTIVE | From General Education List A | 2 |
| HHP 1xxx | HHP Activity | 1 | | | **15** |
| | | **16** | | | |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| PHI 2240 | From General Education List B | 3 | BUS 2343 | Principles of Management | 3 |
| PSC 1120 | Intro to Public Administration | 3 | HIS 2202 | History U.S. Since 1877 | 3 |
| ELECTIVE | University Elective | 3 | PSC 3310 | Public Policy Analysis | 3 |
| SOC 2206 | Social and Behavioral Statistics | 4 | PSY 3420 | Social Psychology | 3 |
| ELECTIVE | From General Education List D w/ lab | 4 | ELECTIVE | From General Education List B | 3 |
| | | **17** | | | **15** |
| **JUNIOR** | | | **JUNIOR** | | |
| ACC 2210 | Principles of Accounting | 3 | ACC 2220 | Principles of Accounting | 3 |
| ECO 2210 | Principles of Microeconomics | 3 | BUS 2343 | Principles of Management | 3 |
| FLA 1xxx | Foreign Language I | 4 | ECO 2220 | Principles of Macroeconomics | 3 |
| PSC 3304 | American State and Local Government | 3 | FLA 1xxx | Foreign Language II | 4 |
| PSC 3361 | African American Politics | 3 | PSC 4503 | Human Resource Mgt. | 3 |
| | | **16** | | | **16** |
| **SENIOR** | | | **SENIOR** | | |
| ECO 3350 | Public Finance | 3 | ELECTIVE | University Electives | 3 |
| ENG 2020 | Vocabulary Development | 2 | MGT 3381 | Organizational Behavior | 3 |
| PSC 3381 | Constitutional Law | 3 | PSC 4493 | Legal and Public Admin Internship | 5 |
| PSC 3390 | Public Budgeting | 3 | PSC 4895 | Senior Capstone Seminar | 3 |
| ELECTIVE | From General Education List B | 3 | | | |
| | | **14** | | | **14** |

***Minimum hours needed to obtain a Bachelor of Arts in Political Science – Public Administration – 124***

***BACHELOR OF ARTS IN PSYCHOLOGY*** — ENG 1100 or ENG 1101 and ENG 1102; USS 1000; MTH 1550; HIS 1110 or HIS 1121 or HIS 1122 plus 3 Humanities credit hours from List B; Social and Behavioral Sciences –6 hours from two different disciplines from List C; Natural and Physical Sciences (7 credit hours from two different disciplines from List D; one choice must include a lab.); Computer Skills (2-4 credit hours) from List A; 1 HHP Activity from List E as well as 8 hours in a foreign language.

A minimum of 36 semester hours in psychology to include the following courses: PSY 1100, PSY 1200, PSY 2220, PSY 2320, PSY 3334, PSY 3450, PSY 4895 and SOC 2206. No psychology course may be counted for major credit unless the grade received is at least a "C".

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF ARTS**
**MAJOR IN PSYCHOLOGY**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| FALL SEMESTER | | | SPRING SEMESTER | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE#** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| ENG 1101 | Introduction to Writing for College | 4 | ENG 1102 | Writing and Research the Essay | 4 |
| USS 1000 | Undergraduate Success Seminar | 2 | ELECTIVE | University Elective | 3 |
| HIS 1110/1121/1122 | Intro History of Africans in the U.S/ GlGlobal History I or II | 3 | PSY 2220 | Human Growth and Development | 3 |
| MTH 1550 | Modern Applications of Math | 3 | ELECTIVE | From General Education List B | 3 |
| PSY 1100 | Freshman Seminar | 1 | ELECTIVE | From General Education List A | 2 |
| PSY 1200 | Introduction to Psychology | 3 | | | **15** |
| | | **16** | | | |
| PSY 2320 | Abnormal Psychology | 3 | HHP 1xxx | HHP Activity | 1 |
| SOC 2206 | Social and Behavioral Statistics | 4 | PSY 3334 | Psychological Measurement | 3 |
| ELECTIVE | From General Education List B* | 3 | PSY 3420 | Social Psychology | 3 |
| ELECTIVE | From General Education List C | 3 | ELECTIVE | From General Education List B | 3 |
| ELECTIVE | From General Education List D w/lab | 4 | ELECTIVE | From General Education List C | 3 |
| SBS Elective (other than psychology)* | | | ELECTIVE | From General Education List D | 3 |
| | | **17** | | | **16** |
| **JUNIOR** | | | **JUNIOR** | | |
| ELECTIVE | University Elective | 3 | FLA 1xxx | Foreign Language II | 4 |
| FLA 1xxx | Foreign Language I | 4 | ELECTIVE | University Elective | 3 |
| PSY 3450 | Research Methods | 4 | PSY xxxx | Psychology elective | 2 |
| PSY xxxx | Psychology Elective | 3 | PSY xxxx | Psychology elective | 3 |
| | | **14** | PSY xxxx | Psychology elective | 3 |
| | | | | | **15** |
| **SENIOR** | | | **SENIOR** | | |
| PSY xxxx | Psychology/University electives | 15 | PSY 4895 | Senior Capstone Seminar | 3 |
| | | | PSY xxxx | Psychology/University electives | 9 |
| | | **15** | | | **12** |

***Minimum hours needed to obtain a Bachelor of Arts in Psychology – 124***

***BACHELOR OF SCIENCE IN PSYCHOLOGY*** — ENG 1100 or ENG 1101 and ENG 1102; USS 1000; MTH 1550; HIS 1110 or HIS 1121 or HIS 1122 plus 3 Humanities credit hours from List B; Social and Behavioral Sciences - 6 hours from two different disciplines from List C; Natural and Physical Sciences (7 credit hours from two different disciplines from List D, one choice must include a lab.), Computer Skills (2-4 credit hours) from List A; 1 HHP Activity from List E.

A minimum of 36 semester hours in psychology to include the following courses: PSY 1100, PSY 1200, PSY 2220, PSY 2320, PSY 3334, PSY 3450, PSY 4895 and SOC 2206. No psychology course may be counted for major credit unless the grade received is at least a "C".

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF SCIENCE**
**MAJOR IN PSYCHOLOGY**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| FALL SEMESTER | | | SPRING SEMESTER | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE#** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| ENG 1101 | Introduction to Writing for College | 4 | ENG 1102 | Writing and Research the Essay | 4 |
| USS 1000 | Undergraduate Success Seminar | 2 | SOC 2206 | Social and Behavioral Statistics | 4 |
| HIS 1110/1121/1122 | Intro History of Africans in the U.S/ Global History I or II | 3 | PSY 2220 | Human Growth and Development | 3 |
| MTH 1550 | Modern Applications of Math | 3 | ELECTIVE | From General Education List B | 3 |
| PSY 1100 | Freshman Seminar | 1 | ELECTIVE | From General Education List A | 2 |
| PSY 1200 | Introduction to Psychology | 3 | | | **16** |
| | | **16** | | | |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| HHP 1xxx | HHP Activity | 1 | PSY 3334 | Psychological Measurement | 3 |
| PSY 2320 | Abnormal Psychology | 3 | ELECTIVE | University Elective | 3 |
| | | | PSY xxxx | Psychology Elective | 3 |
| ELECTIVE | From General Education List C | 3 | ELECTIVE | From General Education List C | 3 |
| | From General Education List D with LAB | 4 | ELECTIVE | From General Education List D | 3 |
| SBS Elective (other than psychology)* | | 3 | | | |
| | | **14** | | | **15** |
| **JUNIOR** | | | **JUNIOR** | | |
| ELECTIVE | University Elective | 3 | ELECTIVE | University Elective | 3 |
| PSY 3450 | Research Methods | 4 | PSY xxxx | Psychology elective | 3 |
| PSY xxxx | Psychology Elective | 3 | PSY xxxx | Psychology elective | 3 |
| ELECTIVE | University Elective | 3 | PSY xxxx | Psychology elective | 3 |
| FLA 1xxx | Foreign Language I | 4 | FLA 1xxx | Foreign Language II | 4 |
| | | **17** | | | **16** |
| **SENIOR** | | | **SENIOR** | | |
| PSY xxxx | Psychology/University electives | 14 | PSY 4895 | Senior Capstone Seminar | 3 |
| | | | PSY xxxx | Psychology/University electives | 9 |
| | | **14** | | | **12** |

***Minimum hours needed to obtain a Bachelor of Science in Psychology – 124***

***BACHELOR OF ARTS IN SOCIAL WORK*** — ENG 1100 or ENG 1101 and ENG 1102; USS 1000; MTH 1550; HIS 1110 or HIS 1121 or HIS 1122 plus 3 Humanities credit hours from List (PHI 2240 Critical Thinking is required); Social and Behavioral Sciences - 6 hours from two different disciplines from List C (PSY 1200 Intro. to Psychology and SOC 1105 Intro. To Sociology are required); Natural and Physical Sciences - 7 credit hours from two different disciplines from List D (NOTE: one choice must include a lab), social work majors must select BIO 1500 (Environmental Science with Lab) as one of their choices; Computer Skills (2-4 credit hours) from List A; 1 HHP Activity from List E as well as 8 hours (I and II of the same language) in a foreign language, and 6 additional hours of Humanities from List B.

A minimum of 49 credit hours in Social Work to include the following courses: SWK 1100, SWK 2200, SWK 3011, SWK 3012, SWK 3406, SWK 4201, SWK 4202, SWK 4203, SWK 4595, SWK 4596; SOC 2006 and 2800. Also, required is COM 2214. Students must have a cumulative grade point average of 2.5 or better to graduate with a degree in social work.

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF ARTS**
**MAJOR IN SOCIAL WORK**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| FALL SEMESTER | | | SPRING SEMESTER | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE#** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| SWK 1100 | Introduction to Social Work | 3 | SWK 2200 | Introduction to Social Welfare | 3 |
| USS 1000 | Undergraduate Success Seminar | 2 | COM 2214 | Public Speaking | 3 |
| HIS 1110/1121/1122 | Intro History of Africans in the U.S/ Global History I or II | 3 | ENG1102 | Writing and Research the Essay | 4 |
| MTH 1550 | Modern Applications of Math | 3 | HHP 1xxx | HHP Activity | 1 |
| ENG 1101 | Intro to Writing for College | 4 | ELECTIVE | From General Education List A | 2 |
| | | **15** | ELECTIVE | University Electives | 3 |
| | | | | | **16** |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| SWK 3011 | Human Behavior I | 3 | SWK 3012 | Human Behavior II | 3 |
| PHI 2240 | Critical Thinking | 3 | SOC 1105 | Introduction to Sociology | 3 |
| ELECTIVE | University Elective | 3 | SOC 2800 | Methods of Research | 4 |
| SOC 2206 | Social Statistics | 4 | BIO 1500 | Environmental Science | 4 |
| Elective | General Elective List D | 3 | HIS1121/22 | Global Civilization I or II | 3 |
| | | **16** | | | **16** |
| **JUNIOR** | | | **JUNIOR** | | |
| SWK 4201 | Generalist Practice I | 3 | SWK 4202 | Generalist Practice II | 3 |
| FLA 1xxx | Foreign Language I | 4 | FLA 1xxx | Foreign Language II | 4 |
| PSY 1200 | Intro to Psychology | 3 | SWK 3406 | Social Welfare Policy | 3 |
| SWK xxxx | SWK Elective | 3 | SWK xxxx | SWK Elective | 3 |
| ELECTIVE | General Elective from List B | 3 | ELECTIVE | General Elective from List B | 3 |
| | | **16** | | | **16** |
| **SENIOR** | | | **SENIOR** | | |
| SWK 4203 | Generalist Practice III | 3 | SWK 4595 | Field Seminar | 2 |
| SWK xxxx | SWK Elective | 3 | SWK 4596 | Field Practicum | 12 |
| ELECTIVE | University Electives | 6 | | | |
| | | **12** | | | **14** |

***Minimum hours needed to obtain a Bachelor of Arts in Social Work – 127***

***BACHELOR OF SCIENCE IN SOCIAL WORK*** — ENG 1100 or ENG 1101 and ENG 1102; USS 1000; MTH 1550; HIS 1110 or HIS 1121 or HIS 1122 plus 3 Humanities credit hours from List B (PHI 2240 Critical Thinking is

required); Social and Behavioral Sciences --6 hours from two different disciplines from List C (PSY 1200 Intro. to Psychology and SOC 1105 Intro. to Sociology are required) ; Natural and Physical Sciences - 7 credit hours from two different disciplines from List D (NOTE: one choice must include a lab), social work majors must select BIO 1500 (Environmental Science with Lab) as one of their choices.; Computer Skills (2-4 credit hours) from List D; 1 HHP Activity from List E and 3 hours of Humanities from List B.

A minimum of 49 credit hours in Social Work to include the following courses: SWK 1100, SWK 2200, SWK 3011, SWK 3012, SWK 3406, SWK 4201, SWK 4202, SWK 4203, SWK 4595, SWK 4596; SOC 2206 and SOC 2800. Also, required is COM 2214 Students must have a cumulative grade point average of 2.5 or better to graduate with a degree in social work.

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF SCIENCE**
**MAJOR IN SOCIAL WORK**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| FALL SEMESTER | | | SPRING SEMESTER | | |
|---|---|---|---|---|---|
| **COURSE # TITLE** | | **CREDIT HRS** | **COURSE# TITLE** | | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| SWK 1100 | Introduction to Social Work | 3 | SWK 2200 | Introduction to Social Welfare | 3 |
| USS 1000 | Undergraduate Success Seminar | 2 | ELECTIVE | University Electives | 3 |
| HIS 1110/1121/1122 | Intro History of Africans in the U.S/ Global History I or II | 3 | ELECTIVE | General Elective List B | 3 |
| HHP 1xxx | HHP Activity | 1 | ENG 1102 | Writing and Research the Essay | 4 |
| MTH 1550 | Modern Applications of Math | 3 | ELECTIVE | From General Education List A | 2 |
| ENG 1101 | Intro to Writing for College | 4 | | | **15** |
| | | **16** | | | |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| SWK 3011 | Human Behavior I | 3 | SWK 3011 | Human Behavior II | 3 |
| PHI 2240 | Critical Thinking | 3 | SWK xxxx | SWK Elective | 3 |
| SOC 1105 | Introduction to Sociology | 3 | SOC 2800 | Methods of Research | 4 |
| SOC 2206 | Social Statistics | 4 | BIO 1500 | Environmental Science | 3 |
| COM 2214 | Public Speaking | 3 | PSY 1200 | Intro to Psychology | 3 |
| | | **16** | | | **16** |
| **JUNIOR** | | | **JUNIOR** | | |
| SWK 4201 | Social Work Practice I | 3 | SWK 4201 | Social Work Practice II | 3 |
| ELECTIVE | University Elective | 3 | ELECTIVE | University Elective | 3 |
| ELECTIVE | University Elective | 3 | SWK 3406 | Social Welfare Policy | 3 |
| SWK xxx | SWK Electives | 6 | ELECTIVE | University Electives | 6 |
| | | **15** | | | **15** |
| **SENIOR** | | | **SENIOR** | | |
| SWK 4203 | Generalist Practice III | 3 | SWK 4595 | Field Seminar | 2 |
| SWK xxxx | SWK Elective | 3 | SWK 4596 | Field Practicum | 12 |
| ELECTIVE | University Electives | 6 | | | |
| | | **12** | | | **14** |

***Minimum hours needed to obtain a Bachelor of Science in Social Work – 127***

***BACHELOR OF ARTS IN SOCIOLOGY —*** ENG 1100 or ENG 1101 and ENG 1102; USS 1000; MTH 1550; HIS 1110 or HIS 1121 or HIS 1122 plus 3 Humanities credit hours from List B; Social and Behavioral Sciences - 6 hours from two different disciplines from List C; Natural and Physical Sciences - 7 credit hours from two different disciplines from List-D (NOTE: one choice must include a lab); Computer Skills (2-4 credit hours) from List A; 1 HHP Activity from List E. and the special requirements for the Bachelor of Arts.

A minimum of 31 credit hours in Sociology to include the following courses: SOC 1105, SOC 1111 or SOC 1125, SOC 2206, SOC 2800, SOC 3800, SOC 4895, and additional courses selected in consultation with the academic advisor. Sociology majors must also complete PHI 2240 and 3300; these courses may also be counted toward the completion of any other University requirements. In addition, two semesters of foreign language is required for the B.A. degree in Sociology.

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF ARTS**
**MAJOR IN SOCIOLOGY**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| FALL SEMESTER | | | SPRING SEMESTER | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE#** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| ENG 1101 | Introduction to Writing for College | 4 | ENG1102 | Writing and Research the Essay | 4 |
| USS 1000 | Undergraduate Success Seminar | 2 | SOC1111/1125 | Anthropology or Social Prob | 3 |
| HIS 1110/1121/1122 | Intro History of Africans in the U.S/ Global History I or II | 3 | ELECTIVE | From General Education List B | 3 |
| HHP 1xxx | HHP Activity | 1 | ELECTIVE | University Elective | 3 |
| MTH 1550 | Modern Applications of Math | 3 | ELECTIVE | From General Education List A | 2 |
| SOC 1105 | Introduction to Sociology | 3 | | | **15** |
| | | **16** | | | |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| PHI 2240 | Critical Thinking | 3 | SOC 2800 | Methods of Research | 4 |
| SOC 2206 | Social and Behavioral Statistics | 4 | SOC 3325 | Race and Ethnic Relations | 3 |
| ELECTIVE | From General Education List C | 3 | SOC 3345 | Soc. of Marriage and Family | 3 |
| ELECTIVE | From General Education List D | 3 | ELECTIVE | From General Education List C | 3 |
| | University Elective | 4 | ELECTIVE | From General Education List D | 3 |
| | | **17** | | | **16** |
| **JUNIOR** | | | **JUNIOR** | | |
| Elective | University Elective | 3 | FLA 1xxx | Foreign Language II | 4 |
| SOC 3300 | Criminology | 3 | PHI 3300 | Logic and Scientific Method | 3 |
| SOC 3800 | Sociological Theory | 3 | SOC 3370 | The Family and Aging | 3 |
| FLA 1xxx | Foreign Language I | 4 | SOC xxxx | Sociology Elective | 3 |
| ELECTIVE | University Elective | 3 | ELECTIVE | University Elective | 3 |
| | | **16** | | | **16** |
| **SENIOR** | | | **SENIOR** | | |
| SOC 3343 | Social Stratification | 3 | SOC 4895 | Senior Capstone Seminar | 3 |
| SOC 3510 | Sociology of Deviance | 3 | ELECTIVE | Sociology or University | 9 |
| SOC xxxx | Sociology Elective | 3 | | or University Electives | |
| ELECTIVE | University Electives | 6 | | | |
| | | **15** | | | **12** |

***Minimum hours needed to obtain a Bachelor of Arts in Sociology – 124***

***BACHELOR OF SCIENCE IN SOCIOLOGY*** — ENG 1100 or ENG 1101 and ENG 1102; USS 1000; MTH 1550; HIS 1110 or HIS 1121 or HIS 1122 plus 3 Humanities credit hours from List B; Social and Behavioral Sciences - 6 hours from two different disciplines from List C; Natural and Physical Sciences - 7 credit hours from two different disciplines from List D NOTE: one choice must include a lab); Computer Skills (2-4 credit hours) from List D; 1 HHP Activity from List E.

A minimum of 31 credit hours in Sociology to include the following courses: SOC 1105, SOC 1111 or SOC 1125, SOC 2206, SOC 2800, SOC 3800, SOC 4895, and additional courses selected in consultation with the academic advisor. Sociology majors must also complete PHI 2240 and 3300; these courses may also be counted toward the completion of any other University requirement. Sociology majors must repeat all Sociology courses in which a grade of "D" or "F" is received.

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF SCIENCE**
**MAJOR IN SOCIOLOGY**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| FALL SEMESTER | | | SPRING SEMESTER | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE#** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| ENG 1101 | Introduction to Writing for College | 4 | ENG1102 | Writing and Research the Essay | 4 |
| USS 1000 | Undergraduate Success Seminar | 2 | SOC1111/1125 | Anthropology or Social Prob | 3 |
| HIS 1110/1121/1122 | Intro History of Africans in the U.S/ Global History I or II | 3 | ELECTIVE | From General Education List B | 3 |
| HHP 1xxx | HHP Activity | 1 | ELECTIVE | University Elective | 3 |
| MTH 1550 | Modern Applications of Math | 3 | ELECTIVE | From General Education List A | 2 |
| SOC 1105 | Introduction to Sociology | 3 | | | **15** |
| | | **16** | | | |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| PHI 2240 | Critical Thinking | 3 | SOC 2800 | Methods of Research | 4 |
| SOC 2206 | Social and Behavioral Statistics | 4 | SOC 3325 | Race and Ethnic Relations | 3 |
| ELECTIVE | From General Education List C | 3 | SOC xxxx | Sociology Elective | 3 |
| ELECTIVE | From General Education List D | 4 | ELECTIVE | From General Education List C | 3 |
| ELECTIVE | University Elective | 3 | ELECTIVE | From General Education List D | 3 |
| | | **17** | | | **16** |
| **JUNIOR** | | | **JUNIOR** | | |
| Elective | University | 3 | PHI 3300 | Logic and Scientific Method | 3 |
| SOC 3300 | Criminology | 3 | SOC 3370 | The Family and Aging | 3 |
| SOC 3343 | Social Stratification | 3 | SOC xxxx | Sociology Elective | 3 |
| SOC 3800 | Sociological Theory | 3 | ELECTIVE | University Elective | 6 |
| ELECTIVE | University Elective | 3 | | | |
| | | **14** | | | **15** |
| **SENIOR** | | | **SENIOR** | | |
| SOC 3343 | Social Stratification | 3 | SOC 4895 | Senior Capstone Seminar | 3 |
| SOC 3510 | Sociology of Deviance | 3 | ELECTIVE | Sociology or Univ Electives | 12 |
| SOC xxxx | Sociology Elective | 3 | | | |
| ELECTIVE | University Elective | 6 | | | |
| | | **15** | | | **15** |

***Minimum hours needed to obtain a Bachelor of Science in Sociology – 124***

# COLLEGE OF ENGINEERING, SCIENCE, TECHNOLOGY AND AGRICULTURE

**Alton B. Johnson, Ph.D**
**Dean and Director, 1890 Land Grant Programs**
**Joshua I. Smith Center for Education and Natural Science, Room 177**

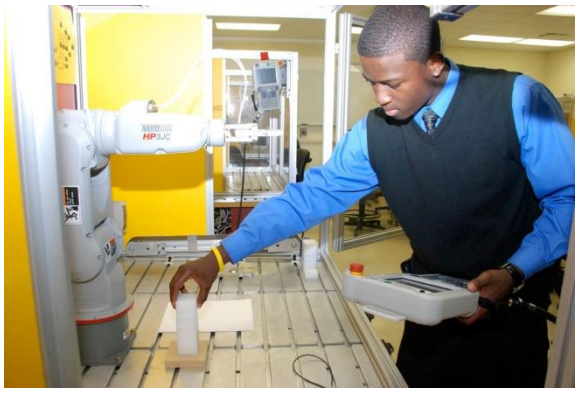
**Mrs. Pamela Sherman, Administrative Assistant – Academic Programs and 1890 Land-Grant Programs**
**(937) 376-6153, (937) 376-6676**

The College is home of the 1890 Land-Grant mission of the University and offers 10 programs in the Science, Technology, Engineering, Agriculture and Mathematics (STEAM) areas. In addition, by offering courses to support the General Education program, the College provides students with a broad foundation in modern computer literacy, sciences and mathematics. The guiding principle of the mathematics and science components of General Education is that each person who graduates from college should possess the ability to understand the impact of science on life in general, especially the guardianship of environment and natural resources for a sustainable future. The General Education curriculum offered by the College of Science and Engineering is unique with the inclusion of courses on water resources and natural disasters.

The College comprises four departments – Agricultural and Life Sciences, Manufacturing Engineering, Mathematics and Computer Science, and Water Resources Management. Undergraduate degree offerings include Biology, Chemistry, Environmental Engineering, Industrial Technology, Manufacturing Engineering, Mathematics, and Computer Science, Sustainable Agriculture, Exercise Science and Water Resources Management. The College also includes two centers: the Center for Excellence in Emerging Technologies (CEET), designated by the State of Ohio and the Center for International Water Resources Management. In addition to the major programs in the STEAM areas, the College also offers minors in Biology, Chemistry, Computational Science, Environmental Science and Nuclear Engineering. The College offers numerous opportunities for students for scholarships and internships during the years of matriculation and facilitates graduate school placement for students aspiring further education in their respective fields. The College has numerous articulations with community colleges in Ohio for students with Associate Degrees in the STEAM areas to pursue a 4 year degree at CSU in selected fields.

## ADMISSION REQUIREMENTS

Freshmen students are admitted to the College of Engineering, Science, Technology, and Agriculture by declaring an intention to major in one of the 11 programs in the STEAM areas. Students transferring from other institutions or transitioning from community colleges may be admitted to their program of choice in any of the departments after conferring with the appropriate chair.



## STUDENT RESPONSIBILITY

Students in the College of Engineering, Science, Technology, and Agriculture are required to confer with an assigned faculty advisor within their major, or their Center for Academic Success professional advisor on a regular basis. Beyond this advisement, students are personally responsible not only for selecting their academic programs, but also for adhering to all published regulations and requirements of the University. Students are expected to seek regular academic advisement and ultimately are individually responsible for completing all degree requirements.

During the semester immediately prior to the year in which a student expects to graduate, students must confer both with their advisor and the chair of the major department for a final degree checkout and preparation of an application for graduation. Completed graduation applications are due in the College Dean's office prior to the end of the first semester of the year in which a student expects to graduate in accordance to the University Academic Calendar.

## TRANSFER OF CREDITS

Students who transfer from other colleges of the University and from other accredited colleges and universities must meet with the **department chairperson to review and determine the acceptability of transfer credits to the intended degree program.** The chairperson may decline to accept the transfer credit for any course which does not

meet an approved course description or for which the grade is lower than a "C" or which does not meet the University General Education Requirements.

Students who have completed the Transfer Module at another school will automatically receive credit for Central State's Transfer Module. Such students will, however, be required to meet some additional General Education Requirements not included in the Transfer Module.

**DEGREE REQUIREMENTS**

The General Education Program, a common curriculum is central to the University's mission of providing students with a liberal arts background. The science and or mathematics requirements of the General Education Program may overlap with the requirements within respective majors in the College and may automatically count towards those requirements. Mathematic requirements for some majors in the college do not include College Algebra and the lowest mathematics course taken will automatically count towards the General Education Mathematics requirement. Students are expected to familiarize themselves with the General Education Requirements through their departmental advisors.

The remaining hours that must be taken to earn a minimum of 120-128 semester hours come from the departmental major requirements and student's choice of free electives. However, majors in the College are urged to choose, with an advisor, courses that provide the student with a second field of interest or a strong minor concentration. Minimum graduation requirements include:

- Completion of at least 124 semester hours with a grade point average of 2.00. Some departments or programs may require additional hours and a higher grade point average,
- Completion of at least 30 semester hours in a major field. Some departments may require additional hours,
- Completion of the University General Education Requirements.

**PREPARATION FOR HEALTH CARE PROFESSIONS**

Many students enter college with the intent to pursue a career in a health care field, such as dentistry, medicine, nursing, optometry, pharmacy, or veterinary medicine. All of these careers require entrance exams and additional professional education, not specific undergraduate majors. Since these are popular career paths, admission to the professional schools are very competitive. In order to have a good chance of getting into a professional school, a student will need to complete all prerequisite courses in a timely fashion and with good grades. The average student admitted to a medical school has an undergraduate GPA of about 3.5 or better and a score of approximately 510 on the MCAT exam. In addition, many schools will be looking for evidence of commitment to a health care career through volunteer work in hospitals, nursing homes, or animal shelters. Other programs may place emphasis on extracurricular activities.

Medical school admission prerequisites are fairly uniform. Most schools specify one year of each of the following topics (The corresponding CSU courses are listed in parentheses):

1. Biology (BIO 1801, BIO 1802)
2. English (ENG 1101, ENG 1102)
3. General Chemistry (CHM 1201, CHM 1202)
4. Organic Chemistry (CHM 2401, CHM 2402)
5. Mathematics (MTH 2502, MTH 2503)
6. Physics (PHY 2411, PHY 2412)

Some schools also ask for courses in quantitative analysis, biochemistry, anatomy and physiology, and/or genetics. Courses in psychology are also useful. Since most or all of these courses would be part of a biology or chemistry major, many students gain admission to medical schools through those two majors; however, some medical schools have a policy favoring other majors in order to get more diversity in their student body. Requirements for dental, optometry, pharmacy, or veterinary schools are similar to those for medical schools. Students are urged to consult the websites of any schools of interest to see what those schools request.

Medical schools also require that applicants take the MCAT exam. (Similar exams are used by dental, optometry, pharmacy and veterinary schools.) A student who plans to enter medical school in the fall immediately after graduation would normally take the MCAT in April of the junior year. Since the MCAT is based on the prerequisite courses listed above, a student should try to complete as many as possible before that time.

The specific sequence of courses a student should take will depend on the student's choice of major and the results of placement exams. The student should work closely with his or her major advisor on scheduling, but regardless of major, a student who wishes to go to medical school needs to complete the admission prerequisite courses by the end of the junior year. Some of these courses need to be done in sequence, so planning is needed. The sequence below is suggested. In addition to the courses listed, a student would need to take courses to meet the General Education and major requirements.

Freshman year: ENG 1101, ENG 1102; BIO 1801, 1802; CHM 1201, CHM 1202; MTH 2502, MTH 2503 (ACT/SAT scores may indicate additional coursework is required ahead of listed courses)

Sophomore year: CHM 2401, CHM 2402; PHY 2411, PHY 2412 (move to junior year if math is not completed)

Junior year: CHM 4300; PSY 1200, PSY 2220 (recommended General Education courses)

Each of the health care professions has an association of its professional schools. These associations have websites that will also provide useful information.

American Association of Colleges of Osteopathic Medicine (http://www.aacom.org)
American Association of Dental Schools (http://www.aads.jhu.edu/about.hunl)
American Council on Pharmaceutical Education (http://www.acpe-accredit.org)
American Nurses Association (http://nursingworld.org)
Association of American Medical Colleges (http://www.aamc.org)
Association of American Veterinary Medical Colleges (http://www.nmaa.org/aavmc)
Association of Schools and Colleges of Optometry (openseason.com/asco)

For more information about preparing for the healthcare professions at Central State University contact:

Dr. Cadance Lowell (937) 376-6274
clowell@centralstate.edu

Dr. Sharath Krishna (937) 376-6061
skrishna@centralstate.edu

Partnerships and articulation agreements between Central State University and North East Ohio Medical University, Cleveland State University and University of Cincinnati are in place to help students to be admitted to medical, pharmacy and graduate programs through direct and indirect entries. Qualified students will receive financial assistance that will help them to achieve their dreams and goals.

**ARTICULATION AGREEMENTS FOR STUDENTS WITH ASSOCIATE DEGREES**

The following articulations and Memorandum of Understanding (MOU) are in place:

**Cincinnati State Technical and Community College**

Associate of Applied Science (AAS) Degree in Engineering Technology (Environmental Technology) to Bachelor Science (BS) in Water Resources Management at CSU.
Associate of Science (AS) Degree to Bachelor Science (BS) in Environmental Engineering at CSU.
Associate of Applied Science (AAS) Degree in Mechanical Engineering Technology to Bachelor Science (BS) in Industrial Technology (Manufacturing Management Concentration) at CSU

**Cuyahoga Community College**

Associate of Science (AS) Degree to Bachelor Science (BS) in Water Resources Management at CSU.
Associate of Science (AS) Degree to Bachelor Science (BS) in Environmental Engineering.
Students interested in dual enrollment program contact the appropriate department at CSU.

**Sinclair Community College**

Associate of Science (AS) Degree (University Parallel) to Bachelor Science in Environmental Engineering at CSU.
Associate of Applied Science (AAS) Degree in Operations Technology (Industrial Technology Option) to Bachelor Science (BS) in Industrial Technology (Manufacturing Management Concentration) at CSU.
Associate of Science (AS) Degree to Bachelor Science (BS) in Manufacturing Engineering a CSU.

**1890 LAND-GRANT MISSION FUNCTIONS OF THE COLLEGE**

Central State University became the 19th member of the 1890 Land Grant Institutions on February 7th, 2014 after the passage of Farm Bill of 2014 in U.S. Congress. This mission calls for teaching, research and extension in agriculture, food and health sciences, water and other natural resources, engineering and agricultural business areas. Expansion in facilities, faculty resources and equipment for the program in agricultural sciences are in progress. In the new functions of research and extension, students will be engaged and will be able to gain additional practical knowledge in their respective fields.

# DEPARTMENT OF AGRICULTURAL AND LIFE SCIENCES .

**Cadance Lowell, Ph.D, Department Chair**
**Joshua I Smith Center for Education and Natural Sciences Building**
**Room 103A**
**(937)-376-6280**

**Ms. Danielle Davis, Administrative Assistant**
**Phone: (937) 376-6280**
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**Professor**: Dr. Anthony Arment, Dr. Alton Johnson**,** Dr. Cadance Lowell, Dr. Suzanne Seleem
**Associate Professors**: Dr. Kathleen Carter, Dr. Daqing Gao, Dr. Jeremy Holtgrave, Dr. Ibrahim Katampe, Dr. Sharath Krishna, Dr. Leanne Petry
**Assistant Professors:** Dr. Mohammadreza Hadizadeh, Dr. Lubna Abu-Niaaj

The Department of Agricultural and Life Sciences provides education and mentoring for the Bachelor of Science Degree in Biology, Chemistry, Exercise Science (Sports Performance; Clinical; Wellness) and Sustainable Agriculture, and offers minors in biology, chemistry, environmental science, exercise science, forensic science, sustainable agriculture, and physics. In cooperation with the College of Education, the department offers the Bachelor of Science in Life Science and Physical Science at the Adolescent to Young Adult Level, Science at the Middle Childhood level, and Agriculture Education (see requirements under the College of Education).

Majors must fulfill the University General Education Requirements (Marauder Lifestyle) and the specific requirements for each degree program. Students with majors in education must fulfill the requirements of the College of Education, in addition to the requirements in this department. Credits toward the major for students from an accredited institution may be accepted at the discretion of the department.

## BIOLOGY

The Biology program prepares students to pursue careers as scientists in a variety of fields such as health, allied health, environmental science, animal science, microbiology and genetics. Biology offers curriculum that leads to the Bachelor of Science in Biology, and a minor in Biology. Biology majors must take a minimum of 46 hours of biology, 20 hours of chemistry, 10 hours of calculus-based physics, and 9 hours of calculus. A minimum requirement of 16 hours of biology courses is needed for a minor in biology. Required courses for all degrees are listed under degree requirements. Students interested in the professions of medicine or veterinarian science may choose to take courses in addition to those required for Biology major. Interested students should consult their advisor.

## CHEMISTRY

Chemistry is the scientific study of matter and its chemical reactions. The Chemistry program offers courses leading to the Bachelor of Science in Chemistry as well as a minor in chemistry and forensic science. Chemistry majors must take a range of 43 to 47 semester hours in chemistry, 10 hours in calculus-based physics and 9 hours in calculus (see degree requirements). A minimum of 19 to 20 semester hours is required for a minor in chemistry. Students interested in the professions of forensic science, medicine and pharmacy may wish to take courses in addition to the chemistry major and should consult their academic advisor. Students graduating with a Bachelor of Science degree in Chemistry are equipped to join the workforce in positions related to several fields that require quality control analysis, innovation and creation of new materials. Additionally, students are well prepared to apply to programs in various medical and pharmaceutical fields as well as graduate programs in various fields.

## EXERCISE SCIENCE

Exercise Science is the scientific study of human movement performed to maintain or improve physical fitness. Students of this program assess, design, and implement exercise and fitness programs for individuals who are healthy as well as those needing support to return to a healthier state. Exercise Science offers opportunities in a wide arena of vocational interests. Example career paths include opportunities in public or private education, professional sports

training or performance coaching, clinical rehabilitation, corporate fitness, and exercise physiology. Students graduating with a Bachelor of Science in Exercise Science degree may also pursue further professional and graduate level opportunities through additional coursework or credentialing, such as: Exercise Physiology, Physical Therapy, Biomechanics, Physician's Assistant, Occupational Therapy, Respiratory Therapist, Medical School, Sport Psychology, Nutrition-Registered Dietitian, Nursing, and jobs in the Public Health sector. Students interested in Physical Therapy or Medicine should read the suggested academic requirements for Pre-Professional Health under the department description and consult with the pre-health advisor.

**SUSTAINABLE AGRICULTURE**

Central State University had an agriculture program since its inception up through 1960. The coursework for this major provides a nod to the past and the future with a strong science base and coursework to reflect modern and cutting edge research into conservation practices that maximize profitability while sustaining the environment. The B.S. degree in Sustainable Agriculture is an interdisciplinary major and overlaps some coursework with Agribusiness, Biology, Chemistry, Geography, Physics, Manufacturing Engineering, and Water Resources Management. The Department maintains a program of related paid and unpaid, undergraduate research experiences that emphasize sustainable agricultural practices in practical applications of classroom theory and enhances their skills for generating new knowledge. Graduates of the Sustainable Agriculture program are in great demand in farming, industry and government agencies.

**TRENDS IN SUSTAINABLE AGRICULTURE**

Food and Agriculture is Ohio's number one industry and one in seven employed are in areas related to the bio economy - only 10% of these jobs are traditional farming. To feed growing populations, the U.S. needs college graduates to enter agriculture related jobs and a lack of diversity is limiting new ideas to increasing food production and maintain the environment. The U.S. awards 35,400 degrees in agriculture each year, but at least 57,900 job openings in agriculture are available, especially in highly-skilled areas. New hires have expertise in food, agriculture, renewable natural resources and the environment – exactly the expertise a major in Sustainable Agriculture provides.

Students with a Sustainable Agriculture background are the future professionals that will provide leadership in addressing sustainable food systems, adequate water resource and renewable energy in the midst of growing populations and climate change. A student with a major in sustainable agriculture is prepared for a wide range of job opportunities and is better suited for future challenges facing agriculture and the environment. Some of the greatest job opportunities will be in agriculture related fields such as food production, nutrition, food chemistry, biomaterials, biofuels, plant science, water management and conservation, forestry, agriculture technology, sustainable agriculture, management and business. Students graduating from Central State University with a degree in Sustainable Agriculture will be prepared to meet this challenge.

**SUSTAINABLE AGRICULTURE PROGRAM OBJECTIVES**

Central State University and the Department of Agricultural Sciences is dedicated to education, research and extension in: 1) Agricultural diversification in areas of vegetables, fruits, natural products and animals; 2) Agricultural marketing, entrepreneurship and small business development; 3) Natural resources and water quality; and 4) Childhood obesity, nutrition, health and health education. The departmental vision is to lead students to become life-long learners through experiential learning activities centered on individuals, families, and organizations that will create more sustainable communities.

The Bachelor of Science degree program in Sustainable Agriculture has been designed to address these objectives. This four year, B. S. degree program in Sustainable Agriculture currently is the only one available in Ohio. The curriculum consists of a year of college biology, chemistry, physics and courses in all areas of agriculture with an emphasis on the pros and cons of conservation practices. Each sustainable agriculture major receives academic advising by a member of the Agricultural Sciences faculty. Nevertheless, students are responsible for knowing and complying with all published schedules and graduation requirements.

**MINORS**

Minors are available in the following areas:

**MINOR in BIOLOGY**

***Minor in Biology Requirements*** - BIO 1801, BIO 1802, BIO 2750, BIO 2850, and at least one elective from the following list up to a minimum of 16 cr. hrs: BIO 2000, BIO 2350, BIO 2400, BIO2650, BIO 3050, BIO 3150, BIO 3500, BIO 3550 or BIO 3660**.–**A grade of "C" or better in these courses is required.

**MINOR in CHEMISTRY**

***Minor in Chemistry Requirements*** - CHM 1201, CHM 1202, CHM 2200, CHM 2401, and one of the following courses at the 3XXX or 4XXX level (CHM 3100, CHM 3501, or CHM 4200). A grade of "C" or better in these courses is required. Students are advised to check for prerequisites on these courses.

**MINOR in ENVIRONMENTAL SCIENCE**

In collaboration with the Water Resources Management Department, Agricultural and Life Sciences offers an interdisciplinary minor in Environmental Science. This minor will be particularly helpful to students majoring in Biology, Chemistry, Sustainable Agriculture, or Water Resources Management, who are seeking a career in environmental fields.

**Minor in ENVIRONMENTAL SCIENCE**

***Minor in Environmental Science Requirements*** -- A core of 26 credit hours is required including a core of 17 hours consisting of BIO 1500, BIO 3500; CHM 2200; WRM 2200 and 3330; and additional 9 hours minimum from elective courses BIO 2000, BIO 2050, BIO 2650, BIO 4200, BIO 4300; CHM 2401, CHM 4200; GEL 2205; MTH 2001; WRM 3306, WRM 3310 and WRM 4435. Students are advised to check for prerequisites on these courses. A grade of "C" or better in these courses is required.

**MINOR in EXERCISE SCIENCE**

A total of 16 credit hours are required for a minor in exercise science. Required Courses:
EXS 1XXX Introduction to Exercise Science (4) and HHP 3340 Physiology of Exercise (3).
Students will choose 9 credits from the following courses: EXS 2XXX Program Management and Leadership (3); EXS 4422; Exercise and Special Populations (3); EXS 3XXX Ergonomics (3); HHP 3326 Motor Development (3); HHP 3312 Behavioral Aspects of Physical Activity (3); HHP 3318 Principles of Coaching (2).

**MINOR in FORENSIC SCIENCE**

***Minor in Forensic Science Requirements*** – CHM 1610, CHM 2200, CHM 2600, CHM 4200, and CHM 4600, total of 20 credit hours. A grade of "C" or better in these courses is required. Students are advised to check for prerequisites on these courses.

**MINOR in PHYSICS**

The minor physics requires 20 semester hours of physics, 8 hours of chemistry and 14 hours of mathematics. The physics program provides support courses for the University general education requirements and for programs in biology, chemistry, manufacturing engineering, pre-professional studies, and water resources management.

***Minor in Physics Requirements*** — PHY 2411, PHY 2212, PHY 3320, PHY 3330, PHY 4431. Students are advised to check for prerequisites on these courses.

**MINOR in SUSTAINABLE AGRICULTURE**

***Minor in Sustainable Agriculture Requirements*** — AGR 1150, AGR 1220, AGR 2150, AGR 2450, and one elective from AGR, ABG or INT from the Sustainable Agriculture degree at the 3000 or 4000 level (3-4 credits). The total credits will be 17-18 depending on the electives chosen. Students are advised to check for prerequisites on these courses.

**Pre-Medical, Pharmacy, Forensic Sciences, Physical Therapy and Veterinary Science Professionals** — Programs in the Department of Agricultural and Life Sciences may prepare students for post-baccalaureate study in medicine, veterinary science, dentistry, nursing, optometry, pharmacy, physical therapy, and forensic science. Students interested in these professions should consult their academic advisor for a list of recommended pre-requisite courses required prior to matriculation into these professional post-baccalaureate programs. Partnerships and articulation agreements between Central State University, Northeast Ohio Medical University, Cleveland State University and University of Cincinnati are in place to help students to be admitted to medical, pharmacy and graduate programs. Qualified students may be eligible for financial assistance upon acceptance into these professional and graduate programs.

Many students enter college with the intent to pursue a career in a health care field, such as dentistry, medicine, nursing, optometry, pharmacy, or veterinary medicine. All of these careers are the result of professional graduate programs, not specific undergraduate majors. Since these are popular career paths, admission to the professional schools are very competitive. In order to have a good chance of getting into a professional school, a student will need to complete all prerequisite courses in a timely fashion and with good grades. The average student admitted to a medical school has an undergraduate GPA of about 3.5 and a score of 810 in each part of the MCAT exam. In addition, many schools will be looking for evidence of commitment to a health care career through volunteer work in hospitals, nursing homes, or animal shelters. Other programs may place emphasis on extracurricular activities.

Health professional school admission prerequisites are fairly uniform. Most schools specify one year of each

of the following topics (The corresponding CSU courses are listed in parentheses): Biology (BIO 1801/BIO 1802); English (ENG 1101, ENG 1102); General Chemistry (CHM 1201/CHM 1202); Organic Chemistry (CHM 2401/CHM 2402); Mathematics (MTH 2501 or MTH 2503); and Physics (PHY 2411/PHY 2412 or PHY 2611/2612).

Some professional schools also ask for courses in quantitative analysis, biochemistry, genetics, anatomy and physiology and psychology. Since most, or all of these courses would be part of a biology or chemistry major, many students gain admission to medical schools through those two majors; however, some medical schools have a policy favoring other majors in order to get more diversity in their student body. Requirements for dental, optometry, pharmacy, or veterinary schools are similar to those for medical schools. Students are urged to consult the websites of any schools of interest to see what specific requirements the graduate program requests.

Medical schools also require that applicants take the MCAT exam. (Similar exams are used by dental, optometry pharmacy and veterinary schools.) A student who plans to enter medical school in the fall immediately after graduation would normally take the MCAT in April of the junior year. Since the MCAT is based on the prerequisite courses listed above, a student should try to complete as many as possible before that time.

The specific sequence of courses a student should take will depend on the student's choice of major and the results of placement exams. The student should work closely with his or her major advisor on scheduling, but regardless of major, a student who wishes to go to medical school needs to complete the admission prerequisite courses by the end of the junior year. Some of these courses need to be done in sequence, so planning is needed. The sequence below is suggested. In addition to the courses listed, a student would need to take courses to meet the General Education and major requirements.

Freshman year: ENG 1101, 1102; BIO 1801, BIO 1802; CHM 1201, CHM 1202; MTH 2502, MTH 2503 (ACT/SAT scores may indicate additional coursework is required ahead of listed courses)

Sophomore year: CHM 2401, CHM 2402; PHY 2411, PHY 2412 (move to junior year if math is not completed)

Junior year: CHM 4300; PSY 1200, PSY 2220 (recommended General Education courses)

For more information about preparing for the healthcare professions at Central State University contact:

Dr. Sharath Krishna 937-376-6061
*Pre-Professional Health Advisor*
*skrishna@centralstate.edu*

Mr. Sidney Williams, Esq. -- *(937) 376-6068*
Director - Pre-Law and Pre-Professional Graduate Programs and Special Initiatives
swilliams@centralstate.edu

Each health care profession has an association of its professional schools. These associations have websites that will provide additional useful information.

American Association of Colleges of Osteopathic Medicine (http://www.aacom.org)

American Association of Dental Schools (http://www.aads.jhu.edu/about.hunl)

American Council on Pharmaceutical Education (http://www.acpe-accredit.org)

American Nurses Association (http://nursingworld.org)

Association of American Medical Colleges (http://www.aamc.org)

Association of American Veterinary Medical Colleges (http://www.nmaa.org/aavmc)

Association of Schools and Colleges of Optometry (http://openseason.com/asco)

**BIOLOGY DEGREE REQUIREMENTS**
A total of 120 semester hours are required for the B.S. degree in Biology.

**GENERAL EDUCATION REQUIREMENTS**
(37-38 hours); see University General Education Requirements. Science and mathematics requirements are included in the major requirements.

**PROGRAM REQUIREMENTS**
Biology offers curriculum that leads to the Bachelor of Science in Biology, and a minor in Biology. Biology majors must take a minimum of 46 hours of biology, 20 hours of chemistry, 10 hours of physics, and 9 hours of mathematics. A minimum requirement of 16 hours of biology courses is needed for a minor in biology. Required courses for all degrees are listed under degree requirements.

***BIOLOGY PRE-MAJOR –*** All students entering the biology program start with the designation of "pre-biology." Students wishing to become biology majors must first successfully complete the following courses: BIO 1801, ENG 1102, MTH 2500, 2501or 2502; CHM1201; and USS1000. Note that all these courses have pre-requisites. *BIO 1705 and CHM 1050 are required for all students entering with an ACT score of 23 or less in Science (or its equivalent) BEFORE taking BIO 1801 and CHM 1201, respectively.* Mathematics pre-requisites may include MTH 1705. A high placement score in mathematics may allow a student to enter MTH 2500, 2501 or 2502 directly. After pre-major coursework is completed, students can apply for formal acceptance into the program. The application package includes an application form, a statement of interest, future goals, basic information about the student, an unofficial transcript, and a check sheet. Biology faculty will meet to review candidates, and a permanent major advisor will be assigned.

***BACHELOR OF SCIENCE IN BIOLOGY*** –
A total of 120 credit hours is required for the B.S. major in Biology

***GENERAL EDUCATION REQUIREMENTS*** (36 hours); see University General Education Requirements (Marauder Lifestyle).
*PROGRAM REQUIREMENTS*
All biology majors must complete the following major requirements: BIO 1801, BIO 1802, BIO 2340, BIO 2400, BIO 2650, BIO 2750, BIO 2850, BIO 3430, BIO 3500, BIO 4100 and BIO 4500. Required electives include 9 credit hours, a minimum of which must come from 3000-level and 4000-level courses from the following list: BIO 2000, BIO 2050, BIO 2900, BIO 2350, BIO 3050, BIO3070, BIO 3090, BIO 3150, SCI 3250, BIO 3550, BIO 3660, BIO 4300, BIO 4350, BIO 4400, and BIO 4600 or equivalent BIO 1705 and CHM 1050 are required for all entering freshmen with an ACT score (or equivalent) in Science less than 23. Required support courses for the major include: CHM 1201, CHM 1202, CHM 2401, CHM 2402, CHM 4300; MTH 2502, MTH 2503, PHY 2411, and PHY2412. Only BIO, CHM, MTH and PHY courses passed with a grade of "C" or above will count towards Biology requirements.

***TWO STRIKES POLICY (Effective Fall 2013) –*** Students who do not pass a biology or support course will have only one attempt to retake and pass the class. Failure to achieve a grade of C or higher in appropriate courses will result in the student being dismissed from the major. Withdraws with record are counted as failures for purposes of this policy. Students wishing to appeal the dismissal must do so within one semester of the issuing of the second grade. The student should consult with his/her advisor for additional procedures.

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF SCIENCE**
**MAJOR IN BIOLOGY (4-year Plan)**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree. **Note that "*" on a course indicates courses which are dependent on pre-requisites or placement scores. Pre-requisites for these courses must be met either by taking BIO 1705, CHM 1050 and MTH 1750 and MTH 2501 prior to BIO 1801, CHM 1201 and instead of MTH 2500, respectively, OR by placement by ACT score.**

| **FRESHMAN** | | | **FRESHMAN** | | |
|---|---|---|---|---|---|
| **COURSE#** | **TITLE** | **CR HR** | **COURSE#** | **TITLE** | **CR HR** |
| BIO 1801* | Fundamentals of Biology I | 4 | BIO 1802 | Fundamentals of Biology II | 4 |
| ENG 1100/01 | Introduction to Writing for College | 4/5 | ENG 1102 | Writing & Research the Essay | 4 |
| USS 1000 | Undergraduate Success Seminar | 2 | HIS 1XXX | 1110, 1121 or 1122 | 3 |
| MTH 2500* | Pre-calculus | 4 | ELECTIVE | General Education List C | 3 |
| Elective | General Education List B | 2 | | Physical Activity List A | 1 |
| | | **15/16** | | | **15** |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| BIO 2340 | Careers in Biology | 1 | BIO 2650 | Microbiology | 4 |
| CHM 1201* | General Chemistry I(List D) | 4 | ELECTIVE | General Education List C | 3 |
| MTH 2502 | Calculus I (STEM Math) | 4 | CHM 1202 | General Chemistry II | 4 |
| BIO 2750 | Zoology | 2 | MTH 2503 | Calculus II | 5 |
| BIO2850 | Plant Biology | 2 | | | |
| ELECTIVE | List C | 3 | | | |
| | | **16** | | | **16** |
| **JUNIOR** | | | **JUNIOR** | | |
| BIO 2400 | Molecular Genetics | 4 | BIO 3430 | Biology Seminar | 1 |
| CHM 2401 | Organic Chemistry I | 4 | CHM 2402 | Organic Chemistry II | 4 |
| BIO | Elective | 3/4 | PHY 2412 | University Physics II | 5 |
| PHY 2411 | University Physics I (List D) | 5 | BIO XXXX | Elective | 3/4 |
| | | **16/17** | | | **13/14** |
| **SENIOR** | | | **SENIOR** | | |
| BIO 3500 | Ecology | 4 | BIO 4100 | Molecular Cell Biology | 4 |
| ELECTIVE | University Elective | 3 | BIO XXXX | BIO Elective | 3-4 |
| CHM 4300 | Biochemistry | 4 | | | |
| BIO XXXX | BIO Elective | 3-4 | | | |
| BIO 4500 | Undergraduate Research in Biology | 2 | ELECTIVES | University Electives to complete 120 hrs | 0-6 |
| | | **16-17** | | | **12-15** |

**Indicates courses which are dependent on placement scores. Pre-requisites for these courses must be met either by taking BIO 1705, CHM 1050 and MTH 1750 and MTH 2501 prior to BIO 1801, CHM 1201 and instead of MTH 2500, respectively, OR by placement by ACT score.*

***Minimum hours needed to obtain a Bachelor of Science in Biology – 120***

## CHEMISTRY PROGRAM

**General Information**
The Chemistry program offers courses leading to the Bachelor of Science in Chemistry as well as a minor in chemistry and forensic sciences. Chemistry majors must take a minimum range of 43 to 47 semester hours in chemistry, 10 hours in calculus-based physics and 9 hours in calculus (see degree requirements).

**CHEMISTRY DEGREE REQUIREMENTS**
A total of 120 semester hours are required for the B.S. degree in Chemistry.

**GENERAL EDUCATION REQUIREMENTS**
(37-38 hours); see University General Education Requirements. Science and mathematics requirements are included in the major requirements.

**PROGRAM REQUIREMENTS**
The Chemistry program offers courses leading to the Bachelor of Science in Chemistry as well as a minor in chemistry and forensic sciences. Chemistry majors must take a range of 43 to 47 semester hours in chemistry, 10 hours in calculus-based physics and 9 hours in calculus (see degree requirements).

***CHEMISTRY PRE-MAJOR*** **–**Students wishing to become chemistry majors must first successfully complete the following courses: ENG 1100/1101, ENG 1102; MTH 1750 and MTH 2501, or MTH 2500; CHM 1050*, CHM 1201, CHM 1202; and USS 1000. **CHM1050 is required for all students entering with an ACT score of less than 23 Science (or its equivalent).* A high placement score in mathematics may preclude MTH 1750 and/or MTH 2501. Note that the pre-requisite for MTH 2502 is MTH 2500 OR MTH 1750 and MTH 2501. After this coursework is completed, students may apply for acceptance into the program. A complete application includes a check sheet, a statement of interest, future goals, basic information about the student, and an unofficial transcript. Upon completion and submission of the package, chemistry faculty members will review candidates. If accepted into the program, a permanent major advisor will be assigned.

***BACHELOR OF SCIENCE IN CHEMISTRY*** — See Marauder Lifestyle for general education requirements.
All chemistry majors must take the following major requirements: CHM 1201, CHM 1202, CHM 2200, CHM 2401, CHM 2402, CHM 3050, CHM 3100, CHM 3300, CHM 3501, CHM 3502, CHM 4200, CHM 4791, CHM 4792, and one additional chemistry course at the 3000 or 4000 level; MTH 2502, MTH 2503; PHY 2411 and PHY 2412. Only CHM, MTH and PHY courses passed with a grade of "C" or above will count towards Chemistry requirements.

***TWO STRIKES POLICY –***
***(Effective Fall 2013)*** **–** Students who do not pass a chemistry or support course will have only one attempt to retake and pass the class. Failure to achieve a grade of C or higher in appropriate courses will result in the student being dismissed from the major. Withdraws with record are counted as failures for purposes of this policy. Students wishing to appeal the dismissal must do so within one semester of the issuing of the second grade. The student should consult with his/her advisor for additional procedures.

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF SCIENCE**
**MAJOR IN CHEMISTRY**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University Requirements, the General Education Requirements and any Special Requirements for the above degree.

| FALL SEMESTER | | | SPRING SEMESTER | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE #** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| CHM 1201 | General Chemistry I (List D) | 4 | CHM 1202 | General Chemistry II | 4 |
| ENG 1101 | Intro to Writing for College | 4 | ENG 1102 | Writing and Research the Essay | 4 |
| USS 1000 | Undergraduate Success Seminar | 2 | HIS XXXX | 1110, 1121, or 1122. | 3 |
| MTH 2502 | Calculus I (List D) | 4 | MTH 2503 | Calculus II | 5 |
| ELECTIVE | General Education (List C) | 3 | | | |
| | | **17** | | | **16** |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| CHM 2401 | Organic Chemistry I | 4 | CHM 2402 | Organic Chemistry II | 4 |
| PHY 2411 | University Physics I | 5 | PHY 2412 | University Physics II | 5 |
| ELECTIVE | From General Education (List C) | 3 | ELECTIVE | From General Education (List B) | 3 |
| ELECTIVE | From General Education (List B) | 3 | HHP 1XXX | Physical Activity (List A) | 1 |
| | | **15** | | | **13** |
| **JUNIOR** | | | **JUNIOR** | | |
| CHM 2200 | Quantitative Analysis | 4 | CHM 3050 | Chemistry Seminar | 2 |
| CHM 3100 | Inorganic Chemistry | 3 | CHM 4200 | Instrumental Analysis | 4 |
| CHM 3300 | Intro to Biochemistry | 3 | ELECTIVE | University Electives | 6 |
| ELECTIVE | University Electives | 6 | | | |
| | | **16** | | | **12** |
| **SENIOR** | | | **SENIOR** | | |
| CHM 3501 | Physical Chemistry I | 3 | CHM 3502 | Physical Chemistry II | 4 |
| CHM 4791 | Undergraduate Research I | 2 | CHM 4792 | Undergraduate Research II | 2 |
| CHM XXXX | Chemistry Elective | 4 | CHM XXXX | Chemistry Elective | 4 |
| ELECTIVE | University Electives | 6 | ELECTIVE | University Electives (for a total of 120 credits) | 6 |
| | | **15** | | | **16** |

***Minimum hours needed to obtain a Bachelor of Science in Chemistry – 120***

**EXERCISE SCIENCE DEGREE REQUIREMENTS**
A total of 120 semester hours are required for the B.S. degree in Exercise Science – Sports Performance.
**GENERAL EDUCATION REQUIREMENTS**
(36 hours); see University General Education Requirements.

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF SCIENCE**
**MAJOR IN EXERCISE SCIENCE- SPORTS PERFORMANCE**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University Requirements, the General Education Requirements and any Special Requirements for the above degree.

| **FALL SEMESTER** | | | **SPRING SEMESTER** | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE #** | **TITLE** | **CREDITHRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| BIO 1100 | Organismal Biology with lab (List D) | 4 | CHM 1150 | Elements of Chemistry with lab (List D) | 4 |
| ENG 1100/01 | Introduction to Writing for College | 4/5 | ENG 1102 | Writing and Research the Essay | 4 |
| USS 1000 | Undergraduate Success Seminar | 2 | HIS XXXX | 1110, 1121, or 1122. | 3 |
| MTH 1750 | College Algebra | 3 | PSY 1200 | General Psychology (List C) | 3 |
| EXS 1140 | Intro to Exercise Science | 4 | HHP 1000 | Health and Wellness | 2 |
| | | **17/18** | | | **16** |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| EXS 2256 | Clinical Practicum 2 | 2 | EXS 2102 | Anatomy and Physiology II | 4 |
| EXS 2202 | Nutrition for Health and Exercise | 3 | EXS 2410 | Medical Terminology | 3 |
| EXS 2101 | Anatomy and Physiology I | 4 | HHP 3330 | Kinesiology | 3 |
| ELECTIVE | Humanities List B. | 3 | HHP 3348 | Family Life and Disease Education | 3 |
| ELECTIVE | University Elective | 3 | ELECTIVE | See List C, Not Psychology | 3 |
| | | **15** | | | **16** |
| **JUNIOR** | | | **JUNIOR** | | |
| EXS 3200 | Prevention and Care of Athletic Injuries | 4 | EXS 3XXX | Nutrition for Sports Performance | 3 |
| HHP 3326 | Motor Development | 3 | EXS 3100 | Ergonomics | 3 |
| HHP 3318 | Principles of Coaching | 2 | EXS 3356 | Clinical Practicum III | 3 |
| HHP 3340 | Physiology of Exercise | 3 | HHP 3317 | Sports Officiating | 2 |
| HHP 3312 | Behavioral Aspects of Physical Activity | 3 | HHP XXX | Physical .E. Activity (List A) | 1 |
| | | | ELECTIVE | University Elective | 3/4 |
| | | **15** | | | **15/16** |
| **SENIOR** | | | **SENIOR** | | |
| EXS 4XXX | Seminar in Exercise Science | 3 | EXS 4422 | Exercise in Special Populations | 3 |
| EXS 4421 | Clinical Exercise Testing and Prescription | 3 | EXS 4401 | Seminar: Current Research in Exer. Science | 1 |
| EXS 4409 | Principles of Sports Conditioning | 3 | EXS 4490 | Exercise Science Clinical Experience | 8 |
| HHP 4432 | Tests and Measurements of Physical Educ. | 2 | | | |
| ELECTIVE | University Elective | 3 | | | |
| | | **14** | | | **12** |

***Minimum hours needed to obtain a Bachelor of Science in Exercise Science - Sports Performance – 120***

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF SCIENCE**
**MAJOR IN EXERCISE SCIENCE- CLINICAL**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University Requirements, the General Education Requirements and any Special Requirements for the above degree.

| FALL SEMESTER | | | SPRING SEMESTER | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE #** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| BIO 1801 | Fundamentals of Biology I | 4 | BIO 1802 | Fundamentals of Biology II | 4 |
| ENG 1100/01 | Introduction to Writing for College | 4/5 | ENG 1102 | Writing and Research the Essay | 4 |
| USS 1000 | Undergraduate Success Seminar | 2 | HIS XXXX | 1110, 1121, or 1122. | 3 |
| MTH 1750 | College Algebra | 3 | PSY 1200 | General Psychology (List C) | 3 |
| EXS 1140 | Intro to Exercise Science | 4 | MTH 2501 | Trigonometry | 3 |
| | | **17/18** | | | **17** |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| EXS 2256 | Clinical Practicum 2 | 2 | EXS 2102 | Anatomy and Physiology II | 4 |
| EXS 2202 | Nutrition for Health and Exercise | 3 | EXS 2410 | Medical Terminology | 3 |
| EXS 2101 | Anatomy and Physiology I | 4 | HHP 3330 | Kinesiology | 3 |
| CHM 1201 | General Chemistry I (List D) | 4 | HHP 3348 | Family Life and Disease Education | 3 |
| ELECTIVE | Humanity Elective (See list B) | 3 | CHM 1202 | General Chemistry II | 4 |
| | | **16** | | | **17** |
| **JUNIOR** | | | **JUNIOR** | | |
| EXS 3312 | Behavioral Aspects of Physical Activity | 3 | EXS 3302 | Nutrition in Health and Disease | 3 |
| EXS 4420 | Introduction to Exercise Cardiology | 2 | EXS 3100 | Ergonomics | 3 |
| PHY 2611 | College Physics I (List D) | 4 | EXS 3356 | Clinical Practicum III | 3 |
| HHP 3326 | Motor Development | 3 | PHY 2612 | College Physics II | 4 |
| HHP 3340 | Physiology of Exercise | 3 | ELECTIVE | See List C | 3 |
| | | | ELECTIVE | See List A | 1 |
| | | **15** | | | **17** |
| **SENIOR** | | | **SENIOR** | | |
| EXS 4XXX | Seminar in Exercise Science | 3 | EXS 4422 | Exercise in Special Populations | 3 |
| EXS 4421 | Clinical Exercise Testing and Prescription | 3 | EXS 4401 | Seminar: Current Research in Exer. Science | 1 |
| EXS 4419 | Principles of Sports Conditioning | 3 | EXS 4490 | Exercise Science Clinical Experience | 8 |
| HHP 2230 | First Aid and Terminology | 3 | | | |
| | | **12** | | | **12** |

***Minimum hours needed to obtain a Bachelor of Science in Exercise Science - Clinical – 123***

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF SCIENCE**
**MAJOR IN EXERCISE SCIENCE- WELLNESS**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University Requirements, the General Education Requirements and any Special Requirements for the above degree.

| FALL SEMESTER | | | SPRING SEMESTER | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE #** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| BIO 1100 | Organismal Biology with lab (List D) | 4 | CHM 1150 | Elements of Chemistry with lab (List D) | 4 |
| ENG 1100/01 | Introduction to Writing for College | 4/5 | ENG 1102 | Writing and Research the Essay | 4 |
| USS 1000 | Undergraduate Success Seminar | 2 | HIS XXXX | 1110, 1121, or 1122. | 3 |
| MTH 1750 | College Algebra | 3 | PSY 1200 | General Psychology (List C) | 3 |
| EXS 1140 | Intro to Exercise Science | 4 | HHP 1000 | Health and Wellness | 2 |
| | | **17/18** | | | **16** |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| EXS 2256 | Clinical Practicum 2 | 2 | EXS 2102 | Anatomy and Physiology II | 4 |
| EXS 2202 | Nutrition for Health and Exercise | 3 | EXS 2410 | Medical Terminology | 3 |
| EXS 2101 | Anatomy and Physiology I | 4 | HHP 3330 | Kinesiology | 3 |
| HHP 2230 | First Aid and Terminology | 3 | HHP 3348 | Family Life and Disease Education | 3 |
| ELECTIVE | Humanities List B. | 3 | ELECTIVE | See List D, Not Psychology | 3 |
| | | **15** | | | **16** |
| **JUNIOR** | | | **JUNIOR** | | |
| EXS 3312 | Behavioral Aspects of Physical Activity | 3 | EXS 3302 | Nutrition in Health and Disease | 3 |
| HHP 3326 | Motor Development | 3 | EXS 3100 | Ergonomics | 3 |
| HHP 3373 | Financial Wellness | 2 | EXS 3356 | Clinical Practicum III | 3 |
| HHP 3340 | Physiology of Exercise | 3 | HHP XXX | Physical Activity (List A) | 1 |
| BUS 1100 | Contemporary American Business | 3 | BUS 2343 | Principles of Management | 3 |
| | | **14** | | | **13** |
| **SENIOR** | | | **SENIOR** | | |
| EXS 4XXX | Seminar in Exercise Science | 3 | EXS 4422 | Exercise in Special Populations | 3 |
| EXS 4421 | Clinical Exercise Testing and Prescription | 3 | EXS 4401 | Seminar: Current Research in Exer. Science | 1 |
| EXS 4425 | Workplace Wellness | 3 | EXS 4490 | Exercise Science Clinical Experience | 8 |
| EXS 4419 | Principles of Sports Conditioning | 3 | MKT 3396 | Consumer Behavior | 3 |
| BUS 2353 | Principles of Marketing | 3 | | | |
| | | **15** | | | **15** |

***Minimum hours needed to obtain a Bachelor of Science in Exercise Science - Wellness – 124***

**SUSTAINABLE AGRICULTURE DEGREE REQUIREMENTS**
A total of 120 semester hours are required for the B.S. degree in Sustainable Agriculture.

**GENERAL EDUCATION REQUIREMENTS**
(36hours); see University General Education Requirements.

**SUSTAINABLE AGRICULTURE PROGRAM REQUIREMENTS:**

***BACHELOR OF SCIENCE IN SUSTAINABLE AGRICULTURE*** — ENG 1100 or ENG 1101, ENG 1102; MTH 2500 or 2501; HIS 1110, HIS 1121 or HIS 1122; Computer Skills - List A - 2 credits; Social and Behavioral Sciences – List B - ECO 2210 plus 3 semesters hours from a different discipline; ACC 2210; BIO 1801, BIO 1802, BIO 2650; CHM 1201, CHM 1202; PHY 1181, PHY 1182; FYS 1101; Health – List E - HHP 1000 and 1 semester credit from HHP 1101-1121. Sustainable Agriculture major requirements: AGR 1150, AGR 1220, AGR 1250, AGR 2150, AGR 2340, AGR 2350, AGR 2450, AGB 3240, AGR 3250, AGR 3330, AGR 3335, AGR 3450, AGR 4350, AGB 4400, AGB 4400, AGR 4500, AGB 4745; 7 credits hours including one at the 3000 and one at the 4000 level from the following list; BIO 2050, BIO 3070, AGR 3120, AGB 3220, AGR 3308, BIO 3550, GEO 3370, AGB 3415, BIO 3660, BIO 4300, BIO 4350, AGR 4406, AGR 4420, AGR 4425, AGR 4430, WRM 4470. Note that students coming as a first time freshman with less than an overall score of 23 or equivalent may have additional pre-requisites including BIO 1705, CHM 1050 and MTH 1750.

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF SCIENCE**
**MAJOR IN SUSTAINABLE AGRICULTURE**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree. *Note that these courses are for incoming first time freshmen student with Composite ACT Entrance Scores less than 23 or equivalent for Biology and Chemistry courses; or less than 18 ACT score in Mathematics or less than 18 ACT score in English or equivalent. Consult with academic advisor or Department Chair.

| **FALL SEMESTER** | | | **SPRING SEMESTER** | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE#** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| *ENG 1100/1101 | Intro to Writing/Reading | 4/5 | ENG 1102 | Writing and Researching the Essay | 4 |
| *MTH 2500/2501 | Pre-Calculus or Trigonometry | 3 | ELECTIVE XXXX | University Elective | 2/3 |
| *BIO 1801 | Fundamentals of Biology I | 4 | BIO 1802 | Fundamentals of Biology II | 4 |
| AGR 1150 | Intro to Sustainable Agriculture | 3 | | | |
| USSC 1000 | Undergraduate Freshman Seminar | 2 | HIS 1110/1121/1122 | History | 3 |
| | | **16-17** | | | **13-14** |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| | | | BIO 2650 | Microbiology | 4 |
| CHM 1201 | General Chemistry I | 4 | CHM 1202 | General Chemistry II | 4 |
| PHY 1181 | Basic Physics I | 4 | PHY 1182 | Basic Physics II | 4 |
| AGR 2250 | Careers in Sustainable Agriculture | 1 | AGR 1220 | Horticulture | 4 |
| HHP XXXX | Physical Activity (See List A) | 1 | | | |
| | | **14** | | | **16** |
| **JUNIOR** | | | **JUNIOR** | | |
| AGR 2450 | Soil Science | 4 | XXXX | Humanity See List B | 3 |
| AGR 2150 | Intro Animal Science | 4 | AGR 2350 | Community Agriculture | 3 |
| ECO 2210 | Microeconomics (See List C) | 3 | AGR 330 | Soil and Water Conservation | 3 |
| ACC 2210 | Financial Accounting | 3 | AGB 3240 | Farm Management | 3 |
| AGR 1250 | Principles of Precision Agriculture | 4 | ELECTIVE | University Elective | 3 |
| | | **18** | | | **15** |
| **SENIOR** | | | **SENIOR** | | |
| AGR 4350 | Integrated Pest Management | 4 | AGR 3XXX | Ag Elective | 4 |
| AGR 4500 | Internship in Sustainable Agriculture | 2 | AGR 4XXX | Ag Elective | 3 |
| AGR 3250 | Grain Crops | 4 | AGB 4745 | Agricultural Policy | 3 |
| AGR 4400 | Agricultural Economics | 3 | AGR 3335 | Irrigation and Drainage | 3 |
| | | | AGR 3450 | Agriculture Extension | 3 |
| | | **13** | | | **16** |

***Minimum hours needed to obtain a Bachelor of Science in Sustainable Agriculture– 120***

# DEPARTMENT OF MANUFACTURING ENGINEERING

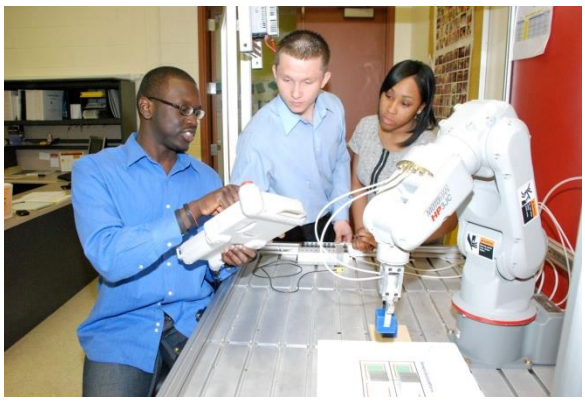
**Arunasalam Rahunanthan, Ph.D.**
**Department Chair**
**Carl C. Jenkins Technology Education Hall**
**Room 111**
**(937) 376-6435**

**Faculty — Professors:** Dr. Mahmoud A. Abdallah, Dr. Abayomi J. Ajayi-Majebi, Dr. Morris Girgis;
**Associate Professors:** Dr. Augustus Morris, Jr., Dr. Alessandro R. Rengan;
**Assistant Professors:** Dr. Saleh Almestiri
**Professor Emeritus:** Mr. John Sassen

## GENERAL INFORMATION

The Department of Manufacturing Engineering, composed of the Manufacturing Engineering Program and the Industrial Technology Program, carries on the University's historic tradition of providing relevant technical education to under-served populations with diverse backgrounds and educational needs. To uphold this rich heritage, the Department offers two baccalaureate degree programs: the B.S. degree in Manufacturing Engineering and the B.S. degree in Industrial Technology. These two programs share faculty, staff and facilities. However, though both prepare students for technical careers in industry and business, they otherwise offer separate degrees with distinct curricula.

The Department draws strong guidance and support from an active Industrial Advisory Committee comprised of engineers and executives from diverse manufacturing companies and technical organizations. This industrial support provides for program enhancement and ensures program relevance in preparing students for technical careers. In addition, the Department maintains a program of related research that engages students in practical applications of classroom theory and enhances their skills for generating new knowledge.



Spacious laboratories with modern laboratory equipment, computer hardware and software are available to support the teaching and research activities of the Department. To provide special opportunities for students to develop technical leadership and teaming skills, the Department promotes active student chapters of the Society of Manufacturing Engineers (SME) and the National Society of Black Engineers (NSBE). Both engineering and technology majors must fulfill the University General Education requirements. During the Spring semester of the senior year, Manufacturing Engineering majors are also encouraged to take the Fundamentals of Engineering Examination, which is the initial step in attaining professional engineering licensure.

Each engineering or technology major receives academic advising by a member of the Manufacturing Engineering Department faculty. Nevertheless, students are responsible for knowing and complying with all published schedules and graduation requirements.

## MANUFACTURING ENGINEERING PROGRAM

### General Information

Graduates of the Manufacturing Engineering program are in great demand by prestigious firms and government agencies.

## TRENDS IN MANUFACTURING

Manufacturing is one of the major wealth producing sectors of the world economic structure with a direct and powerful impact on the quality of life of each individual. The field of manufacturing has undergone dramatic changes during the past decade. Diverse forces driving these changes include the following factors: rapid technological advances in areas such as computers, lasers, machine vision, robotics and automation; emerging new materials including polymers, composites and ceramics; an increasing global economy with intensified international trade competition; changing national defense and security priorities; changing labor management relationships; dwindling natural resources; increasing energy costs; and, heightened environmental concerns. These factors continue to produce new demands and exciting opportunities for manufacturing engineers. Graduates of the program have found diverse employment in manufacturing fields such as automotive, aerospace, electronics, defense, food processing, and consumer

product manufacturing industries. Others have earned related graduate degrees at some of the nation's finest graduate engineering schools prior to assuming industry positions.

**MANUFACTURING ENGINEERING PROGRAM OBJECTIVES**

The Manufacturing Engineering Department at Central State University is dedicated to preparing students for manufacturing engineering careers in diverse manufacturing enterprises. The MFE Program expects the graduates within few years of graduation to attain the following:

1. Have productive careers.

2. Embrace leadership opportunities, promote diversity and communicate effectively.

3. Pursue professional development and continuing education.

4. Adhere to the Engineer's code of conduct and ethics.

5. Positively contribute to the university, local communities, and global societies.

The Bachelor of Science degree program in Manufacturing Engineering has been designed to address these objectives. The curriculum follows guidelines established by the Society of Manufacturing Engineers (SME), an international organization with over 40,000 members in seventy countries. SME seeks to ensure that Manufacturing Engineering programs produce engineers prepared to address industry demands for increasingly sophisticated manufacturing technology, and ready to play an important role in planning, building and optimizing the "factories of the future." Emphasis is, therefore, given to computer-aided design and manufacturing (CAD/CAM), microprocessor control, manufacturing planning and control, quality assurance, and the processing and utilization of engineering materials. The program provides opportunities for hands-on experience in the application of the knowledge embodied in these disciplines.

The BS degree program in Manufacturing Engineering is one of only a few programs in the nation which are dedicated to undergraduate manufacturing engineering education, and which are accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (EAC/ABET). The overarching goal of the program is to produce graduates who are well prepared to:

- Contribute to the engineering planning and management of a relatively large, modern manufacturing operation.
- Introduce modern manufacturing methods and design technologies into a small manufacturing operation or assist in the start-up of a new manufacturing enterprise.
- Maintain a process of life-long learning to retain technical competence, including earning graduate degrees in engineering or related business management or other professional studies and obtaining relevant professional certification.

The overall Manufacturing Engineering curriculum consists of strong components of mathematics, basic sciences, engineering sciences, humanities and social sciences, together with the engineering major requirements which can be grouped into the following topic areas:

**Materials and Manufacturing Processes** — the behavior and properties of materials and materials processing.

**Process, Assembly, and Product Engineering** — the design of products and the equipment, tooling and environment necessary for their manufacture.

**Manufacturing Competitiveness** — the creation of competitive advantage through manufacturing planning, strategy and control. Topics such as productivity, quality, cost, human resources, product safety and liability, social concerns, international issues, environmental impact, and product life cycle are included in this area.

**Manufacturing Systems Design** — the analysis, synthesis and control of manufacturing operations using statistical and calculus based methods.

**Manufacturing Systems Design** — the analysis, synthesis and control of manufacturing operations using statistical and calculus based methods.

**Simulation and Information Technology** — Simulation, modeling, control, architecture, and information systems are included in this area.

**Laboratory Experience -** Measuring manufacturing process variables in a manufacturing laboratory and making technical inferences about the process. Throughout the curriculum major emphasis is given to the engineering design function. The Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (EAC/ABET) has

published the following description for engineering design:

> Engineering design is the process of devising a system, component, or process to meet desired needs. It is a decision making process (often iterative), in which the basic sciences and mathematics and engineering sciences are applied to convert resources optimally to meet a stated objective. Among the fundamental elements of the design process are the establishment of objectives and criteria, synthesis, analysis, construction, testing and evaluation. The engineering design component of a curriculum must include most of the following features: development of student creativity, use of open ended problems, development and use of modern design theory and methodology, formulation of design problem statements and specifications, consideration of alternative solutions, feasibility considerations, production processes, concurrent engineering design, and detailed system descriptions. Further, it is essential to include a variety of realistic constraints, such as economic factors, safety, reliability, aesthetics, ethics and social impact."
>
> In the senior year, the design experience is culminated with a sequenced two-semester "capstone" design project. Students work on individual or team design projects under close faculty supervision. A broad range of resources including machine tools, materials testing and processing equipment, electronic and measuring instrumentation, computers and control devices is available to prepare students for the real-world challenges of the engineering profession. Oral and written communication skills are emphasized in the senior design project.
>
> The broad educational experience outlined above is designed to integrate the knowledge, skills, attitudes and values acquired in a diverse set of courses to produce graduates with the following specific competencies:
> - An ability to apply knowledge of mathematics, science, and engineering;
> - An ability to design and conduct experiments, as well as to analyze and interpret data;
> - An ability to design a system, component, or process to meet desired needs subject to constraints;
> - An ability to function on multi-disciplinary teams;
> - An ability to identify, formulates, and solves engineering problems;
> - An understanding of professional and ethical responsibility;
> - An ability to think, listen and communicate effectively;
> - An understanding of the impact of engineering solutions in a global and societal context;
> - A recognition of the need for, and ability to engage in life-long learning;
> - A knowledge of contemporary issues;
> - An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

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**DEGREE REQUIREMENTS**

A total of 136 semester hours are required for the BS degree in manufacturing engineering:

**GENERAL EDUCATION REQUIREMENTS**

(Min 39-40 hours): Thirty-one (31) of the total fifty-four (54) credits apply also to the manufacturing engineering (MFE) program requirements; see University General Education Requirements.

**MANUFACTURING ENGINEERING PROGRAM REQUIREMENTS:**

The majority of the MFE courses emphasize design, the process of devising a system, component, or process to meet some desired need. The design course work provides experience in open-ended problem solving by combining decision making and creative thought with basic and engineering sciences. The design experience is incorporated across a variety of subject areas and increases in amount and complexity.

**MINOR**

*Minor in Nuclear Engineering* – four (4) Nuclear Engineering courses (12 hours), and a NUE practicum 3 hours), while using two (2) additional courses, (6 hours) to draw on current courses in the disciplines of science, mathematics, computer science, manufacturing engineering, environmental

***BACHELOR OF SCIENCE IN MANUFACTURING ENGINEERING*** — Marauder Lifestyle Courses: USS 1000 and 1 semester credit from Physical Activity (List A); Marauder Foundation Core Courses: ENG 1100 or ENG 1101, MTH 2502, and HIS 1110, HIS 1121 or HIS 1122; Marauder Foundation Bridge Courses: ENG 1102, 3 hours from Humanities (List B); 6 hours in two disciplines from Social and Behavioral Sciences (List C); CHM 1201, CHM 1202, PHY 2411, PHY 2412, MTH 2503, and MTH 3110; 3 hours from Technical/Business* & Other General Requirements.

All manufacturing engineering majors must take the following major requirements: INT 1210, MFE 1110, MFE 1210, MFE 2310, MFE 2320, MFE 2410, MFE 2420, MFE 2430, MFE 2440, MFE 3510, MFE 3520, MFE 3530, MFE 3540, MFE 3550, MFE 3610, MFE 3620, MFE 3630, MFE 3640, MFE 4710, MFE 4720, MFE 4730, MFE 4795, MFE 4810, MFE 4820, MFE 4895. A grade of "C" or better in these courses is required to earn a major degree in Manufacturing Engineering.

*Technical/Business electives (3 hours) are selected with approval of the advisor from courses numbered 2000 or higher in the areas of accounting, biology, business, chemistry, computer science, finance, management, management information systems, manufacturing engineering, industrial technology, marketing, mathematics
, physics, or water resources management.

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF SCIENCE**
**MAJOR IN MANUFACTURING ENGINEERING**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| **FALL SEMESTER** | | | **SPRING SEMESTER** | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE#** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| MTH 2502 | Calculus I | 4 | MTH 2503 | Calculus II | 5 |
| CHM 1201 | Chemistry I | 4 | CHM 1202 | Chemistry II | 4 |
| MFE 1110 | Principles of Manufacturing | 3 | MFE 1210 | Engineering Analysis I | 3 |
| INT 1210 | Engineering Computer Graphics | 3 | ENG 1101 | Intro to Writing for College | 4 |
| USS 1000 | Undergraduate Success Seminar | 2 | HIS 1xxx | HIS 1110, HIS 1121, or HIS 1122 | 3 |
| | | **16** | | | **19** |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| PHY 2411 | University Physics I | 5 | PHY 2412 | University Physics II | 5 |
| PHY 2411L | University Physics Lab I | 0 | PHY 2412L | University Physics Lab II | 0 |
| MTH 3110 | Differential Equations | 4 | MFE 2410 | Engineering Analysis II | 4 |
| MFE 2310 | Statics | 3 | MFE 2420 | Dynamics | 3 |
| MFE 2320 | Computer-Aided-Design | 3 | MFE 2430 | Design of Experiments | 3 |
| ENG 1102 | Writing & Researching the Essay | 4 | MFE 2440 | Computer-Aided-Manufacturing | 3 |
| | | **19** | | | **18** |
| **JUNIOR** | | | **JUNIOR** | | |
| MFE 3510 | Circuit Analysis | 4 | MFE 3610 | Automatic Control Systems | 3 |
| MFE 3520 | Microprocessors | 3 | MFE 3620 | Programmable Logic Controllers | 3 |
| MFE 3530 | Strength of Materials | 3 | MFE 3630 | Manufacturing Processes | 4 |
| MFE 3540 | Material Science & Processes | 4 | MFE 3640 | Machine & Tool Design | 4 |
| MFE 3550 | Thermodynamics & Heat Transfer | 3 | HHP 1xxx | Physical Activity (List A) | 1 |
| | | | ELECTIVE | From General Education List C | 3 |
| | | **17** | | | **18** |
| **SENIOR** | | | **SENIOR** | | |
| MFE 4710 | Measurements & Instrumentation | 3 | MFE 4810 | Design for Assembly & Syst Int. | 3 |
| MFE 4720 | Manufacturing Quality & Economy | 4 | MFE 4820 | Manufacturing Planning, Control | 4 |
| MFE 4730 | Hydraulic & Pneumatics | 3 | MFE 4895 | Senior Design Project II | 2 |
| MFE 4795 | Senior Design Project I | 1 | ELECTIVE | From General Education List C | 3 |
| ELECTIVE | From General Education List B | 3 | xxx.xxxx | Technical/Business Elective | 3 |
| | | **14** | | | **15** |

***Minimum hours needed to obtain a Bachelor of Science in Manufacturing Engineering – 136***

# INDUSTRIAL TECHNOLOGY PROGRAM

## GENERAL INFORMATION

Industrial technology is a field of study designed to prepare technical and/or management oriented professionals for employment in business, industry, education, and government. Industrial technology is primarily involved with the management, operation, and maintenance of complex technological systems, while engineering and engineering technology are primarily involved with the design and installation of these systems.


## TRENDS IN TECHNOLOGY

The pervasive use of technology on a global scale has created a demand for management-oriented technical professionals with an understanding of fundamental technical principles and the practical skills required to apply those principles in the laboratory, manufacturing shop floor, and business office. These individuals must also understand the basic economic and business principles, which guide business and technology. The BS degree program in Industrial Technology has been designed to fulfill these requirements.

Graduates of the program find diverse employment opportunities as production supervisors, information technology technicians, or as industrial sales, marketing, or management profession.

## INDUSTRIAL TECHNOLOGY CURRICULUM OBJECTIVES

The Bachelor of Science degree program in Industrial Technology addresses the need for technical professionals with specialized technical training. To achieve in-depth training in a selected discipline, students can choose from one of two concentrations: Computer Technology and Manufacturing Management. The selection of the concentration is normally based upon individual student interests, skills and career goals with input and guidance by a faculty advisor. The technology core of the curriculum builds upon a foundation of trigonometry and includes components of metals technology and machining principles, occupational safety and health, computer numerical-controlled (CNC) machining, computer aided-design and computer aided manufacturing (CAD/CAM); electrical circuits, digital electronics, microprocessors, programmable logic controllers (PLC), and statistical analysis. Throughout the program, a heavy emphasis is placed upon hands-on laboratory experience and practical applications of the theory gained in the classroom lecture sessions.

## COOPERATIVE EDUCATION EXPERIENCES

A student majoring in Industrial Technology may participate in the Cooperative Education program. All Industrial Technology majors are encouraged to take part in the Cooperative Education Program, which offers students an opportunity to integrate classroom theory with planned periods of practical "real world" work assignments. Each student may spend one to two semesters of his/her academic program working in an approved position. A total of 24 credit hours can be applied towards graduation and is included in the student's transcript under "Earned Hours."

## DEGREE REQUIREMENTS

A total of 128 semester hours are required for the BS degree in Industrial Technology with a concentration in Manufacturing Management or Computer Technology.

## GENERAL EDUCATION REQUIREMENTS

(Min 39-40 hours): Nine (9) of the total forty-one (41) credits apply also to the industrial technology (INT) program requirements; see University General Education Requirements.

***BACHELOR OF SCIENCE IN INDUSTRIAL TECHNOLOGY - Computer Technology Option*** — Marauder Lifestyle Courses: USS 1000 and 1 semester credit from Physical Activity (List A); Marauder Foundation Core Courses: ENG 1100 or ENG 1101, MTH 1750, and HIS 1110, HIS 1121 or HIS 1122; Marauder Foundation Bridge Courses: ENG 1102, 3 hours from Humanities (List B); 6 hours in two disciplines from Social and Behavioral Sciences (List C); 6 hours from Natural and Physical Sciences (List D); MTH 2001, MTH 2501, and ECO 2210;

All Industrial Technology – Computer Technology majors must take the following major requirements: ACC 2210, ACC 2220, BUS 1100, BUS 2200, BUS 2343, CPS 1191, CPS 2215, CPS 2236, CPS 3316, CPS 3320, CPS 3325, INT 1110, INT 1210, INT 2311, INT 2312, INT 2410, INT 2420, INT 2430, INT 3520, INT 3540, INT 3630, INT 4720, INT 4795, INT 4895, MGT 4441, MFE 1110, MKT 3456, MTH 2001, MTH 2501. A grade of "C" or better in these courses is required to earn a major degree in Industrial Technology.

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF SCIENCE IN INDUSTRIAL TECHNOLOGY OPTION IN COMPUTER TECHNOLOGY**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| **FALL SEMESTER** | | | **SPRING SEMESTER** | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE#** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| BUS 1100 | Contemporary American Business | 3 | ENG 1102 | Writing & Researching the Essay | 4 |
| ENG 1101 | Introduction to Writing for College | 4 | INT 1210 | Engineering Computer Graphics | 3 |
| USS 1000 | Undergraduate Success Seminar | 2 | MTH 2501 | Trigonometry | 3 |
| INT 1110 | Engineering Print Reading | 3 | BUS 2200 | Legal Environment of Business | 3 |
| MFE 1110 | Principles of Manufacturing | 3 | HHP 1xxx | HHP Activity (List A) | 1 |
| MTH 1750 | College Algebra | 3 | | | |
| | | **18** | | | **14** |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| CPS 1191 | Computer Science I | 4 | INT 2312 | Circuit Analysis II | 3 |
| CPS 2215 | Internet and Web Essentials | 3 | INT 2410 | Industrial Safety & Health | 3 |
| INT 2311 | Circuit Analysis I | 3 | INT 2420 | Ind. Instrument. & Process Ctrl | 3 |
| MTH 2001 | Probability and Statistics | 3 | INT 2430 | Electronic Devices & Circuits | 4 |
| ELECTIVE | From General Education List D | 4 | ELECTIVE | From General Education List D | 3 |
| | | **17** | | | **16** |
| **JUNIOR** | | | **JUNIOR** | | |
| ACC 2210 | Financial Accounting | 3 | ACC 2220 | Managerial Accounting | 3 |
| CPS 3381 | Prin. of Operating Systems | 3 | CPS 3316 | Computer Networks | 3 |
| CPS 3320 | Database Systems | 3 | CPS 3325 | Java Programming | 3 |
| INT 3520 | Digital Systems | 4 | HIS 1xxx | HIS 1110, HIS 1121, or HIS 1122 | 3 |
| INT 3540 | Programmable Logic Controllers | 3 | INT 3630 | Microprocessors | 4 |
| | | **16** | | | **16** |
| **SENIOR** | | | **SENIOR** | | |
| BUS 2343 | Principles of Management | 3 | INT 4895 | Senior Design Capstone II | 2 |
| INT 4720 | Communication Systems | 3 | MGT 4441 | Labor Management | 3 |
| INT 4795 | Senior Design Capstone I | 2 | MKT 3395 | Sales Management | 3 |
| ELECTIVE | From General Education List C | 3 | ELECTIVE | From General Education List B | 3 |
| ELECTIVE | From General Education List C | 3 | ECO 2210 | Prin. of Microeconomics | 3 |
| | | **14** | | | **14** |

***Minimum hours needed to obtain a Bachelor of Science in Industry Technology – Computer Technology Option – 123***

***BACHELOR OF SCIENCE IN INDUSTRIAL TECHNOLOGY – Manufacturing Management Option*** — Marauder Lifestyle Courses: USS 1000 and 1 semester credit from Physical Activity (List A); Marauder Foundation Core Courses: ENG 1100 or ENG 1101, MTH 1750, and HIS 1110, HIS 1121 or HIS 1122; Marauder Foundation Bridge Courses: ENG 1102, 3 hours from Humanities (List B); 6 hours in two disciplines from Social and Behavioral Sciences (List C); 6 hours from Natural and Physical Sciences (List D); MTH 2001, MTH 2501, and ECO 2210;

All Industrial Technology – Manufacturing Management majors must take the following major requirements: ACC 2210, ACC 2220, BUS 1100, BUS 2200, BUS 2343, BUS 2353, BUS 3331, INT 1110, INT 1210, INT 2311, INT 2312, INT 2320, INT 2410, INT 2420, INT 2460, INT 3510, INT 3530, INT 3540, INT 3550, INT 3610, INT 3620, INT 4710, INT 4730, INT 4795, INT 4895, MGT 4441, MFE 1110, and MKT 3456. A grade of "C" or better in these courses is required to earn a major degree in Industrial Technology.

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF SCIENCE IN INDUSTRIAL TECHNOLOGY OPTION IN MANUFACTURING MANAGEMENT**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| **FALL SEMESTER** | | | **SPRING SEMESTER** | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE#** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| BUS 1100 | Contemporary American Business | 3 | ENG 1102 | Writing & Researching the Essay | 4 |
| ENG 1101 | Introduction to Writing for College | 4 | INT 1210 | Engineering Computer Graphics | 3 |
| USS 1000 | Undergraduate Success Seminar | 2 | MTH 2501 | Trigonometry | 3 |
| INT 1110 | Engineering Print Reading | 3 | HIS 1xxx | HIS 1110, HIS 1121, or HIS 1122 | 3 |
| MFE 1110 | Principles of Manufacturing | 3 | ELECTIVE | From General Education List C | 3 |
| MTH 1750 | College Algebra | 3 | | | |
| | | **18** | | | **16** |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| INT 2311 | Circuit Analysis I | 3 | ACC 2210 | Financial Accounting | 3 |
| INT 2320 | Advanced 3-D Modeling | 3 | BUS 2200 | Legal Environment of Business | 3 |
| MTH 2001 | Probability and Statistics | 3 | INT 2312 | Circuit Analysis II | 3 |
| ELECTIVE | From General Education List B | 3 | INT 2410 | Industrial Safety & Health | 3 |
| ELECTIVE | From General Education List D | 3-4 | INT 2420 | Ind. Instrument. & Process Ctrl | 3 |
| | | | INT 2460 | Applied Statics | 3 |
| | | **15** | | | **18** |
| **JUNIOR** | | | **JUNIOR** | | |
| BUS 2353 | Principles of Marketing | 3 | ACC 2220 | Managerial Accounting | 3 |
| INT 3510 | Materials & Machine Processes | 3 | BUS 2343 | Principles of Management | 3 |
| INT 3530 | Quality Control (SPS/DOE) | 3 | HHP 1xxx | HHP Activity (List A) | 1 |
| INT 3540 | Programmable Logic Controllers | 3 | INT 3610 | Plastic Technology | 3 |
| INT 3550 | Applied Strength of Materials | 3 | INT 3620 | Computer Numerical Control | 3 |
| | | **15** | | | **13** |
| **SENIOR** | | | **SENIOR** | | |
| INT 4710 | Manufacturing Processes | 3 | BUS 3331 | Principles of Finance | 3 |
| INT 4730 | CAD/CAM/CAE | 3 | INT 4895 | Senior Design Capstone II | 2 |
| INT 4795 | Senior Design Capstone I | 2 | MKT 3395 | Sales Management | 3 |
| MGT 4441 | Labor Management | 3 | ELECTIVE | From General Education List C | 3 |
| ELECTIVE | From General Education List D | 3-4 | ECO 2210 | Prin. of Microeconomics | 3 |
| | | **14** | | | **14** |

***Minimum hours needed to obtain a Bachelor of Science in Industry Technology – Manufacturing Management Option – 123***

# DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE

**Arunasalam Rahunanthan, Ph.D.**
**Department Chair**
**Carl C. Jenkins Technology Education Hall**
**Room 111**
**(937) 376-6435**

**Dr. Arunasalam Rahunanthan**
**Program Coordinator**
Clara Henderson Hall
Room 150B
(937) 376-6362

**Associate Professors:** Dr. Deng Cao and Dr. Arunasalam Rahunanthan

**Assistant Professors:** Dr. Gopalakrishnan Krishnasamy, Dr. Manizheh Nafari, and Dr. Bhupendra Paudyal.

**Instructor:** Prof. Latha Chakravarthy

**Computer Classroom Technician:** Mr. Elias Andebrhan

The Department of Mathematics and Computer Science offers majors and minors in the disciplines of Computer Science and Mathematics. In cooperation with the College of Education, the department offers Mathematics at the Adolescent to Young Adult level and Mathematics at the Middle Childhood level.

Majors must fulfill the University General Education Requirements, and the specific requirements for each degree program. Students with majors in education must fulfill the requirements in the department (requirements vary from discipline to discipline).

Credits for students from an accredited institution may be accepted at the discretion of the department.

The curriculum in mathematics and computer sciences offer courses leading to the Bachelor of Science in Mathematics, and Bachelor of Science in Computer Sciences. A minimum of 49 semester hours in mathematics and a minimum of 8 semester hours in computer science are required for the B.S. degree in mathematics (See DEGREE REQUIREMENTS).

Computer Science majors must take a minimum of 45 semester hours of computer science, a minimum of 18 semester hours of mathematics, and minimum of 4 semester hours of Industrial and Engineering Technology from the courses listed under degree

The Department of Mathematics and Computer Science offers a minor in Computational Science that will better prepare students for graduate programs and for careers using simulation and modeling software tools. The minor is offered through a statewide consortium of universities in Ohio which is managed by the Ohio Supercomputer Center. The minor will require students to take at least two courses in Computational Science in other departments in the College of Engineering Science Technology and Agriculture. Finally, the minor requires students to participate in a Computational Science summer internship program.

**MINORS**

***Minor requirements in Computational Science*** — COE 2255, CPS 1192, CPS 3330, CPS 3450, MTH 3310 and a CSI Science or Engineering 3 hour elective. Electives: CPS 2680 or CPS 3465 or MTH 3110.

***Minor requirements in Computer Science*** — A minimum of 15 semester hours in Computer Science including CPS 1000, CPS 1191, CPS 1192, CPS 2271 and CPS 3200; and 9 hours in Mathematics including MTH 2502, and MTH 2503.

***Minor requirements in Mathematics*** — A minimum of 27 semester hours including MTH 2502, MTH 2503, MTH 3001, MTH 3002, MTH 3110, CPS 1191 and one additional mathematics elective.

***BACHELOR OF SCIENCE IN MATHEMATICS*** — Core Courses: ENG 1100 or ENG 1101; MTH 1750 or STEM math option; one course from the list of Social and Cultural Values (SCV) consisting of HIS 1110, HIS 1121, HIS 1122, PSY 1200 or SOC 1105. Bridge Courses: ENG 1102; 3-6 hours from Humanities (List B) **; 3-6 hours in two disciplines from Social and Behavioral Sciences (List C) **; 6 hours including PHY 2411 from Natural and Physical Sciences (List D); USS 1000 and 1 semester credit from Health and Physical Activity (List A). **Six total credits in humanities (List B), including at least 3 credits chosen from His 1110, 1121 or 1122 and six total credits in social science in two disciplines (List C) are required. The six required humanities credits and six required social science credits may be completed through a combination of Core and/or Bridge courses.

All mathematics majors must take the following major requirements: 43 semester hours in mathematics including MTH 2001, MTH 2002, MTH 2502, MTH 2503, MTH 2540, MTH 3001, MTH 3002, MTH 3110, MTH 3520, MTH 3521, MTH 3530, MTH 4120, and MTH 4600. Mathematics majors must also take CPS 1191, CPS 1192, and 6 hours of mathematics electives. A grade of "C" or better in these courses is required to earn a major degree in Mathematics.

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF SCIENCE**
**MAJOR IN MATHEMATICS**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| FALL SEMESTER | | | SPRING SEMESTER | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE#** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| USS 1000 | Undergraduate Success Seminar | 2 | ELECTIVE | From List A | 1 |
| ENG 1101 | Introduction to Writing for College | 4 | ENG 1102 | Writing and Research the Essay | 4 |
| ELECTIVE | From List C | 3 | ELECTIVE | From List B ** | 3 |
| SCV course | HIS 1110/1121/1122/PSY 1200/SOC 1105 | 3 | ELECTIVE | From List C ** | 3 |
| MTH 2500 | Pre-Calculus | 4 | MTH 2502 | Calculus I | 4 |
| | | **16** | | | **15** |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| CPS 1191 | Computer Science I | 4 | MTH 2002 | Probability & Statistics II | 3 |
| MTH 2001 | Probability & Statistics I | 3 | CPS 1192 | Computer Science II | 4 |
| MTH 2503 | Calculus II | 5 | MTH 3530 | Scientific Writing and Research* | 2 |
| MTH 2540 | Foundation in Mathematics | 3 | MTH 3002 | Calculus III | 4 |
| | | | ELECTIVE | From D | 3 |
| | | **15** | | | **16** |
| **JUNIOR** | | | **JUNIOR** | | |
| MTH 3520 | Abstract Algebra l | 3 | MTH 3521 | Abstract Algebra II | 3 |
| MTH 3001 | Linear Algebra | 3 | MTH XXXX | Mathematics Elective | 3 |
| MTH 3110 | Differential Equations | 4 | ELECTIVE | From List B, C, D or math option | 3 |
| PHY 2411 | University Physics w/Lab (List D) | 5 | ELECTIVE | Electives | 6 |
| | | **15** | | | **15** |
| **SENIOR** | | | **SENIOR** | | |
| MTH XXXX | Mathematics Elective | 3 | MTH 4120 | Introduction to Real Analysis | 3 |
| ELECTIVES | Electives | 12 | MTH 4600 | Capstone: Selected Topics in Math* | 3 |
| | | | ELECTIVE | Electives | 7 |
| | | **15** | | | **13** |

***The items denoted with an asterisk (*) meet the Writing Across the Curriculum requirements.***
***Minimum hours needed to obtain a Bachelor of Science in Mathematics – 120***

***BACHELOR OF SCIENCE IN COMPUTER SCIENCE*** — Core Courses: ENG 1100 or ENG 1101; MTH 1750 or STEM math option; one course from the list of Social and Cultural Values (SCV) consisting of HIS 1110, HIS 1121, HIS 1122, PSY 1200 or SOC 1105. Bridge Courses: ENG 1102; 3-6 hours from Humanities (List B) **; 3-6 hours in two disciplines from Social and Behavioral Sciences (List C) **; 6 hours from Natural and Physical Sciences (List D); USS 1000 and 1 semester credit from Health and Physical Activity (List A). **Six total credits in humanities (List B), including at least 3 credits chosen from His 1110, 1121 or 1122 and six total credits in social science in two disciplines (List C) are required. The six required humanities credits and six required social science credits may be completed through a combination of Core and/or Bridge courses.

All computer science majors must take the following major requirements: CPS1000, CPS1110, CPS 1191, CPS 1192, CPS 2271, CPS 3200, CPS 3316, CPS 3320, CPS 3340, CPS 3381, CPS 4210, CPS 4420, CPS 4460, and CPS 4895; 6 semester hours from courses CPS 2215, CPS 2236, CPS 2300, CPS 3300, CPS 3325 CPS 3370, and CPS 3465; 18 semester hours in the following Mathematics courses: MTH 2001, MTH 2501, MTH 2503, MTH 3310, and MTH 3610; and 4 semester hours from Industrial Technology, INT 3520. A grade of "C" or better in CPS courses is required to earn a major degree in Computer Science.

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF SCIENCE**
**MAJOR IN COMPUTER SCIENCE**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| FALL SEMESTER | | | SPRING SEMESTER | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE#** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| ENG 1101 | Introduction to Writing for College | 4 | CPS 1110 | Computer Literacy | 2 |
| USS 1000 | Undergraduate Success Seminar | 2 | CPS 1192 | Computer Science II | 4 |
| CPS 1191 | Computer Science I | 4 | ENG 1102 | Writing and Research the Essay | 4 |
| SCV | HIS 1110/1121/1122/PSY 1200/SOC 1105 | 3 | MTH 2501 | Trigonometry | 3 |
| MTH 1750 | College Algebra | 3 | ELECTIVE | From List C | 3 |
| | | 16 | | | 16 |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| CPS 1000 | Ethics in Computer Science | 1 | CPS 3316 | Computer Networks | 3 |
| MTH 2001 | Probability & Statistics I | 3 | CPS 2271 | Data Structures | 3 |
| CPS XXXX | Computer Science Elective | 3 | MTH 2503 | Calculus II | 5 |
| MTH 2502 | Calculus I | 4 | ELECTIVE | From List A | 1 |
| CPS 3200 | Computer Algorithms | 3 | ELECTIVE | From List B ** | 3 |
| | | **14** | | | **15** |
| **JUNIOR** | | | **JUNIOR** | | |
| CPS 3320 | Database Systems | 3 | MTH 3310 | Numerical Methods | 3 |
| CPS 3340 | Computer Architecture | 3 | MTH 3610 | Discrete Structures | 3 |
| INT 3520 | Digital Systems | 4 | CPS 3381 | Principles of Operating Systems | 3 |
| ELECTIVE | From List C ** | 3 | CPS XXXX | Computer Science Elective | 3 |
| ELECTIVE | From List D | 3 | ELECTIVE | From List B, C, D or math option | 3 |
| | | **16** | | | **15** |
| **SENIOR** | | | **SENIOR** | | |
| CPS 4420 | Software Engineering | 3 | CPS 4895 | Senior Project | 3 |
| CPS 4460 | Advanced Topics | 3 | CPS 4210 | Artificial Intelligence | 3 |
| ELECTIVE | From List D | 3 | ELECTIVE | Electives | 7 |
| ELECTIVE | Electives | 6 | | | |
| | | **15** | | | **13** |

***Minimum hours needed to obtain a Bachelor of Science in Computer Science – 120***

# DEPARTMENT OF MILITARY SCIENCE

**LTC. Samuel Dallas**
**Professor of Military Science**
**Carl C. Jenkins Technology Education Hall**
**Room 142**
**(937) 376-6286/6382**

**Assistant Professor of Military Science**
CPT. Matthew Fleming

**Assistant Professor of Military Science** (Patton Intern) – CPT. Matthew Barber

**Assistant Professor of Military Science** (Patton Intern) – 1LT Albert Jones

**Assistant Professor of Military Science** (Patton Intern) – MSG Geriah McAvin

**Senior Military Instructor** – MSG Jeffrey Davis

**Military Instructor** (ADJ) – MSG Joan Hunter

**Military Instructor** (ADJ) Mr. Steve Harmon

**Recruiting Operations Officer** – Mr. Robert Johnson

**Logistician Vacant** – Human Resource Assistant

The Department of Military Science is a cooperative venture between the United States Army and Central State University and Cedarville University. The program provides a Reserve Officer Training Corps (ROTC) program to full-time students on an optional basis. Satisfactory completion of the program may lead to a minor in Military Science, and a commission as an officer in the United States Army.

The program provides students an opportunity to practice leadership skills necessary in society. The emphasis of the program is on leadership development. Students are challenged to apply accepted leadership theory to practical situations. A theoretical basis of knowledge is developed through attendance in Military Science classes and courses offered in colleges throughout the University.

Army ROTC is a college elective students can try out for up to two years with no obligation. Unlike traditional college programs, Army ROTC gives you a wide range of experiences while you work toward a

degree. You will combine classroom time with hands-on experience, learning skills that are sure to give you an edge over your peers when it comes time to look for a job. ROTC provides students with opportunities to attend demanding active military courses such as: Cultural Understanding and Language Proficiency, Basic Airborne Course, Air Assault School, Combat Diver Qualification Course, Combat Survival Training, and Mountain Warfare Training. By offering such demanding training, ROTC provides students with the ability to test the limits of their mental and physical stamina. Whether

you are planning a career in the Army or the corporate world, Army ROTC is a smart elective course to take. As part of Army ROTC, you will be in the company of a diverse group of individuals with broad interests — those who were presidents of their student governments, captains of their varsity sports teams, club presidents, or members of the National Honor Society. Your studies will include Leadership Development, Military Skills, and Adventure Training.

First and foremost, an Army officer is a leader. The officer plans the work of the organization, assigns tasks to others and sees that the work is accomplished to the highest standard. In that regard, an Army officer is similar to a manager in a corporation. But that is where any comparison to the corporate world ends. Even the most junior officer routinely has 40 or more soldiers working directly under his or her control. In the corporate world it could take decades for an individual to achieve that level of responsibility. Officers do not just issue orders and disappear into the background. They lead by example. An officer must be willing to personally undertake any task that is assigned to a Soldier. The level of integrity and personal conduct required of an officer is quite high — with very good reasons. Officers daily make decisions that involve millions of dollars of resources. Their judgment and skill can mean the difference between life and death for the Soldiers they command. Over the years, three words have become the hallmark of what it is to be an Army Officer. Those three words are Duty, Honor and Country. No matter what their specific duties are, or where they serve, these three words embody what it is to be an Army officer.

We are a people-oriented organization. Consequently, leadership and management skills are essential in our training program. ROTC provides you the opportunity to become a college-educated leader and manager. **You will be employed** when you graduate — employed in an organization that offers competitive medical, dental, housing and retirement benefits. Let's say you decide to move on after a few years and pursue another profession. When you join your friends in the civilian world you will have no problem grasping what they are doing and you will have far greater depth and breadth of experience.

They will admire, even envy your exposure, work and travel experience. Trust us, whatever you decide, the experience you will gain will give you the confidence you need to be a success in college and beyond. You will have the edge because employers respect officer-ship — Believe it!

**TO HELP YOU FINANCE YOUR COLLEGE YEARS, ARMY ROTC** awards scholarships. Army ROTC scholarships pay tuition and required fees, and can be worth as much as $120,000 or more. They are awarded on merit — like academic achievements, extracurricular activities, and personal interviews. Scholarship winners receive a stipend ($300 freshman, $350 sophomore, $450 junior, $500 senior) for each academic month plus an allowance for books and other educational items. ***Contracted Cadets earn a stipend.*** If you are a non-scholarship student, you can still receive the stipend as a contracted cadet during your last two years. If you are selected to receive a scholarship, you will have a commitment to the Army after completing the program. You can fulfill it by either serving part time in the Army National Guard or Army Reserve, or compete for full time service on active duty. The U.S. Army is one of the most culturally diverse organizations in the nation, and Army ROTC is committed to drawing a diverse group of individuals with a broad range of interests. As part of this commitment, Army ROTC offers a limited number of scholarships specifically to those individuals who desire to attend a Historically Black College/University (HBCU).


# DEPARTMENT OF WATER RESOURCES MANAGEMENT

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**Associate Professors:** Dr. DeBonne N. Wishart, Dr. Ning Zhang
**Professor Emeritus**: Dr. Samuel A. Okunade
**Laboratory Technician**: Ms. Adelynn Reeves

The Department of Water Resources Management offers programs in Environmental Engineering (ENE) and Water Resources Management (WRM). In addition to its primary role of offering baccalaureate programs, the department also offers continuing education opportunities for practicing professionals in the field of water resources management and environmental engineering. The department engages in research and in outreach activities to attract high school students to pursue higher education in these fields.

The programs in the department lead to Bachelor of Science degrees in Environmental Engineering and Water Resources Management. They are structured to provide students with the knowledge of diverse aspects of these interdisciplinary fields. An internship is a requirement in environmental engineering and water resources management.

## GENERAL EDUCATION REQUIREMENTS FOR PROGRAMS IN THE DEPARTMENT

The University General Education Requirements apply to the majors in the Department (please refer to the General Education Requirements in the University Course catalog). Students in WRM and ENE automatically fulfill the natural science requirements under general education by taking their major requirements.

## ENVIRONMENTAL ENGINEERING (ENE) PROGRAM –MISSIONS, GOALS, AND PROGRAM EDUCATIONAL OBJECTIVES

The Bachelor of Science degree program in Environmental Engineering is dedicated to undergraduate environmental engineering education and is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (EAC/ABET).

The overarching mission of the program is to prepare engineers who specialize in the field of environmental systems at the baccalaureate level, and who understand how to apply engineering principles to solve environmental problems and harness energy while maintaining the integrity of the ecosystem. ENE program identified five specific program educational objectives (PEOs) to address the local, state, and national opportunities and needs discussed earlier.

The ENE program expects the graduates within a few years of graduation to attain the following:

1. Be employed as practicing engineers in environmental engineering or related fields (civil, chemical, ecological, or agriculture) and satisfy and exceed employers' expectations;
2. Develop professionally through attainment of licensure, or through enrolling in or completing advanced studies in engineering or engineering management;
3. Attain progressive management or leadership positions through professionalism and adherence to engineering code, ethics, and responsibilities;
4. Contribute to sustainable development of civil, process, and industrial infrastructures through natural resource conservation, environmental preservation and protection, and economic and environmental stewardship; and
5. Make a positive impact on the environment, public health, and wellness of global society.

## ENVIRONMENTAL ENGINEERING CURRICULUM

The curriculum relies on a strong foundation in sciences and mathematics by requiring students to take courses in rigorous college physics (calculus-based), chemistry and mathematics to advanced levels of differential equations and linear algebra. The program also promotes holistic development of students through courses in humanities, and in social and behavioral sciences as required in the general education curriculum.

Students take general engineering courses such as Engineering Computer Graphics, Statics, Dynamics, Strength of Materials and other courses from the manufacturing engineering department (MFE). With this set of basic science and engineering courses, the program then provides background in Applied Hydraulics, Wastewater Treatment Systems, Municipal and Hazardous Waste Management, Air Quality Engineering and other engineering-based courses. There is an internship requirement and students engage in a capstone project during the final year. The Mc Lin Center, which houses the WRM Department, has excellent laboratory equipment in the areas of hydraulics, hydrology, water quality, and soils that is essential for the study of environmental engineering.

The department has faculty with expertise in the areas of air quality engineering, hydraulics, hydrology, environmental engineering, water quality, water policy and economics, geography and geology. The uniqueness of the Environmental Engineering (ENE) program at CSU is the availability of interdisciplinary courses within the Water Resources Management (WRM). These courses cover important issues in water, such as policy, socio-economic impact, environmental regulations, Remote Sensing and GIS. The program directly serves the university's land-grant mission by preparing students towards careers in civil engineering and hydrology in Agriculture both in public and private sectors. WRM department has a transfer articulation agreement with Sinclair Community College (SCC) for students to transfer to CSU ENE program at the junior standing after receiving an Associate of Science (A.S.) Degree at SCC. WRM received university approvals to offer a certificate course in Water Resources Management for the Oil and Gas Industry. It is being submitted to the State of Ohio for further review and approval. The certificate is available for WRM and ENE majors.

### Core Competencies for ENE Graduates

The environmental engineering curriculum provides students with the following competencies upon successful completion of the program:

1. Application of mathematics, physics, chemistry, hydraulics, and engineering for finding solutions for environmental problems.
2. Problem-solving skills by using mathematical, logical, analytical and algorithmic constructs.
3. Effective communication with peers as well as the general public through reading, speaking and writing skills.
4. Capability to use technology tools in planning, design, operation, and management of environmental engineering systems and in the assessment of spatially distributed problems using geospatial tools such as GIS and remote sensing.
5. Ability to use appropriate laboratory and field instrumentation needed in environmental engineering work.
6. Understanding and appreciation of the need for accuracy in professional judgment, accountability, engineering ethics, and social responsibility.
7. The necessity to continuously update skills in the environmental engineering profession. The coursework, laboratory experiences, fieldwork, summer internship, and a capstone design project are used to teach these competencies to hydraulic and environmental engineering students. Details are provided below as part of the degree requirements.

## WATER RESOURCES MANAGEMENT (WRM) PROGRAM

The Bachelor of Science in Water Resources Management, a program that was one of the first of its kind in the nation, educates students in the interrelationships of the technical, social, political and economic aspects of the field. The objective of the program is to provide students with educational skills and background necessary for the positions in water resources management in private industry, government, and nongovernmental organizations. The program directly serves the university's land-grant mission by preparing students towards careers in water related fields in Agriculture such as soil and water conservation with the U.S. Department of Agriculture. Water resources management is intertwined with the environmental field and the curriculum offers courses that enable students to gain background in this field as well.

As the population expands and pressure on development increases, the need for water resources management professionals is felt at the state, national and international levels. The program responds to the critical need for water resources professionals who have an understanding of all phases of water resources management within agriculture and municipal sectors. These professionals help to identify the most effective

solutions to water resources management problems, involving both technical and non-technical aspects. The curriculum emphasizes environmental subjects such as soil and water conservation, water chemistry, streams and lakes, and soil and water pollution. Many graduates of the program have progressed further by obtaining graduate degrees in specialized fields such as public works management and water resources /environmental engineering. The curriculum has been enhanced to include water resources management within the industry in general and particularly in shale based oil and gas energy development.

Two options are available for those students interested in pursuing a minor in related fields. A minor in Water Resources Management is designed for students from other areas who desire knowledge in the field as it pertains to their major. In collaboration with Sustainable Agriculture, Biology and Chemistry of the Department of Agricultural and Life Sciences, Water Resources Management also offers an interdisciplinary minor in Environmental Science. This minor will be particularly helpful to students in biology, chemistry and water resources management seeking a career in environmental fields.

**MINORS**

***Minor in Environmental Science*** — Requirements for this minor include 26 credit hours of core courses BIO 1500, 3500 (7 Credit hours); CHM 2200, 2401, 2402 (12 credit hours) WRM 2200, and 3330 (7 credit hours) and from elective courses BIO 2050, 2650, 4100, 4200; CHM 4200, 4300; GEL 2205; MTH 2001; WRM 3306, 3308, 3370, and 4470 Students are expected to familiarize themselves with the prerequisites required for each course. A grade of "C" or better is required.

***Minor in Water Resources Management*** — Coursework for the minor includes 14 credit hours of core courses WRM 2200, 3330, 3335, 4402 and a minimum of 6 credit hours of elective courses from other WRM courses. Students are expected to familiarize themselves with the prerequisites required for each course. A grade of "C" or better is required.

***Minor in Nuclear Engineering*** **–** four (4) Nuclear Engineering courses (12 hours), and a NUE practicum (3 hours), while using two (2) additional courses (6 hours) to draw on current courses in the disciplines of science, mathematics, computer science, manufacturing engineering, environmental engineering, industrial technology, and business administration for a total of 21 semester hours beyond the student's requirement in the major.

***BACHELOR OF SCIENCE IN ENVIRONMENTAL ENGINEERING —*** ENG 1100 or ENG 1101, ENG 1102; USS 1000 (2 credit hours); 12 credit hours from Social and Behavioral Sciences and Humanities Electives with two courses per each including HIS 1110| HIS 1121| HIS 1122| PSY 1200| SOC 1105 and WRM 3370.

All students must take the following major requirements: ENE 2200, 3305, 3309, 3315, 3320, 3325, 4405, 4415, 4430, 4435, 4440, 4496 and 4498 (total of 34 credit hours); WRM 3308 (3 credit hours), Internship ENE 4596 (3 credit hours); and coursework from related areas with following distribution: INT 1210 (3 credit hours), INT 3650 ( 3 credit hours), MFE 1210, 2310, 2420, 3530, 3550 (15 credit hours); CHM 1201, 1202 (8 credit hours); GEL 1101 (4 credit hours); PHY 2411 and 2412 (10 credit hours); MTH 2001, 2502, 2503, 3002, 3110 (19 credit hours) and BIO 2650 (4 Credit Hours). Students must earn a grade of "C" or better in their ENE courses.

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF SCIENCE**
**MAJOR IN ENVIRONMENTAL ENGINEERING**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements, and any Special Requirements for the above degree.

| FALL SEMESTER | | | SPRING SEMESTER | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE#** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| CHM 1201 | General Chemistry I | 4 | CHM 1202 | General Chemistry II | 4 |
| ENG 1101 | Introduction to Writing for College | 4 | ENG 1102 | Writing and Research the Essay | 4 |
| USS 1000 | Undergraduate Success Seminar | 2 | MTH 2001 | Probability & Statistics I | 3 |
| INT 1210 | Engineering Computer Graphics | 3 | MTH 2503 | Calculus II | 5 |
| MTH 2502 | Calculus I | 4 | | | |
| | | **17** | | | **16** |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| ENE 2200 | Intro to Environ Engineering | 3 | INT 3650 | Surveying | 3 |
| CORE | HIS 1110\| 21\|22\| PSY 1200\| SOC 1105 | 3 | MFE 1210 | Engineering Analysis I | 3 |
| MFE 2310 | Statics | 3 | MFE 2420 | Dynamics | 3 |
| MTH 3110 | Differential Equations | 3 | GEL 1101 | Physical Geology | 4 |
| PHY 2411 | University Physics I w/ lab | 5 | PHY 2412 | University Physics II w/ lab | 5 |
| | | **17** | | | **18** |
| **JUNIOR** | | | **JUNIOR** | | |
| ENE 3305 | Fluid Mechanics and Hydraulics | 3 | ENE 3315 | Air Quality Engineering | 3 |
| ENE 3309 | Water Chemistry | 3 | ENE 3320 | Engineering Hydrology | 3 |
| MFE 3530 | Strength of Materials | 3 | ENE 3325 | Groundwater Hydraulics | 3 |
| MFE 3550 | Thermodynamics & Heat Transfer | 3 | MTH 3002 | Multivariate Calculus | 4 |
| WRM 3370 | Introduction to GIS (used for List C) | 3 | BIO 2650 | Microbiology | 4 |
| | | **15** | | | **17** |
| **SENIOR** | | | **SENIOR** | | |
| ENE 4415 | Water Supply | 3 | | | |
| ENE 4440 | Environmental Prof. Seminar | 1 | ENE 4405 | Applied Hydraulics | 3 |
| ENE 4596 | Internship ENE | 3 | ENE 4430 | Wastewater Treatment Systems | 3 |
| ENE 4496 | Senior Capstone Design Project I | 1 | ENE 4498 | Senior Capstone Design Project II | 2 |
| ELECTIVE | From General Education List B\|C | 3 | WRM 3308 | Water and Environmental Law | 3 |
| ENE 4425 | Solid and Hazard. Waste Mgmt. | 3 | | | |
| | | **14** | | | **14** |

***Minimum hours needed to obtain a Bachelor of Science in Environmental Engineering – 128***

***BACHELOR OF SCIENCE IN WATER RESOURCES MANAGEMENT*** — ENG 1100 or ENG 1101, ENG 1102; MTH 1750 or STEM MTH; USS 1000; HHP 1101-1121; 12 credit hours from Social and Behavioral Sciences and Humanities Electives with two courses per each including HIS 1110| HIS 1121| HIS 1122| PSY 1200| SOC 1105.

All students must take the following major requirements: WRM 2200, WRM 3302, WRM 3308,WRM 3310, WRM 3330, WRM 3335, WRM 3340, WRM 3370, WRM 4402, WRM 4470, WRM 4495 (total of 33 credit hours), ENE 3309, WRM 4596 (Internship - 3 credit hours); electives from WRM|ENE|AGR|BIO (a total of 20 credit hours with a minimum of 10 credit hours from WRM electives); and coursework from related areas: BIO 1500, BIO 2050 (7 credit hours); CHM 1201, CHM 1202 (8 credit hours); GEL 1110, GEL 2205 (6 credit hours); MTH 2001, MTH 2500|2501 (7|6 credit hours); PHY 2611, PHY 2612 ( 8 credit hours). Students must earn a grade of "C" or better in their WRM courses.

**SUGGESTED CURRICULUM FOR THE DEGREE, BACHELOR OF SCIENCE MAJOR IN WATER RESOURCES MANAGEMENT**

The curriculum below is to be used in consultation with an academic advisor. The student must be familiar with the University requirements, the General Education Requirements and any Special Requirements for the above degree.

| FALL SEMESTER | | | SPRING SEMESTER | | |
|---|---|---|---|---|---|
| **COURSE #** | **TITLE** | **CREDIT HRS** | **COURSE#** | **TITLE** | **CREDIT HRS** |
| **FRESHMAN** | | | **FRESHMAN** | | |
| ENG 1101 | Introduction to Writing for College | 4 | BIO 1500 | Environmental Science w/ lab | 4 |
| USS 1000 | Undergraduate Success Seminar | 2 | ENG 1102 | Writing and Research the Essay | 4 |
| CORE | HIS 1110\| 21\|22\| PSY 1200\| SOC 1105 | 3 | MTH 2001 | Probability & Statistics I | 3 |
| MTH 1750 | College Algebra | 3 | MTH 2501 | Trigonometry | 3 |
| WRM 2200 | Introduction to WRM | 3 | ELECTIVE | From General Education List B\|C | 3 |
| | | **15** | | | **17** |
| **SOPHOMORE** | | | **SOPHOMORE** | | |
| CHM 1201 | General Chemistry l | 4 | ELECTIVE | From General Education List C | 3 |
| BIO 2050 | Biology of the Environment w/ lab | 3 | CHM 1202 | General Chemistry II | 4 |
| HHP 1xxx | HHP Activity (List A) | 1 | PHY 2612 | College Physics II | 4 |
| PHY 2611 | College Physics I | 4 | WRM 3302 | Water Resources Policy | 3 |
| ELECTIVE | From General Education List B | 3 | WRM 3308 | Water and Environmental Law | 3 |
| | | **15** | | | **17** |
| **JUNIOR** | | | **JUNIOR** | | |
| ENE 3309 | Water Chemistry | 3 | GEL 2205 | Environmental Geology | 3 |
| GEL 1110 | Oceanography | 3 | WRM 3310 | Streams and Lakes | 3 |
| WRM 3311 | Water Resources Economics | 3 | WRM 3335 | Irrigation and Drainage | 3 |
| WRM xxxx | WRM\|ENE Elective 1 | 1 | WRM 4596 | Internship (Summer Term) | 3 |
| WRM3370 | Introduction to GIS | 3 | WRM 3330 | Soil and Water Conservation | 4 |
| WRM xxxx | WRM\|ENE\|AGR\|BIO Elective 1 | 2 | | | |
| | | **15** | | | **16** |
| **SENIOR** | | | **SENIOR** | | |
| WRM xxxx | WRM\|ENE Elective 2 | 1 | WRM 3340 | Hydrometry | 2 |
| WRM xxxx | WRM\|ENE\|AGR\|BIO Elective 2 | 3 | WRM 4470 | Applied Remote Sensing | 3 |
| WRM4402 | Urban Water Problems | 4 | WRM 4495 | Senior Capstone Project in WRM | 2 |
| WRM xxxx | WRM\|ENE\|AGR\|BIO Elective 3 | 4 | WRM xxxx | WRM\|ENE\|AGR\|BIO Elective 4 | 3 |
| | | **12** | | | **13** |

***Minimum hours needed to obtain a Bachelor of Science in Water Resources Management - 120***

# COURSE DESCRIPTIONS

**COURSE NUMBERING SYSTEM**
Courses numbered from 1000-2099 are introductory courses or courses normally taken in the freshman and sophomore years. Courses numbered from 3000-3099 are normally taken in the junior and senior years. Courses numbered from 4000-4099 are senior-level courses.

**PREREQUISITES**
Students must make certain that they have the necessary prerequisites for each course. Failure to do so may result in inadequate preparation and thus failure of the course. Prerequisites are indicated at the end of each course description.

NOTE: The University reserves the right to cancel courses that have insufficient enrollment.

The curriculum may also be subject to change as a result of ongoing curricular revisions and program development.

Please consult the University Web site (www.centralstate.edu) for the most recent course descriptions and class schedules.

## ACCOUNTING

**ACC 2210. Financial Accounting (I, II; 3)** An introduction to the fundamentals of accounting that includes the accounting cycle for service and merchandising entities. Emphasis is on accounting language, transaction analysis and financial reporting of proprietorships, partnerships and corporations. *Prerequisite: BUS 1100. Equivalent to TAG OBU001.*

**ACC 2220. Managerial Accounting I (II; 3)** Use of accounting data, concepts and techniques for planning and controlling business operations. Cost flow and cost behavior as used in decision making. *Prerequisite: ACC 2210. Equivalent to TAG OBU002.*

**ACC 3301. Intermediate Accounting I (I; 3)** The course develops the theoretical foundation of accounting and the conceptual framework for processing and reporting financial data. Primary emphasis is placed on the asset side of the balance sheet. *Prerequisite: ACC 2220.*

**ACC 3302. Intermediate Accounting II (II; 3)** Continued study of underlying accounting theory and practice related to processing and reporting accounting information. Primary emphasis is placed on the equity side of the balance sheet to include liabilities, long-term debt and owner equity accounts. *Prerequisite: ACC 3301.*

**ACC 3330. Advanced Accounting (I; 3)** A study of advanced topics in financial accounting to include the treatment of accounting for consolidations, mergers, partnerships, joint-ventures and receiverships, international accounting, non-profit and governmental accounting, etc. *Prerequisite: ACC 3302.*

**ACC 3340. Cost Accounting (I; 3)** The study of accounting for manufacturing operations. It includes the analysis of cost systems as they relate to planning, control and reporting to facilitate decision-making. *Prerequisite: ACC 2220.*

**ACC 3360. Accounting Information Systems (II; 3)** This course exposes students to the nature and applicability of accounting information systems. It includes the consideration of how accounting systems relate to the basic concepts of information system theory. Accounting applications are discussed with an emphasis on system control and design. The computer's role in processing and reporting information is covered as well. *Prerequisite: ACC 3301.*

**ACC 4420. Federal Income Tax (I; 3)** A study of federal income tax as applied to individuals, partnerships and corporations. Includes discussion of current and proposed changes in tax legislation. *Prerequisite: ACC 3301.*

**ACC 4430. Auditing (II; 3)** The study of procedures and practices in the auditing process to attest to the fair representation of financial data. Includes the study of control and procedures to safeguard assets. *Prerequisites: ACC 3330.*

**ACC 4450. Special Problems in Accounting (I, II; 1-3)** Independent study in accounting. Includes assigned readings, research projects and conferences may be included. Open to transfer students with insufficient hours from transferred courses. Accounting majors only. *Prerequisite: Permission of instructor.*

**ACC 4464. Internship in Accounting (I, II, III; 1-6)** The purpose of the internship is to provide students an opportunity to gain practical experience in

the area of specialization. Eligible students must have completed their sophomore year (a minimum of 60 semester hours) of which a minimum of 20 hours must be from the business area. Generally, the student must have at least a 2.6 cumulative GPA and demonstrated potential in the major field. Consult Department Chair and Career Services to receive business internship application package. A maximum of 6 hours may be earned. Registration is needed before entering an internship program. Accounting Internship not available to students participating in the Cooperative Education Program. *Prerequisite: Accounting major and junior or senior standing.*

**ACC 4495. Seminars in Accounting (II; 3)** Practical application and review of prior course work through the discussion of current problems and trends in accounting; supplemented by individual/team research in selected areas of significance. *Prerequisites: ACC 3330*

## AFRICANA STUDIES

**AFS 1200. Introduction to Africana Studies (I, II; 3)** Introduction to the multi-subject and multidisciplinary field of Africana Studies (aka, Black Studies, African, Afro-American Studies, Pan-African Studies). Students will acquire the following skills sets, competencies and knowledge base: critical understanding of U.S. society, critical reflection on and understanding of cultural demographics across geographies; international/global awareness; interdisciplinary problem solving or research; appreciation of aesthetical, economical, historical, psychological, political, and social dynamics of African descent populations, including the interrelations of Africans and African Diaspora communities and cultures.

## AGRIBUSINESS

**AGB 2300. Introduction to Agribusiness (I; 3)** This course provides a comprehensive overview into the fundamentals and applications of agribusiness and discusses the broad spectrum of the agribusiness world. The course delves into commodity marketing, food and fiber processing channels, farm management, agricultural policy, and employment opportunities in business arenas where agriculture is the primary focus. *Prerequisite: BUS 1100.*

**AGB 3220. Agricultural Marketing (I; 3)** This course focuses on the fundamentals of the agricultural marketing system and the market for farm products. Students will be introduced to methods of pricing, promotion, marketing planning, purchasing, and international marketing in the agricultural sector. In addition, the course will explore the linkages between supply and demand of agricultural products as well as the role played by government agencies and cooperatives in agricultural marketing. *Prerequisite: BUS 2353, AGB 2300.*

**AGB 3240. Farm Management (II; 3)** The focus of this course is on examining the general farm business management concepts, including farm business records, economic concepts in decision making in farm planning, farm organization and farm management. The course will also compare management concepts which apply to the agricultural sector. *Prerequisite: BUS 2353, AGB 2300, ECO 2210.*

**AGB 3415. Agricultural Finance (I; 3)** The objective of this course is to examine the acquisition and use of capital in agriculture. Topics covered include financial reports and analysis, liquidity and risk; use of credit and other financial alternatives to acquire control of farm resources; credit sources and acquisition of capital; investment analysis; and decision-making. *Prerequisite: BUS 3331, AGB 2300.*

**AGB 4445. Agricultural Economics (I; 3)** The objective of this course is to apply microeconomic tools and concepts to explain the agricultural sector within an economic system. The course exposes Students to economic principles and concepts that emphasize the use of basic economic concepts such as profit maximization, cost minimization, elasticity's, one-input and two input production, resource substitution, demand and supply to the production and distribution of agricultural commodities. *Prerequisite: ECO 2220, AGB 2300.*

**AGB 4745. Agricultural Policy (II; 3)** This capstone course centers on the current policy issues and policy instruments from the U.S. and international perspective. The course discusses the economic characteristics and problems of agriculture, evolution and significance of key agricultural and food policies, the interaction between climate change and agricultural production, the international dimension and domestic policies that affect agriculture. The course will also focus on welfare analysis related

to application of welfare criteria and economic analysis to agriculture, food and rural development problems and policies. The course will also discuss international institutions, such as the World Trade Organization (WTO), which support food and agricultural trade. *Prerequisite: ECO 2210, AGB 4445, Senior Standing.*

## AGRICULTURAL EDUCATION

**AGED 3100 – The Adult Classroom** (II, 3) In this course, you will discover how to use the newest educational methods to create a student-centered classroom that's perfectly suited for adult learners. The course will address strategies for connecting with adult learners in a variety of learning environments. The course will prepare Agricultural Education students for experiences as an extension educator. Students will be required to participate in field experiences and assignments. Pre-Requisites: AGR 1150 or equivalent course and EDU 2500

**AGED 3110 – Agriscience Foundations** (I, 3) This course is designed for the pre-professional development of historical, philosophical and sociological perspectives for successful teaching and learning in Agriscience. Students will have the opportunity to experience diverse school, community, and college settings, and to explore the various options in agriscience education. This course will include required participation in field experiences and assignments. Pre–Requisites: AGR1150 and EDU 2500.

**AGED 3115 - Addressing Diverse Populations in Agriculture (I, 3)** The course will focus on the increasingly more diverse populations of students in Agriculture. The course will provide perspective and insight to understand the needs and behaviors of a broad range of students and help develop techniques for working effectively with them. Students will be required to participate in field experiences and assignments. Pre-Requisites: AGR 1150 or equivalent course and EDU 2500

**AGED 4100 – Methods of Teaching Agriculture Education** ( I, 3 ) The methods course will focus on designing curriculum, planning, and delivering lessons, building and developing agriscience programs in public schools. Students will understand the teaching and learning process by teaching their peers created lessons, and assessing the learning. Pre-requisites: AGR 1150, or equivalent course, AGED 3110 and admission to the College of Education

**AGED 4110 -Student Leadership Organizations** (II, 3) This course provides students with the organizational and historical understanding to be able to organize, manage, coordinate, deliver, and evaluate co-curricular, educational programs in student development and leadership. The roles and responsibilities of advisors for student organizations as well as practical and motivational aspects of experiential learning will be included. Student will be required to participate in field experience and assignments. Pre-requisites: AGR 1150 or equivalent course, AGED 3110 and admission to the College of Education.

## AGRICULTURAL SCIENCES

**AGR 1150. Introduction to Sustainable Agriculture (I, II, III; 3)** This course introduces conservation techniques for the production of food, fiber and other plant and animal products using farming techniques that protect the environment, public health, human communities and animal welfare. Both local and global issues of agricultural and food production sustainability will be explored from environmental, social, political and economic aspects. Three lectures per week. Course may be taught online. *Prerequisite: None.*

**AGR 1220. Horticulture (II, III; 4)** This course introduces the basic principles and practices of horticulture including the structure, development, growth, distribution and utilization of fruits, vegetables, and ornamental plants. Focus will be on plant response to environmental conditions and sustainable management techniques. Three, one hour lectures and one, three hour lab per week. *Prerequisite: None.*

**AGR 1250. Principles of Precision Agriculture (I; 3)** This course introduces the basic principles and practices of precision agriculture including the history, applications, terminology, platforms, data, software and associated components available for use to improve yield and sustainability in agriculture systems. Career opportunities in the precision agriculture field will be explored. Three, one hour lectures per week. *Prerequisite: None.*

**AGR 2150. Introductory Animal Science (I; 4)** An introduction to the field of animal science: Students will be

exposed to fundamental information on comparative functional anatomy and physiology of livestock, poultry and companion animals. Emphasis will be placed on basic knowledge and its practical utility central to animal health and the use of animals for food production. The class meets three days a week and a three hour lab. *Prerequisite: BIO 1802.*

**AGR 2340. Careers in Sustainable Agriculture (I; 1)** This course introduces students to career choices in sustainable agriculture through highlighted speakers. Students will interactively discuss the pros and cons of various careers and the required skill sets and level of education for each. Students will also begin development of their professional resumes for future application to internships and other avenues of employment. One hour per week. Required of Sustainable Agriculture majors. *Prerequisite: Sophomore standing, Sustainable Agriculture major.*

**AGR 2350. Community Agriculture (II, III; 3)** This course introduces the social, economic and ecological foundations of civic agriculture and sustainability. Topics will include community based food systems, supply chains, urban agriculture, food deserts and farmer markets. Students are expected to engage in a public problem-solving situation involving agriculture and feeding or nutrition/health programs. There is a service learning component to this course and all students are expected to participate in provided opportunities for at least 10 documented hours outside of the scheduled lecture time. *Prerequisite: AGR 1150.*

**AGR/WRM 2450. Soil Science (I, II, III; 4)** This course introduces students to soils; their formation, classification and survey. It covers physical, chemical, and biological characteristics; soil management and its role in crop production. Lab is required as part of the four hour course credit. Students are to register for both the course and laboratory. Three hours lecture and two lab contact hours. *Prerequisite: CHM 1202, PHY 2612, BIO 1500 or permission of the instructor.*

**AGR/INT 3120. Agriculture Machines and Mechanization (I; 4)** This course introduces students to mechanization in agriculture which involves selection, basic design, operation, maintenance and management of machinery and power systems typically used in the agriculture field operations and in production. The course also provides an overview of precision agriculture and sensors, GPS and real time kinematic GPS, remote sensing technologies, and computer guided delivery systems for precise and targeted delivery of irrigation water, fertilizers, and pesticides. Course in particular introduces agricultural power and machinery (engines, power transmissions including hydraulics, tillage machinery, calibrations, and harvesting machines), agricultural mechanization for improved agricultural materials handling, pest control applications, agricultural electrification including (circuits, motors, controls) and agricultural structures plans and constructions. Three hour lecture and two lab contact hours per week. *Prerequisite: INT 1210, AGR 1150, AGR 1250 and MTH 2501*

**AGR 3250. Grain Crops (I; 4)** This course presents a study of the history, adaption, and distribution of cereal, forage, and miscellaneous crops around the world with emphasis on botany, physiology and sustainable crop production. Major cereal grain crops such as corn, wheat, rice, barley, sorghum, millet, triticale, rye and oats; grain legumes such as soybean and black eyed pea; and pseudo grains such as amaranth and quinoa will be emphasized. This class will teach the production principles of grain crops; postharvest handling; utilization options including food, feed and biofuel; and international trade. Three, one hour lectures and one, three hour lap per week. *Prerequisite: AGR 3330.*

**AGR/WRM 3308. Environmental Law (II; 3)** A case by case study of state and federal legislation relative to water use. Federal laws relating to water and environment; Land use legislation as it impacts the management of water resources and environment is also considered. *Prerequisites: WRM 2200 or AGR 1150 or permission of the instructor.*

**AGR/WRM 3330. Soil and Water Conservation (II; 4)** Hydrological processes in agricultural fields - rainfall, infiltration, evaporation, evapotranspiration and runoff; Ground Water Processes; Water conservation practices; Soil erosion due to rainfall, its effect on agricultural productivity and water quality-estimating soil loss from agricultural lands using Agriculture Research Service (ARS-USDA) models -

Universal Soil Loss Equation (USLE) and its revisions; Practices to mitigate soil erosion; Design of grassed waterways, terraces and conservation structures; Wind erosion -estimation using ARS-USDA models and its mitigation; An examination of the federal, state and local organizations which carry out soil and water conservation programs. Field experience includes on-site observation of soil and water conservation practices. Three hour lecture and one hour lab/field work. *Prerequisites: MTH 1750 and WRM 2200 or AGR 1150.*

**AGR/WRM 3335. Irrigation and Drainage (I; 3)** A first course in the study of irrigation and drainage and practices. Soil structure, soil moisture processes and infiltration; evapotranspiration processes and their applications in irrigation and drainage; Models for evapotranspiration and introduction to irrigation scheduling; Irrigation and drainage practices in different parts of the world; Introduction to on farm and main systems in large scale irrigation projects. Water control and distribution in large scale systems. Sprinkler irrigation for non-agricultural purposes and the on-site observation of irrigation and drainage systems in the area. *Prerequisites: MTH 1750 and WRM 2200 or AGR 1150.*

**AGR 3450. Agriculture Extension (II; 3)** This course presents different forms of cooperative extension work in agriculture. Students will explore agricultural non-formal education, extension, and leadership. Oral and written communication will be stressed as students design educational training programs and professional presentations. *Prerequisite: AGR 2350.*

**AGR 4350. Principles of Integrated Pest Management (I; 4)** This course introduces the principles and practices of Integrated Pest Management (IPM): Concepts, principles, development and application of IPM. IPM constitutes a series of pest control tactics and strategies toward more sustainable agriculture, natural resources, and urban and rural health and well-being. Three hours of lecture and one, three hour lab per week *Prerequisite: AGR 3250 and AGR 3330.*

**AGR/WRM 4406. Agricultural Development (I; 3)** The role of agriculture in the economic development in the world. The course examines theories of agricultural growth and agriculture policy issues, with extensive use of case studies. Emphasis will be placed on the use of economic theory and its application to specific problems in the field of agriculture. *Prerequisite: WRM 2200 or AGR 1150 or permission of the instructor .*

**AGR/WRM 4420. Irrigation Systems Design (II; 4)** An applied course in the design, of on-farm irrigation systems. Advanced evapotranspiration modeling and irrigation scheduling; Design and operational principles of surface, sprinkler and drip irrigation systems; Water losses in irrigation systems and the definitions of various efficiencies associated with on-farm and main irrigation systems. Hydraulic structures associated with distribution of water systems. On-farm application equipment selection and maintenance. Irrigation system performance and irrigation water management impacts on design; Introduction to irrigation water quality. Field visits to sprinkler irrigation systems in the area. *Prerequisites: WRM/AGR 3335 or permission of the instructor.*

**AGR/WRM 4425. Agricultural Drainage Systems Design (II; 4)** An applied course in the design, construction and maintenance of drainage systems for agricultural fields. Surface drainage systems layout and design. Design of hydraulic structures associated with surface drainage systems - chutes, drops, outlet structures and culverts. Surface drainage systems in irrigated areas. Sub-surface system design principles. Steady state and unsteady state theories of tile drainage. Introduction to analysis of oxygen transport in root zone and the effect of submergence. Salt balance and water quality issues in subsurface drainage. System layout, construction materials and methods. Design of structures associated with subsurface drainage systems. Cost recovery of drainage systems and maintenance issues. Field visits to drainage systems in the area. *Prerequisite: WRM/AGR 3335or permission of the instructor.*

**AGR 4430. Topics in Sustainable Agriculture (On Demand; 3)** This course is designed to present an in-depth study of topics not normally covered in other agriculturally related courses. This course meets for three hours per week. The topics selected will be dependent on the needs of the student. *Prerequisite: permission of the instructor.*

**AGR 4500. Internship in Sustainable Agriculture (I, II, III; 2)** For this non-formal experience, students will work with a faculty mentor at Central State University directly, or may fulfill this requirement by doing an off-campus internship or job-shadowing experience. For the latter option, the student will work with a CSU faculty mentor during and upon return to campus to prepare and present a written and oral presentation for credit. Course meets minimum of four contact hours per week. Required for the major in sustainable agriculture. *Prerequisite: sophomore standing and permission of the instructor.*

## ART

**ART 1001. Fundamentals of Design I (I; 3)** An introductory course designed to explore the basic principles and elements of art and design. The exercises will emphasize black and white compositions.

**ART 1002. Fundamentals of Design II (II; 3)** A second level design course intended to explore the basic principles and elements of art and design. The exercises will emphasize color compositions. *Prerequisite: ART 1001.*

**ART 1101. Beginning Drawing I (I; 3)** An introductory drawing course designed to expose the student to a variety of approaches and media used in creative drawing.

**ART 1102. Beginning Drawing II (II; 3)** A follow-up course to introductory drawing. Increased complexity of drawing assignments and emphasis on the spatial element of visual art will be experienced.

**ART 1110. Ancient and Early European Art History (I, II; 3)** A survey of visual arts from prehistoric times through the Gothic Art.

**ART 1120. Later European Art History (I, II; 3)** A study of art of the Renaissance and Post-Renaissance with attention to the influences of and differences among the art of the Renaissance, Mannerism, Baroque, Rococo and the Modern World.

**ART 1200. Introduction to Photography (I, II; 3)** An introductory course in photography designed to convey proper picture-taking techniques through the study of photographic composition. Students will also learn to manipulate and output digitized photographic images utilizing industry standard image processing software.

**ART 1210. Introduction to Art (I, II; 3)** An approach to the understanding and enjoyment of art involving analysis of media and the elements and principles of visual organization. The course also surveys styles reflecting diverse cultural attitudes. Exposure to many works of art will be included.

**ART 1320. Introduction to Art Education (I; 3)** This course introduces the student to the profession of teaching art education. The class content consists of the history of art education, discipline-based art education, and multicultural art electronic media. Students will learn to use industry-standard drawing and image processing software.

**ART 1415. Art for Early Childhood Education (I, II; 2)** This course introduces the student to the four components of art education: Art History, Art Criticism, Aesthetics and Art Appreciation. Art production, discipline-based art education, multicultural art education and exploration with suitable two-dimensional and three-dimensional materials for art production for kindergarten (early childhood) will be emphasized. Technology and internet use will be integrated for classroom research. The student will produce a professional notebook consisting of three sections emphasizing the following: art education readings/summaries, art lessons and activities and art history readings/summaries on artists. Classroom observation is required.

**ART 1421. Art Education for Teachers (II; 3)** This course introduces the student to four components of art education: (1) art production, (2) art history, (3) art criticism, and (4) aesthetics/art appreciation. Art production, discipline-based art education, and exploration with suitable two-dimensional and three-dimensional materials for art production for kindergarten - 12th grades will be emphasized. Technology and internet use will be integrated for classroom research. The student will produce a professional notebook consisting of the four components of art education using technology, the internet and library for research tools.

**ART 1422. Secondary Art Education (I; 3)** This course introduces the student to further experimentation and exploration with materials and methods for art education. It includes emphasis on three-dimensional design and professional art education literature. Technology and internet use will be

integrated for classroom research. The student will read, write about and discuss art education theory and educational psychology, create art, and define and identify pedagogical approaches for the teaching of art. Teaching, producing one art lesson in an urban public school, and classroom observation are required.

**ART 1523. Creative Art Teaching (II; 3)** This course introduces the student to producing a rubric for an academic teaching year. National and state of Ohio content standards will be the guiding format for the production of the rubric. The rubric will consist of the following: (1) student's aim and rationale for teaching the units, (2) unit themes, (3) scope and sequence of art activities, (4) day-to-day lesson plans, (5) supportive art education theory, (6) adapted design for classroom demographics (diversity/challenged and gifted students), (7) materials and safety, and (8) the list of professional references. Use of technology and the internet will be integrated for classroom research.

**ART 2010. Introduction to Two-Dimensional Computer Art (I; 3)** Beginning-level course designed for students with very little or no prior knowledge of computers or their graphic applications. Students will acquire basic computer skills and be introduced to the creative possibilities and applications of two-dimensional computer graphics and electronic media. Students will learn to use industry-standard drawing and image processing software.

**ART 2020. Image Processing for Artists (II; 3)** This course builds on concepts learned in ART 2010. In addition to the continued development of skills in image processing for presentations and graphic design, students will explore advanced creative possibilities that will add depth to their visual foundations. *Prerequisite: ART 2010.*

**ART 2100. Figurative Drawing and Sculpture (II; 3)** This course introduces the study of the human figure in two-dimensional and three-dimensional form. This course will employ theories and techniques in drawing and sculpting realistic interpretations of the human figure through observation.

**ART 2130. Arts of Africa (I, II; 3)** This course is a general survey of the arts of Africa with emphasis on the visual and plastic arts. Supplemental information will be covered on music, dance, drama, and other cultural influences.

**ART 2140. African American Art History (II; 3)** This is a course that surveys the origin and development of African American art and artists. Studies will cover various media, processes and techniques used by the artists. Attention is given to the subject matter and content in the work of African American artists from a social, cultural and educational point of view.

**ART 2200. Figure Drawing and Painting I (I, II; 3)** This course explores technical experiences in oil painting while practicing sustained drawing from the figure. Emphasis will be placed on traditional painting techniques utilizing the live model.

**ART 2400. Beginning Ceramics (I, II; 3)** An introduction to the use of clay as a creative material for personal expression. The course will emphasize the basic concepts of wheel throwing, hand construction and glazing of clay forms.

**ART 3010. Computer Presentation Graphics (I; 3) In** this course students will learn to research, organize and prepare visual presentations using computer graphics and animations. *Prerequisite: ART 2010.*

**ART 3020. Computer Desktop Video for Artists (II; 2)** Students will learn how to create presentations by mixing editing. *Prerequisite: ART 2010.*

**ART 3061. Graphic Design I (I; 3)** This course covers advertising theory, techniques and use of studio equipment, safety practices, and projects geared toward concept-thinking in advertising design.

**ART 3062. Graphic Design II (II; 3)** This course continues to build on concept-thinking and visual resolution learned in ART 3061. In addition, students will explore typography and basic page layout.

**ART 3065. Introduction to Illustration (II; 3)** An introductory course in illustration that allows the student to devote time to studying the fundamentals of drawing, composition, color, harmony, perspective, cartooning, and the proportions of the human figure. Traditional and digital media will be used.

**ART 3100. Advanced Drawing (I, II; 3)** Advanced techniques

for figure, still life, and landscape compositions. A variety of media will be explored (i.e. charcoal, pastels, contè, and ink).

**ART 3150. Modern and Contemporary Art History I (I; 3)** An analytical and interpretive study of art movements from the 19th century to the present with emphasis on their significance in relation to contemporary civilization.

**ART 3160. Modern and Contemporary Art History II (II; 3)** An advanced art history course that takes a geographical or regional look at modern and contemporary art.

**ART 3200. Figure Drawing and Painting II (I, II; 3)** Advanced painting from the figure incorporating environment. Course work will focus on observation of the live model and environment.

**ART 3300. Figure and Advanced Drawing I (I, II; 3)** This course will explore a variety of media and techniques in compositional drawing. Assignments will stress advanced figure drawing techniques, with emphasis on traditional drawing techniques and composing the figure within an environment.

**ART 3400. Advanced Drawing and Painting I (I, II; 3)** In this course students will develop drawings as studies for paintings. The course will examine the historical use of drawings as studies for paintings and as finished works of art. Students will develop drawings and paintings for graduate school portfolios.

**ART 4061. Advanced Graphic Design I (1; 3)** This course gives the advanced graphics student the chance to execute finished art using advanced techniques and equipment. Basic production techniques will be covered. *Prerequisite: ART 3062.*

**ART 4062. Advanced Graphic Design II (II; 3)** This course will emphasize through projects the continuation of good design execution from ART 4061. At this point in a student's artistic development he/she should have a specific graphic focus in mind. *Prerequisite: ART 4061.*

**ART 4200. Figure Drawing and Painting III (I, II; 3)** This course will address advanced figure painting concerns. Emphasis will be placed on creative painting compositions utilizing the figure in combination with the study of 'old master' paintings. Students will create work for graduate school portfolios.

**ART 4300. Figure and Advanced Drawing II (I, II; 3)** The course will emphasize the development of the student's personal drawing style while focusing on the figure in an interior and/or landscape environment. Students will develop drawings for their senior exhibitions and graduate school portfolios.

**ART 4400. Advanced Drawing and Painting II (I, II; 3)** This course will explore further the historical relationships between drawing and painting. Students will utilize drawings as preliminary studies for painting as well as finished works of art. Students will also develop drawings and paintings for their senior exhibitions and graduate school portfolios.

**ART 4751. Senior Art Show (II; 0)** Supervised independent study encompassing all phases of preparation and completion of the Senior Art exhibition. The Senior candidate should submit 10 representative samples of his or her work for possible selection in the show. The number of works accepted for his or her exhibition depends on the provided gallery space and the number of graduates. The Senior Art Show will take place in the Art Gallery during April of the student's last year of coursework. Open only for Seniors. *Prerequisite: Permission of instructor.*

## BIOLOGY

**BIO 1100. Organismal Biology with Lab (I, II, III; 4)** This course is an introduction to the principles of biology related to organismal structure and function. Topics include cell organization, levels of biological organization, and whole body systems. Three one-hour lectures and one two-hour laboratory period per week. No prerequisites. Does not count towards a degree in Biology. Fulfills the general education requirement for natural science with lab.

**BIO 1300. Genetics and Diversity with Lab (I, II, III; 4)** This course is an introduction to the principles of biology related to the inheritance of characteristics and their change over time. Topics include reproduction, basic genetics, population genetics, evolution, and the diversity of organisms. Three one-hour lectures and one two-hour laboratory period per week. No prerequisites. Does not count towards a degree in Biology. Fulfills the general

education requirement for natural science with a lab.

**BIO 1500. Environmental Science with Lab (II, III; 4)** This interdisciplinary course relates biological, chemical, and physical principles to how organisms interact with their environments. The emphasis is on the scientific and social aspects of human impact on the planet. Environmental issues and policies will also be discussed. Three one-hour lectures and one two-hour laboratory period per week. No prerequisites. A requirement for the minor in Environmental Science. Fulfills the general education requirement for natural science with a lab.

**BIO 1705. Biological Concepts (I, II, III; 4)** An introduction to the basic concepts used in the study of biology. Topics to be covered include metrics and measurement, scientific instrumentation, microscopy, the cell and cellular metabolism and genetics (Mendelian and population). Class will meet for three hours of lecture per week and two hours of lab. *Co-requisite: MTH 1750.*

**BIO 1801. Fundamentals of Biology I (I, II, III; 4)** A study of the fundamental concepts of biology designed to acquaint majors with the scientific method and to develop critical thinking and problem solving skills through hands-on exploration. Emphasis is placed on the gathering and analysis of data and the writing of formal lab reports. Topics covered include biological implications of chemical processes such as pH and molecular interactions, the structure and function of biomolecules (DNA, RNA and proteins), cell structure, evolution, cell division, Mendelian and introductory population genetics, ecology, energy utilization through metabolism and photosynthesis. Three lectures and one three-hour laboratory period per week. This course is required for Biology Education (Adolescent to Young Adult) and Environmental Engineering majors. *Prerequisites: BIO 1705*, ENG 1100 or ENG 1101, MTH 1750 *BIO1705* is waived if ACT composite score is at least 23 or SAT composite score is 1530**.** *Equivalent to TAG OSC003 (Combination of OSC003 and OSC004 equals OSC024).*

**BIO 1802. Fundamentals of Biology II (I, II, III; 4)** A continuing study of the fundamental concepts in biology with emphasis placed upon the evolution and diversity of organisms and their interactions through a survey of Kingdoms Prokarya, Fungi, Plantae and Animalia as well as the Protists. The semester culminates with emphasis on animal tissues, homeostasis, and organ systems. Three one-hour lectures and one three-hour laboratory period per week. *Prerequisite: B10 1801. Equivalent to TAG OSC004 (Combination of OSC003 and OSC004 equals OSC024).*

**BIO 2000. Evolution (II; 2)** A study of evolutionary processes and the history of life on earth. Topics of discussion include evidence supporting the theory of evolution gathered from fossil records, classical genetics, population biology, organismal behavior and changes in DNA over time. Three lecture/discussion periods per week. The course is taught as a mini-term class, consisting of half a semester. The remaining half of the semester slot will be a second mini-term course. Required for the Education degree in Life Science. Fulfills the general education requirement for natural science. Prerequisite: BIO 1100, 1300 or BIO 1801.

**BIO 2050. Biology of the Environment with Lab (I, III; 3)** This course studies biodiversity in the environment of ecosystems and landscapes with emphasis on identification using standard taxonomic keys, natural history, and molecular phylogenetic analysis. It includes environmental and ecological factors affecting organisms and focuses on conservation and management of natural areas. Four lectures/laboratory periods per week. *Prerequisites: BIO 1500 or BIO 1801.*

**BIO 2151. Human Anatomy and Physiology I (I; 3)** Course discussions emphasize the relationships between the structures and functions of human organ systems. Topics include cellular biology tissues, and integumentary, muscular, skeleton, and nervous systems. Laboratory periods are devoted to the study of basic mammalian tissues, mammalian dissection, and exercises illustrating the principles of body functions. Three one-hour lecture/discussion periods and one two-hour laboratory period per week. Does not count toward required hours for the Biology major. *Prerequisite: BIO 1100 or permission of instructor.*

**BIO 2152. Human Anatomy and Physiology II (II; 3)** This continuation course covers in a discussion format the cardiovascular, respiratory, reproductive, digestive, excretion and endocrine systems. Three one-hour

lecture/discussion periods and one two-hour laboratory period per week. Does not count toward required hours for the Biology major. *Prerequisite: BIO 2151.*

**BIO 2200. Biology of Aging (II, III; 2)** A course covering the biology of human aging. It will examine the mechanisms of aging followed by the consequences of aging in all of the human organ systems including nervous, skeletal, endocrine, alimentary, reproductive, respiratory, excretory, cardiovascular, muscular, lymphatic, and integumentary and immune systems. Required for the sociology minor in gerontology and fulfills the natural science requirement for the general education. Does not count towards a major in Biology.

**BIO 2340. Careers in Biology (I; 1)** This course introduces students to speakers highlighting various career choices in biology. Students will interactively discuss the pros and cons of various careers and the required skill sets and level of education for each. Required of Biology majors. *Prerequisite: BIO 1802.* (can be co-requisite).

**BIO2350 Bioethics (II;2)** Bioethics is an interdisciplinary subject that is neither biology nor ethics but, rather, a melding of both disciplines. Bioethics studies the reasonableness of human choices and actions that typically occur in a research or medical setting. Emphasis is placed on examining the merits and harm of decision making while examining self-bias and preconception. This course is offered as a partial term course with BIO2000, Evolution. Pre-requisite: BIO1801.

**BIO 2400. Molecular Genetics (I, III; 4)** This course focuses on the study of heredity from different, yet integrated perspectives. The first is the historical, quantitative and tactile approach of Mendelian Genetics; the second is a study of the environmental dynamics impacting the passage of traits through local and global communities (population genetics); the last involves examining DNA at the qualitative and conceptual level of molecular mechanisms of replication, gene regulation, expression and mutation. Additionally, the class offers opportunities to examine the impact of current genetic research on individuals, society, and decision making. Three lecture periods and one three-hour laboratory period per week. *Prerequisite: BIO 1802*

**BIO 2650. Microbiology (II, III; 4)** Microbiology, in the most literal sense, deals with the study of small organisms. The primary focus of the course is the study of human pathogens. Emphasis is placed on the isolation and identification of bacteria through traditional staining methods and metabolic testing as well as through the application of molecular tools such as PCR and ELISA. Mechanisms of pathology and antibiotic resistance will be examined as well as host defenses and the immune response. Non-bacterial pathogens such as viruses and parasites will also be discussed in relationship to disease. Alternate areas of microbiology, such as environmental and food microbiology, will be discussed. Three lecture/discussion periods and one three-hour laboratory period per week. Required for BIO and ENE majors. *Prerequisite: BIO 1801.*

**BIO 2750. Zoology (I; 2) This** course deals with the basic characteristics, taxonomy, phylogeny, geologic and geographic distribution, behavior and ecology of the major animal groups. Consists of three one-hour lecture and one three-hour laboratory per week. The course is taught as a mini-term class, consisting of half a semester. The remaining half of the semester slot will be a second mini-term course, BIO 2850. *Prerequisite BIO 1802.*

**BIO 2850. Plant Biology (I; 2)** This course is an exploration of the structural and functional relationships in mosses, lower vascular plants and vascular plants. The morphology, anatomy, reproduction, function and basic biochemistry of plants and their growth and development will be covered. Consists of three one-hour lecture periods and one three-hour laboratory period per week for 7 weeks. The course is taught as a mini-term class, consisting of half a semester. The remaining half of the semester slot will be a second mini-term course. *Prerequisite BIO 1802.*

**BIO 2900. Introduction to Evolution (I, II, II; 4)** Knowledge of the basic concepts of evolution is essential to understand biological process and general human health. Hence this course is designed for students of any major to understand and appreciate the scope of evolutionary principles in sciences. This course introduces the rapidly advancing field of evolution and its genetic basis in the context of its applications to agriculture, general health, nature conservation and everyday life. The class meets

online, three times a week and has a two hour per week remote laboratory component.

**BIO 3050. Developmental Biology of Vertebrates (I; 4 – Even Years) This** course is a comprehensive survey of the history of vertebrates through their comparative early development with an integration of descriptive, experimental, biochemical and molecular approaches. Besides vertebrate models, insects, sea urchins and helminthes models will also be used. Students will compare the development of selected vertebrates as well as invertebrate models and examine the mechanisms responsible for their differences and similarities. Three lectures and one three-hour laboratory per week. *Prerequisite: BIO 2750.*

**BIO 3070. Comparative Anatomy of Vertebrates (I; 4 – Odd Years) this** course explores the comparative morphogenesis and adult structures of the vertebrate system with emphasis on phylogenetic relationships of vertebrates. Organ systems to be studied include integumentary, skeletal, muscular, reproductive, digestive, circulatory, sensory and urogenital systems. Three lectures and one three-hour laboratory per week. *Prerequisite: BIO 2750.*

**BIO 3150. Bioinformatics (II; 3 – Odd Years)** Genomes are biological information storage devices. DNA sequencing has made it practical to describe entire genomes. The field of biology is devoted to interpreting this data is called "bioinformatics." The course combines elements of molecular biology, evolution and computer science all used to gain understanding of biomolecules. The student will utilize public databases and software tools to manipulate data and extract meaning. Additionally, the course will touch on the use of software tools that enable better experimental design and modeling. The central theme of the course is to train students to use DNA sequence information to problem solve. *Prerequisite: BIO 2400*

**BIO 3430. Biology Seminar (II; 1)** This course is designed to reinforce and refine the professional styles used in papers and presentations. Students will use original research or a detailed literature review of a specific topic as the basis for this course. Presentations may be made by faculty and guest speakers. Required of all Biology majors. *Prerequisite:* BIO 2340.

**BIO 3500. Ecology (I, III; 4)** Ecology is the study of the environment and organisms interacting within it. The course concentrates on basic principles of ecology (e.g. biomes, water and nutrient cycles, energy stratification, organismal interactions, and population genetics) then places these in the context of modern global problems (e.g. deforestation, pollution, acid rain, extinction, global warming). Three lecture / discussion periods and one three-hour laboratory period per week. Field work will take advantage of local resources such as the Tawawa Woods, Indian Mound, and Glen Helen. *Prerequisites: BIO 2750 and BIO 2850.*

**BIO 3550 Medicinal Plants (II; 4 – Even Years).** This course explores historic and current ethnopharmacology and ethnobotany contributions to the health and well-being of humans. The biochemistry of major classes of plant secondary compounds is explored, and primary resources are used to determine the efficacy of specific secondary compounds used for skin, hair, teeth, the digestive and reproductive systems, pain and internal well-being. Course includes 3 hours of lecture and one, 3 hour lab per week. Pre-requisites: BIO 2850; CHM 2401.

**BIO 3660. Toxinology (II, III; 3 - Even Years)** Toxinology is the branch of biology that studies toxins and the organisms that produce them. The learning outcome of the course is to develop a clearer understanding of the chemical structures, functions and biological activities of various toxins produced by organisms such as snakes, scorpions, spiders, marine invertebrates, fungus, plant and microbes. The course will examine applications of these toxins in the development of therapeutics for treatment of human diseases, e.g., cancer. *Prerequisites: BIO 2750 and CHM 2401.*

**BIO 4100. Molecular Cell Biology (II; 4)** An in-depth investigation of the fundamental unit of life – the cell, following two major themes: evolutionary development and molecular mechanisms. Emphasis is placed on the eukaryotic cell but prokaryotic cells are examined comparatively. Course topics include detailed examination of organelles, structure/function relationships, diversity as it relates to function, and cellular coordination at the tissue, organ, and organism levels. Lastly, the course studies what happens when normal cellular processes go awry (i.e., genetic diseases, prions, and cancer). BIO 4100 is

the designated upper level writing intensive course for the biology major. A grade of C or higher is required to meet graduation requirements. Three lecture/discussion periods and one three hour laboratory period per week. *Prerequisite: BIO 2400 & CHM 3300.*

**BIO 4300. Environmental Plant Physiology (II; 4 – Odd Years)** This course is an investigation of the structure, function, physiology and biochemistry of vascular plant growth and its interaction with a changing environment. Topics to be explored include water relations, translocation, mineral nutrition, photosynthesis and photorespiration, plant hormones and their roles in growth, dormancy, photoperiodism and flowering, and responses to environmental stimuli. The student is expected to develop an experimental design and complete a research project. Three lecture/discussion sessions and one three-hour laboratory period per week. *Prerequisites: BIO 2850 and CHM 2401*

**BIO 4350. Agroecology (I, II; 4)** This course will focus attention on agricultural systems from an ecological perspective, and how such systems can contribute to a more sustainable society. Topics covered in the class will include basic ecological concepts (i.e., the biological, chemical and physical factors and their interactions and how they affect plants/crops) and their application to agricultural systems; production and consumption aspects of food systems; and ways to facilitate the promotion of sustainable agriculture. The course is divided into three modules designed to introduce the students to increasingly complex concepts of agroecology. Problem based learning provides the students with opportunities to discuss and research case studies corresponding to each of these levels of complexity. *Prerequisites: BIO 1802, AGR 1150, and AGR 3330.*

**BIO 4400. Animal Physiology (I; 4 - Even Years)** A study of the concepts and principals involved in the function of animal organ systems with emphasis on human physiology. Emphasis will be placed on the application of physical and chemical principles on cell function in which transport, electrical activity of cell membrane and cell contractility will be discussed, followed by the physiology of most organ systems in the human body. Three lecture/discussion periods and one three-hour laboratory period per week. *Prerequisites: BIO 1802 and CHM 1202.*

**BIO 4500. Undergraduate Research in Biology (I, II, III; 2)** Undergraduate research experience in which a student will work with a mentor to develop a research topic, work on semi-independent research, and present this topic in written and oral format. Students may work with a faculty mentor at Central State University or fulfill this requirement by doing an off-campus internship or job-shadowing experience. For the latter option, the student will work with a CSU faculty mentor upon return to campus to prepare and present a written and oral presentation for credit. Required of Biology and Education, Life Science majors. This course may be repeated for credit. *Prerequisites: BIO 1802 and CHM 1202*

**BIO 4600. Selected Topics in Biology (On demand; 2-3)** This course is designed to present an in-depth study of topics not normally covered in other courses. The topics selected will be dependent on the needs of the student. *Prerequisite: Permission of the instructor.*

## BUSINESS ADMINISTRATION

**BUS 1100. Contemporary American Business (I, II; 3)** This basic course introduces current American business and its functional areas. An overview of Management, Marketing, Management Information Systems, Accounting, Economics, and Finance is presented. Business terminology and career opportunities will be discussed. Current business topics will be examined.

**BUS 1500. Computer Applications for Business (I, II; 3)** This course introduces students to the role of information systems in business and develops competencies in the operation of computer hardware and contemporary business applications software.

**BUS 2200. Legal Environment of Business (I, II; 3)** Introduction to basic legal institutions including the structure of the court system, schools of legal thought, and the nature of the judicial process. An in-depth study of the law of general contract couples with an in-depth study and comparison of the law of sales under the Uniform Commercial Code. *Prerequisite: BUS 1100. Equivalent to TAG OBU004.*

**BUS 2203. Professional Development (I, II; 2)** This

course emphasizes the importance of knowing the nuances of etiquette in today's business environment. It assists students in developing professional and social skills needed in today's corporate environment and in building self-confidence, credibility creating a winning image.

**BUS 2260. Business Communications (I, II; 3)** An introduction to current business communication practices to include computer skills for written reports, and oral presentations. Emphasis is placed on current technology as used in contemporary business, as well as clear, concise, accurate, thorough and truthful written and oral communications. *Prerequisite: BUS 1100 and ENG 1102, and sophomore standing. Equivalent to TAG OBU005.*

**BUS 2261. Business Communication II (I, II; 3)** This course will compete the study and development of business communication skills which began in BUS 2260, with emphasis on adapting clear, concise, complete, and correct communications to the challenges of global business environments such as cultural nuances. Students will analyze samples of emails, memos, executive summaries, and create written and spoken communication of business operations. *Prerequisites: ENG 1102, BUS 2260 and sophomore standing.*

**BUS 2343. Principles of Management (I, II; 3)** Course is the study of the process of getting things done, effectively and efficiently, through and with other people, including management processes, decision making, leadership, and motivation. *Prerequisite: BUS 1100.*

**BUS 2353. Principles of Marketing (I, II; 3)** This course is the study of the process of buying and selling of goods and services. Emphasis is placed on marketing strategies and consumer response to those strategies. Marketing strategies for buying and selling for both wholesale and retail markets are included. *Prerequisite: BUS 1100, ECO 2210, ENG 1102.*

**BUS 2801. Business Calculus I (I, II; 3)** The first of a two-course sequence in differential and integral Calculus in Business. This course stresses limits and derivatives of continuous functions, including sum and difference rules, product and quotient rules, power and chain rules, and second order derivatives. *Prerequisite: MTH 1750.*

**BUS 2802. Business Calculus II (I, II; 3)** The second of a two-course sequence in differential and integral Calculus for Business. This course stresses integral business calculus, with the relationship between differential and integral calculus. *Prerequisite: BUS 2801.*

**BUS 2900. Business Calculus (I, II; 3)** This course is an introduction to calculus for students in business. It provides students proficiency in the mathematics required to understand modern business models (e.g. in economics, finance and marketing). *Prerequisite: MTH 1750.*

**BUS 2901. Business Statistics I (II; 3)** This course is Part I of a two-part course sequence, which introduces the basic tools of statistical analysis with the emphasis on the application of these tools to decision-making and problem solving in business. Business applications are integrated in this course. *Prerequisite: MATH 1750.*

**BUS 2902. Business Statistics II (I; 3)** Part II of a two-part course sequence, which introduces the basic tools of statistical analysis with the emphasis on the application of these tools to decision-making and problem solving in business. Business applications are integrated in this course. *Prerequisite: BUS 2901.*

**BUS 3331. Principles of Finance (I, II; 3)** A study of financing, capitalization and expansion of modern business enterprises. Course includes financial institutions, securities, markets and rates; financial statements, taxes, depreciation and cash flows; financial statement analysis; and the time value of money. *Prerequisites: ACC 2210, ACC 2220, and BUS 1100.*

**BUS 3370. International Business (I, II; 3)** This course surveys business practices on six continents, emphasizing the relationship between the U.S. and other countries. International commerce is impacted by differing languages, terminology, laws, customs, politics, and economics. Emphasis is placed on finance, management, and marketing. *Prerequisites: BUS 3331, 2343 and 2353.*

**BUS 4466. Internship in Business (On Demand: 1-6)** Course provides the opportunity to explore practical experience in business. Student activities will be supervised the organization sponsoring the

internship. The Office of Career Services and the responsible faculty monitor internships. A comprehensive report is required at the completion of the internship. *Prerequisite: Permission of the instructor.*

**BUS 4785. Operations Management (I, II; 3)** A survey course in production and operations management that covers managerial concepts and the quantitative tools used in the design, planning, operation and control of production systems. *Prerequisite: BUS 2801, BUS 2802, BUS 2901, BUS 2902.*

**BUS 4795. Strategic Management and Policy (I, II; 4)** This "Capstone Course" is a study of strategic planning. The importance of environment scanning and identifying strategic factors in external and internal environments are stressed. Course examines the present state of the national economy, the impact of stakeholders in the task environment, common methods of portfolio analysis, and possible significance of technological change to individual firms and entire industries. Individual research or case analysis is required. *Prerequisite: Senior standing.*

## CHEMISTRY

**CHM 1050. Chemical Concepts (I, II; 3)** This course covers some of the basic mathematical skills needed for success in chemistry courses as well as introducing basic concepts of chemistry. The course is designed to help students who have not had high school chemistry or who wish to review before beginning the General Chemistry sequence. Three one hour lecture/ discussion sessions per week.

**CHM 1150. Elements of Chemistry (I, II; 4)** This course is intended to meet the needs of students' general education core who are not majoring in a science area. This course will show the relevance of chemistry to socially important problems, and in the process introduce concepts such as chemical bonding, stoichiometry, and acid/base equilibria. Three one-hour lectures and one two-hour inquiry-based laboratory per week. Fulfills the general education requirement for Natural Sciences with lab.

**CHM 1201. General Chemistry I (I, II; 4)** This course begins a sequence which supplies a foundation in chemistry for science majors. Topics covered include atomic structure, bonding, stoichiometry, thermos-chemistry, periodic law, gas laws, and solutions. Three one-hour lectures and one three-hour lab per week. *Pre- or co-requisite: MTH 1750-Equivalent to TAG OSC008 (Combination of CHM 1201 and CHM 1202 equals OSC023).*

**CHM 1202. General Chemistry II (I, II; 4)** This course completes the sequence begun in CHM 1201. Topics covered include kinetics, equilibria, pH, solubility, thermodynamics, and electrochemistry. Three one-hour lectures and one three-hour lab per week. *Prerequisite: CHM 1201. Equivalent to TAG OSC009 (CHM 1201 and CHM 1202 equals OSC023).*

**CHM 1610. Introduction to Forensic Science I with Lab (I, II; 4)** This course is intended to meet the needs of students' general education core. This course will provide a foundation for the different aspects of science used to solve crimes and most importantly enforce justice in our society. Some of the topics covered are: 1. Processing the crime scene, 2. Hair, fibers and paints analysis, 3. Drugs control and identification, 4. Forensic toxicology, 5. Aspects of arson and explosions, 6. Forensic serology, 7. Forensic anthropology, 8. Fingerprints, 9. Firearms and tool marks, 10. DNA. There are two and a half hours of lecture and one-and-a-half-hour lab period each week. Laboratory exercises will be selected to reinforce the materials covered during lecture. *Prerequisites: High School math and chemistry.*

**CHM 2200. Quantitative Analysis (II; 4)** This course is a study of the theory and practice of classical methods of chemical analysis. Gravimetric analysis and volumetric techniques based on acid/base, precipitation, complexation, and oxidation/reduction reactions will be covered. Three one-hour lecture/discussion sessions and one four-hour laboratory per week. *Prerequisite: CHM 1202.*

**CHM 2401. Organic Chemistry I (I; 4)** This course begins a two-semester sequence dealing with the chemistry of carbon compounds. The course begins with a discussion of the structure and reactivity of covalent compounds, including acid-base properties, kinetics, and stereochemistry. The course then begins a systematic discussion of the various organic functional groups and their reactions. Three one-hour lectures and one four-hour lab per week. *Prerequisite: CHM 1202.(CHM 2401 and CHM 2402 are equivalent to TAG OSC010).*

**CHM 2402. Organic Chemistry II (II; 4)** This course continues the sequence begun in CHM 2401. The systematic discussion of functional groups is continued along with some coverage of the synthesis of organic compounds and spectroscopic identification of them. Three one-hour lectures and one four-hour lab per week. *Prerequisite: CHM 2401. (CHM 2401 and CHM 2402 are equivalent to TAG OSC010).*

**CHM 2600. Introduction to Forensic Science II (II: 4)** This course will provide a foundation for the different aspects of science used to solve crimes and enforce justice in our society. Some of the topics covered are: Organic analysis & Inorganic analysis, drugs, control and Identification Forensic Toxicology; Techniques and the significance of toxicological findings, forensic aspects of arson and explosion investigation, forensic serology, forensic anthropology, DNA, the future forensic tool. There are three hours of lecture and a two-hour lab period each week. Laboratory exercises will be selected to reinforce the materials covered during lecture. *Prerequisites: CHM 1610 and CHM 1201 or CHM 1202.*

**Bn CHM 3050. Chemistry Seminar (II; 1)** This course is designed to introduce chemistry majors to recent advancements in sciences, as well as current and ongoing research carried in this field. This course will also help all majors to carry out the required undergraduate research as well as enhancing their chances for better careers in their field or future graduate studies. Presentations will be made by faculty and guest speakers. Required for all chemistry majors. *Prerequisite: Junior standing.*

**CHM 3100. Introductory Inorganic Chemistry (I; 3)** This course introduces fundamental concepts and theories of the electronic structure of the atom. It will cover Schrödinger equation, group theory and the quantum chemistry of various rotors, the structure of the periodic table, covalent, bonding, molecular spectroscopy, as well as different properties of various compounds. 3 one-hour lectures per week. *Prerequisites: CHM1202, PHY 2412.*

**CHM 3300. Introduction to Biochemistry (I; 3)** This course will offer a foundational look at biomolecules such as sugars, lipids, phospholipids, steroids, vitamins, and hormones with a cellular fictional perspective. The focus of the course, however, will be on nature of DNA, RNA, and proteins looking at their basic structure and activity that has direct application to cellular functions. Course topics will include replication, transcription, translation, and gene regulation as a prelude for advanced coverage in genetics, microbiology, molecular biology, and immunology. This course meets three hours of lecture each week with no lab component. *Prerequisites: CHM 2402 and BIO 1801.*

**CHM 3501. Physical Chemistry I (I; 3)** This course is an introduction to the laws of classical thermodynamics and their applications to systems at equilibrium. Three one-hour lecture/discussion sessions per week. *Prerequisites: CHM 1202 and PHY 2412.*

**CHM 3502. Physical Chemistry II (II; 4)** A continuation of the study of thermodynamics and equilibrium followed by a study of electrochemistry, kinetics, and an introduction to crystal structures. This course also highlights the fundamental ideas of quantum mechanics and their applications. The laboratory portion of the course emphasizes the measurement of the physical and thermodynamic properties of organic and inorganic compounds. Three one-hour lecture/discussion sessions and one four-hour laboratory per week. *Prerequisite: CHM 3501.*

**CHM 3600. Introduction to Radiochemistry (I; 4)** This course and its corresponding laboratory will cover nuclear theory, concepts and calculations, control, handling and use of radioactive materials, fundamentals, principles of radiochemistry, separation chemistry concepts, principles of Alpha and Gamma spectrometry as well as principles of liquid scintillation counting and mass spectrometry. Three hours of lecture and one three hour lab. *Prerequisites: CHM 1202; PHY 2411.*

**CHM 3797. Selected Topics in Chemistry (On demand; 3)** This course is designed to provide greater coverage topics that do not normally get in-depth coverage in other courses and to present new concepts in chemistry. Topics to be covered may come from any area of chemistry and will be selected on the basis of student and faculty interest. The intent of this course is to provide an opportunity for students to become familiar with an area or areas of current research interest. May be repeated for

credit. *Prerequisite: Permission of instructor.*

**CHM 4100. Advanced Inorganic Chemistry (I; 4 – Odd Years)** This course is designed to introduce the theories underlying modern inorganic chemistry. Atomic structure, ionic and covalent bonding, and acid/base behavior are emphasized. Group theory, valence bond, molecular orbital, crystal field, and ligand field bonding models will be employed. Laboratory experiments will illustrate the synthesis and properties of inorganic materials. Three one-hour lectures and a three-hour laboratory each week. *Prerequisites: CHM 3100.*

**CHM 4200. Instrumental Analysis (I; 4 - Even Years)** This course deals with modern instrumental methods of chemical analysis. The principles of the design and construction of various types of spectrometers, chromatographs, and electro analytical instruments will be discussed with emphasis on the advantages and limitations of these methods. Laboratories will involve application of these principles. Three one-hour lecture/discussion sessions and one four -hour laboratory per week. *Prerequisite: CHM 2200.*

**CHM 4300. Biochemistry (I; 4)** This course involves the study of the properties of carbohydrates, proteins, lipids, nucleic acids, and the reactions they undergo. Experimental work will introduce the chemical and physical properties of selected biological molecules. Three one-hour lecture/ discussion sessions and one four-hour laboratory per week. *Prerequisites: BIO 1801 and CHM 2402.*

**CHM 4400. Advanced Organic Chemistry (II; 3 – Even Years)** This course uses concepts of kinetics and thermodynamics learned in physical chemistry to explain the properties and reactions of organic compounds. Three one-hour lecture/discussion sessions per week. *Prerequisites: CHM 2402 and CHM 3501.*

**CHM 4500. Advanced Quantum Chemistry (II; 3 - Odd Years)** This course will explore various types of quantum systems. It will highlight: 1.The transformation of electrons to fermions, and how that leads to the Pauli exclusion principle, 2. The transformation of photons to bosons and how that is related to radios and laser, 3. The quantum tunneling and its relation to nuclear emission of alpha particles and 4. The updates and highlights of the quantum field theory and the relation between waves and particles. *Prerequisite: CHM 3502.*

**CHM 4600. Advanced Forensic Science (II; 4)** This course will provide information for the different aspects of science used to solve crimes and enforce justice in our society. Some of the topics covered are: organic and inorganic analysis, drugs, control and identification, forensic toxicology, techniques and the significance of toxicological findings, forensic aspects of arson and explosion investigation, forensic serology, forensic anthropology, and DNA, the future forensic tool. There are three hours of lecture and a three-hour lab period each week. Laboratory exercises will be selected to reinforce the materials covered during the lecture. *Prerequisites: CHM 2200, 2600 and 4300.*

**CHM 4791. Undergraduate Research I (I, II; 2)** This course offers the opportunity for an advanced chemistry major student to do independent research on a problem. Eight hours of laboratory and/or library effort per week are required. A presentation, poster, and written report are required to be submitted by the student as part of the course requirements for completion. *Prerequisites: Approval of the Department.*

**CHM 4792. Undergraduate Research II (I, II; 2)** This course offers the opportunity for an advanced chemistry major student to do independent research on a problem and expand upon that independent research for a second semester. Eight hours of laboratory and/or library effort per week are required. A presentation, poster, and written report are required to be submitted by the student as part of the course requirement for completion. *Prerequisites: Approval of the Department or CHM 4791.*

**CHM 4895. Integrated Concepts of Chemistry (II; 3)** This course uses several case study problems to apply and reinforce concepts learned in previous chemistry courses. Three one-hour discussion sessions per week. *Prerequisite: 25 hours of chemistry courses.*

## COMMUNICATIONS

**COM 2200. Introduction to Mass Communication (I; 3)** This course introduces students to the history, theories and models of the mass communication process; and the structure, dynamics and effects of print and electronic media on the individual and society. The course includes discussion of the

structure and development of minority and international media with an emphasis on social, cultural, economic, and political implications. *Prerequisite: ENG 1102. Equivalent to TAG OCM0006.*

**COM 2214. Public Speaking (I, II; 3)** Students learn message preparation and presentation, with emphasis on formal speeches, including informational, demonstrative, and persuasive speeches. Students learn primary theories of communication and analyze the methods used by professional speakers. Required of all communication majors.

**COM 2219. Introduction to Media Writing I (I; 3)** This *course* introduces students to proper grammatical structure and writing styles used by journalists and communication professionals. Students will be introduced to basic writing formats for various forms of communication, including print journalism and electronic media. Students will develop language usage and grammar skills and learn Associated Press Style. Emphasis will be placed on critical thinking and writing on deadlines. *Prerequisite: Passing grade of C in ENG 1102.*

**COM 2272. Principles of Electronic Media Production (II; 3)** This course introduces students to the history, characteristics and practices of major electronic media including radio, television, movies, the Internet and other telecommunications. The course includes an introduction to the function and care of basic electronic media equipment. *Prerequisite: COM 2200.*

**COM 2400. Introduction to Photojournalism (On Demand; 3)** This course teaches news reporting through visual media. It includes sections on basic photographic techniques, such as composition, framing, lighting, focus, exposure, camera handling, and scanning. It also includes caption and cutline writing, news judgment, journalism ethics, publication design, desktop publishing, and computer manipulation of images. *Prerequisite: COM 2200. Equivalent to TAG OCM011.*

**COM 3300. Broadcast Media Production and Direction: Radio (II; 3)** This course covers principles and practices of over-the-air, satellite and digital radio productions such as news, commercials, documentaries and programming. *Prerequisite: COM 2272.*

**COM 3306. Communication Research Methods (II; 3)** This course examines the theoretical underpinnings, strategies and methods of contemporary research in communication. Emphasis is placed on theories and methods used by print and electronic media in identifying and analyzing audiences. *Prerequisites: COM 2219 and MTH 1750.*

**COM 3308. Reality and the Image (On Demand; 3)** This course provides for the detailed study of films, particularly those with a minority theme or cast, and the reality the films attempt to portray. Students engage in film analysis, paying close attention to a film's script, themes, production values, acting, setting, and cultural/historical context. The course also may include consideration of the history, technology, and business practices of the film industry. *Prerequisite: COM 2200.*

**COM 3314. Advanced Public Speaking (On Demand; 3)** This course will examine and practice the skills necessary to become an effective speaker. The course emphasizes modes of speech. Student will practice persuasive, motivational, and humorous speeches; study historic speeches that made impact on the world; and learn how to research and write long-form speeches. COM 2214 is recommended.

**COM 3315. Writing for Electronic Media (II; 3)** This course introduces students to the writing and formatting of scripts for electronic media with special emphasis on the writing of scripts for radio and television news programs. The course may also include the writing of commercials, sitcoms, drams, and documentaries. *Prerequisites: COM 2219 and COM 2272.*

**COM 3319. Reporting (II; 3)** This course introduces students to the fundamentals of journalism. It covers news gathering and news writing including the writing of both hard news and feature stories. The course builds on the grammar, language, and style lessons of COM 2219. *Prerequisite: COM 2219.*

**COM 3323. Voice and Diction (On Demand; 3)** This course explores how to develop a satisfactory speaking voice. It is designed to deal with problems of articulation and voice quality in various settings. *Prerequisite: None.*

**COM 3326. Argumentation and Debate (On Demand; 3)** This course involves the study

and practice of basic principles in reasoned discourse and their application to a variety of issues. It includes the history of rhetoric and criticism and a review of principal rhetoricians from ancient to modern times. *Prerequisite: None.*

**COM 3327. Copy Editing (II; 3)** This course covers copy desk work, news selection, headline writing and page layout. Three hours of work on The Gold Torch required. *Prerequisite: COM 3319.*

**COM 3330. Public Relations Principles and Practices (On Demand; 3)** This course introduces students to the theories, processes, functions and practices of public relations. It includes a discussion of the external and internal publics of public relations. *Prerequisites: COM 2200 and COM 2219.*

**COM 3340. Online Journalism and Desktop Publishing (II; 3) This** course covers Web-assisted journalism and design; it includes advanced layout and design and the creation of newsletters and magazines for professional or desktop printing. *Prerequisites: COM 2219 and 3327.*

**COM 3400. Broadcast Media Production and Direction: Television and New Media (II; 3)** This course provides students with practical training in production, programming and direction. Students work in teams to produce television and new media productions such as news, commercials, sports programs, and documentaries. The course includes video editing. *Prerequisite: COM 2272.*

**COM 3460. Introduction to Sound Engineering and Recording (On Demand; 3)** This course covers techniques of electronic music including analog and digital sound generation and manipulation, control systems, MIDI, and Macintosh basics; it includes hands-on work with audio editing software. *Prerequisites: COM 2272 and MUS 1101.*

**COM 4412. Advanced Reporting and Feature Writing (II; 3)** This course focuses on specialized reporting of issues and events in society with an emphasis on governmental and/or urban affairs. It includes the writing of magazine style feature stories, editorials, and reviews. *Prerequisite: COM 3319.*

**COM 4447. Media Law and Ethics (II; 3)** This course covers the history and structure of media regulation and their socio-political ramification. It includes extensive discussion of First Amendment rights and ethical issues relating to mass media. *Prerequisites: COM 2200 and COM 2219.*

**COM 4450. Media Management (On Demand; 3) This** course covers the history and structure of media ownership and the variables that constrain the operations of media organizations. The course includes a discussion of globalization. *Prerequisite: COM 2200.*

**COM 4460. Broadcast Announcing and Delivery (On Demand; 3)** This course introduces students to voice techniques used in the field of broadcasting. Effective delivery and postural techniques for on-air television and radio will receive special attention. *Prerequisites: COM 2214.*

**COM 4892. Professional Development (I, II; 1)** This course covers professional ethics, etiquette, and dress. Students learn job search strategies, networking skills, and interview techniques. They learn how to write a cover letter and resume. They also learn how to research graduate schools, prepare for the graduate record exam, and apply to graduate school.

**COM 4894. Practicum in Journalism and Electronic Media: WCSU, WCSU-TV, The Gold Torch, Communication Week, or other approved medium for Communication majors. (I, II, III; 1)** The practicum is an on-campus pre-professional activity related to the student's career path or interests in the field of communication. Prerequisites: COM 2200, 2219 and permission of the Program director. Total practicum hours may not exceed two credit hours toward graduation. Required of all majors and for graduation.

**COM 4895. Senior Capstone and Portfolio Assessment (II; 3)** This course is a comprehensive assessment of student knowledge and work in the major field. Students complete a professional-quality portfolio under the direction of a faculty member. Required of all majors and for graduation. *Prerequisite: Senior status.*

**COM 4896. Internship in Journalism and Electronic Media (I, II, III; 3)** An internship is an off-campus, part-time placement in a professional setting for students to gain practical experience in the student's career path or interests in the field of Communication. Students are expected to learn operational

and managerial skills that are required for entry-level positions. Complete internship guidelines are available from the program director, who assigns the course grade. The program director assigns the course grade. *Prerequisite: COM 4892, and junior status and permission of the program director. Total internship hours may not exceed three credit hours toward graduation. Required of all Communication majors and for graduation.*

**COM 4897. Independent Study (On Demand; 1-3)** An independent study is a research project or course of study, not a performance activity and not otherwise offered as an existing course. The individual study may carry 1-3 semester hours. Before the end of the previous semester and in consultation with the departmental advisor, the student must submit a proposal to the department chair. *Prerequisites: COM 2200, 2219, 3306, and permission of the department chair.*

## COMPUTER SCIENCE

**CPS 1000 Ethics in Computer Science (I, II; 1)** This course explores ethical issues that arise due to widespread use of computer technology. Students will become familiar with issues related to professional ethics, ethical use of the internet, privacy issues, property rights of software, accountability and social implications of information technology.

**CPS 1110. Computer Literacy (I, II, III; 2)** This course presents students with a study of various systems and methods of problem-solving by computers and other means through use of examples, simple exercises and theory. Further topics include using computer systems for word processing, Internet browsing, PC spreadsheets and databases, and other desk top publishing techniques.
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**CPS 1191. Computer Science I (I, II; 4)** This course is designed to provide an introduction to programming using C++. Topics include algorithms, flow-chart, pseudo-code, top-down design, branching, looping, arrays strings, basic input and output (I/O) operations, scientific applications using C++ programming language. *Prerequisite: MTH 1750 or permission of the instructor.*

**CPS 1192. Computer Science II (II; 4)** Importance of program design, modular function and object oriented programming; flow-charting, pseudo-code, and top-down design, use of text files, binary files, and fundamentals of higher languages such as C/ C++. *Prerequisite: CPS 1191.*

**CPS 2215. Internet Web Essentials (Even Years, II; 3)** This course teaches students topics pertaining to World Wide Web (WWW) fundamentals, contemporary Web browsers, Web editors, Web development tools, Internet tools and services, Internet searching, web site design, web page publishing, JavaScript, Java Applets, CGI, Web security, creating dynamic web pages using a database and other web enabling tools.

**CPS 2236. Contemporary Operating Systems (I; 2)** The objective of this course is to teach basics of an operating system from the point of view of both end-users and programmers. Existing popular operating systems such as Windows, Linux and Mac OS will be used as practical examples to work with. Students will learn about the history of Operating Systems, Computer Security Basics, Desktop Virtualization, Disk Operating System (DOS) and the Command-Line Interface, Windows, Linux, and Mac OS X. *Prerequisite: None.*

**CPS 2271. Data Structures (I; 3)** This course introduces students to data structures, including topics on linked lists, doubly linked lists, circular lists, stacks, queues, search strategies, hashing, internal sorting algorithms, external sort / merge algorithms, binary trees, B-trees, B +- trees, sequential files, random access files, file update algorithms, bit maps, and memory management algorithms. *Prerequisite: CPS 1192.*

**CPS 2300. Cyber Security I (I, on demand; 3)** The objective of this course is to introduce students to the field of cybersecurity, network and internet architecture. Students will study technologies, security protocols, policies and practices designed to protect networks, computers, programs, and data from attacks. The students will also learn about viruses and other vulnerabilities, and cyber-attacks and the techniques for identifying, detecting and defending against cybersecurity threats. *Prerequisite: CPS 1191.*

**CPS 3200 Computer Algorithms (II; 3)** This course covers the modern theory of algorithms, common algorithmic paradigms, the relationship between algorithms and programming, basic performance measures and analysis techniques for real world problems. The course goal is to provide a solid background in algorithms for computer

science students, in preparation either for a job in industry or for more advanced courses at the graduate level. *Prerequisite: CPS1192.*

**CPS 3300. Cyber Security II (On demand, II; 3)** This is the second cyber security course after Cyber Security I. The student will learn contemporary security technologies and issues, infrastructure security management processes, risk analysis, security planning, analysis and safeguards, industrial espionage, cyber terrorism, information warfare, security policies, contingency planning, incidence handling and response, and security standards. *Prerequisite: CPS 2300.*

**CPS 3316. Computer Networks (II; 3)** This course teaches students fundamentals of computer networks, covering topics on local and wide area networks, media, topologies, layered networking models, hardware and software; network setup and administration, network architecture, communication protocols, and aspects of network administration that include server folders and permissions. *Prerequisites: CPS 1191 or its equivalent.*

**CPS 3320. Database Systems (II; 3)** The objective of this course is to introduce relational database systems and provide practical experience in using a popular database package. Contemporary database systems such as Oracle and Microsoft Access will be used extensively in this course. Students will learn about relational database principles, the SQL query language, application development using forms, creating and using tables and queries, database design and implementation issues. *Prerequisites: CPS 1192 or permission of instructor.*

**CPS 3325. Java Programming (II; 3)** The objective of this course is to teach the basics of Java programming and object-oriented programming. Students will learn both Applets and Application programming in Java. The topics covered include compilers and interpreters, objects and primitive data, control flow, writing classes, enhancing classes, arrays and vectors, inheritance, exceptions, I/O streams, software engineering, recursive programming, and implementation of data structures. *Prerequisites: CPS 1191 or its equivalent.*

**CPS 3340. Computer Architecture (I; 3)** The goal of this course is to give students a solid foundation in the fundamental concepts of CPU, memory system and I/O system design, and to expose them to a number of more advanced topics in these areas. Instruction set architecture, memory subsystem organization, interfacing concepts and issues arising in managing communication with the processor.

**CPS 3465. High Performance Computing (II; 3)** Fundamentals of parallel computing including shared memory paradigm, semaphores, and dead lock; distributed memory paradigm including point-to-point and collective message passing constructs in MPI, parallel I/O, vector and structure derived data types; speed-up and scalability, check-point restart, parallel debugging; techniques, performance profiling, graphical and visualization techniques; parallel libraries, and systems modeling applications in high performance computing. *Prerequisite: CPS 2271 and MTH 2503 or permission of the instructor.*

**CPS 4210. Artificial Intelligence (II; 3)** Introduction to concepts, principles, challenges and research in major areas of technical AI research. Areas of discussion include: natural language and vision processing, machine learning, machine logic and reasoning, expert systems, and robotic. *Prerequisite: CPS 2271*.

**CPS 4420. Software Engineering (II; 3)** This course teaches students design and implementation issues for large software systems, software life cycle, requirements definition and specification, prototyping, verification, validation, equivalence classes and testing, fault-tolerance, social and ethical issues of commercial software, user interface, design, portability, and management. The goal of this course is to introduce students to methods for producing large-scale commercial software. They learn techniques for managing hardware, software, and personnel systems using a group-oriented project production paradigm. *Prerequisite: CPS 2271.*

**CPS 4460. Advanced Topics (I, II, III; 1-3)** This course is designed to meet the needs of advanced students as a preparation for graduate study or students who are interested in modern topics that are not presented in other courses. Projects required in CPS 4460 must be distinguished from those in other courses. Prerequisites: Permission of instructor.

**CPS 4895. Senior Project (I, II; 3)** Students work under the mentorship of a faculty member to design, implement and present a capstone computer science project. Each student selects a topic for the project subject to approval of the faculty mentor, conducts a feasibility study and prepares a project design using flowcharts, structure charts and pseudo-code along with documentation and references. Each student must implement the project design and submit all program listings, data files, and report listing showing results of appropriate test runs. Each student must write a paper on the project from the external documentation and prepare appropriate visual aids for an oral presentation of the project to the Department. *Prerequisite: CPS4420 or permission of the instructor*..

## COOPERATIVE EDUCATION

**COE 2255. Parallel Cooperative Education (I, II, III; 6)** The Cooperative Education Program offers students an opportunity to integrate classroom theory with practical "real world" work assignments that alternate formal coursework with employment in business, industry, government, and the non-profit sector. Employers assign work which is relevant to each student's academic degree program or career interests, provide on-the-job training and supervision, and evaluate performance on a regular basis. COE 2255 provides credit for the student who has 30 - 60 semester hours, and who is combining a part-time co-op job with coursework during the same semester. *Prerequisites: Department approval and 30-60 credit hours.*

**COE 2299. Alternating Cooperative Education (I, II, III; 12)** The Cooperative Education Program offers students an opportunity to integrate classroom theory with practical "real world" work assignments that alternate formal coursework with employment in business, industry, government, and the non-profit sector. Employers assign work which is relevant to each student's academic degree program or career interests; provide on-the-job training and supervision, and evaluate performance on a regular basis. COE 2299 provides credit for the student who has 30-60 semester hours, and who is combining a part-time co-op job with coursework during the same semester. *Prerequisites: Department approval and 30-60 credit hours.*

**COE 3355. Parallel Cooperative Education (I, II, III; 6)** The Cooperative Education Program offers students an opportunity to integrate classroom theory with practical "real world" work assignments that alternate formal coursework with employment in business, industry, government, and the non-profit sector. Employers assign work which is relevant to each student's academic degree program or career interests, provide on-the-job training and supervision, and evaluate performance on a regular basis. COE 3355 provides credit for the student who has 61-90 semester hours, and who is combining a part-time co-op job with coursework during the same semester. *Prerequisites: Department approval and 61-90 credit hours.*

**COE 3399. Alternating Cooperative Education (I, II, III; 12)** The Cooperative Education Program offers students an opportunity to integrate classroom theory with practical "real world" work assignments that alternate formal coursework with employment in business, industry, government and the non-profit sector. Employers assign work which is relevant to each student's academic degree program or career interests; provide on-the-job training and supervision, and evaluate performance on a regular basis. COE 3399 provides credit for the student who has 61-90 semester hours, and who is combining a part-time co-op job with coursework during the same semester. *Prerequisites: Department approval and 61-90 credit hours.*

**COE 4455. Parallel Cooperative Education (I, II, III; 6)** The Cooperative Education Program offers students an opportunity to integrate classroom theory with practical "real world" work assignments that alternate formal coursework with employment in business, industry, government, and the non-profit sector. Employers assign work which is relevant to each student's academic degree program or career interests, provide on-the-job training and supervision, and evaluate performance on a regular basis. COE 4455 provides credit for the student who has 90 or more semester hours, and who is combining a part-time co-op job with coursework during the same semester. *Prerequisites: Department approval and 91 or more credit hours.*

**COE 4499. Alternating Cooperative Education (I, II,**

**III; 12)** The Cooperative Education Program offers students an opportunity to integrate classroom theory with practical "real world" work assignments that alternate formal coursework with employment in business, industry, government, and the non-profit sector. Employers assign work which is relevant to each student's academic degree program or career interests, provide on-the-job training and supervision, and evaluate performance on a regular basis. COE 4499 provides credit for the student who has 90 or more semester hours, and who is combining a part-time co-op job with coursework during the same semester. *Prerequisites: Department approval and 91 or more credit hours.*

## CRIMINAL JUSTICE

**CRJ/PSC/PSY/SWK/SOC 2206. Statistics for Social and Behavioral Sciences (I, II; 4)** This course provides students with an introduction to basic statistical techniques used by researchers in the social and behavioral sciences. Major topics include frequency distributions, measures of central tendency and variation, regression and correlation, and hypothesis testing. A computer lab is required with this course. *Prerequisite: MTH 1750 or MTH 1550, grade "D" or better.*

**CRJ 2210. Introduction to Criminal Justice (I, II; 3)** An overview of the criminal justice field including its historical development, contemporary structures and functions, and emerging trends in each segment of the system. *Equivalent to TAG OSS031.*

**CRJ 2310. Corrections in America (II; 3)** An overview of the American correctional system as it relates to local, state and federal correctional agencies. The course will cover the history and development of correctional policies and practices, criminal sentencing, jail, prisons, alternative sentencing, prisoner rights, rehabilitation and parole and probation. Current philosophies of corrections and the issues surrounding the roles and effectiveness of criminal sentences, institutional procedures, technological developments and special populations will also be examined. *Prerequisite: CRJ 2210. Equivalent to TAG OSS033.*

**CRJ 2330. Police and Society (II; 3)** An introductory course which provides students with an overview of the role of the police in American society. It will explore diversity and critically evaluate the direction and trends in modern police agencies. Particular attention will be given to the origins of policing, the nature of police organizations and police work, and patterns of relations between the police and the public. *Prerequisite: CRJ 2210. Equivalent to TAG OSS032.*

**CRJ 3305. Criminal Investigation (I; 4)** This course will help students to understand the link between criminal investigation and forensic science. The course will focus on how potential evidence is linked to identifying offender profiles and characteristics. In addition, key terms, and basic police procedure will be discussed as it relates to the identification and collection of evidence. A review of the historical development of criminal investigation as well as the proper organization and preservation of evidence will be examined. Basic investigative tools will be explored and utilized. A one hour lab is included with this course. *Prerequisites: CRJ 2210 and 2330.*

**CRJ 3310. Criminal Procedures (I; 3)** This course covers the basic constitutional rights associated with the investigation and adjudication of criminal cases. Particular attention is given to the problems of arrest; search and seizure; self-incrimination; coerced confession; wiretapping; right to counsel; bail; speedy trial; discovery; plea bargaining; double jeopardy; and the retroactive effect of decisions. *Prerequisite: CRJ 2210.*

**CRJ 3335. White-Collar Crime (I; 3)** This course will examine various crimes referred to as white-collar crime. The types of crimes explored will include different forms of illegal business activities, fraud, bribery, computer crimes, medical and educational crimes, embezzlement, tax evasion, conspiracy and organizational crimes, and crimes committed by the government. The purpose of the course will be to describe, analyze and assess the social impact of these types of offenses as well as examine the responsibilities, powers and activities of various agencies which have jurisdiction over these crimes. *Prerequisites: CRJ 2210 and SOC 3333.*

**CRJ 3340. Criminal Law (II; 3)** An examination of the central principles of criminal law, which include the substantive elements defining criminal conduct for specific crimes and

the various exculpatory conditions of criminal liability. *Prerequisite: CRJ 2210 and SOC 3333.*

**CRJ 3351. Seminar in Criminal Justice (I; 3)** An in-depth analysis of a contemporary issue in criminal justice. Topics may include, but are not limited to, issues related to women in crime, sex crimes, juvenile crimes, and computer crimes. Prerequisites: Completion of six semester hours in criminal justice courses and CRJ 2210 (Students may only take this course twice with different topics).

**CRJ 3362. Administration of Correctional Institutions (II; 3)** An examination of classifications, training, treatment, security, custody, and discipline in correctional institutions. *Prerequisites: CRJ 2210 and 3310.*

**CRJ 4421. Police Organization and Management (II; 3)** Administrative structures, functions and supervision of personnel in police organizations. Various models will be studied. *Prerequisites: CRJ 2210 and 2330.*

**CRJ 4432. Probation and Parole (I; 3)** Basic principles of probation of juveniles and adults. Topics include: pre-sentence, pre-hearing, pre-parole, investigations, administrative organizations, and supervision. *Prerequisites: Completion of six semester hours in criminal justice courses and CRJ 2310.*

**CRJ 4655. Juvenile Justice (I; 3)** This course is designed to introduce the student to the organizations, processes and actors that comprise the Juvenile Justice System. The emphasizes the history of the juvenile justice system, the agency interactions and interrelationships, the concepts of prevention and diversion, the development of juvenile gangs, the roles of criminal justice professionals, and the future of the Juvenile Justice System. *Prerequisite: SOC 3415.*

**CRJ 4895. Senior Capstone for Criminal Justice (II; 3)** This is a required course for criminal justice majors. The emphasis will be on the major areas of the criminal justice system which include law enforcement, the courts, and the correctional system. In addition, the review will cover various crime theories and reporting agencies. Students will develop a comprehensive project that reflects their understanding of one of the three areas of criminal justice system. The use of crime theories and statistical data bases (i.e., UCR, BJS, and other data websites) will be expected. *Prerequisite: SOC 2206, SOC 3800 and senior standing.*

**CRJ 4896. Internship in Criminal Justice (I, II; 4)** This course will consist of students working directly in a criminal justice agency or setting. The course will give students hands on experience within the field of criminal justice. Students will work 12 hours a week at the location chosen by the student and criminal justice faculty advisor. *Prerequisites: A minimum of 12 hours in criminal justice and prior approval from the faculty advisor responsible for the internship.*

## DRAMA

**DRM 1100. Introduction to Theatre (I; 3)** A study of the history and workings of the theatre together with the reading of 3-5 selected exemplary plays.

**DRM 2201. Development of Drama: Tragedy (I; 3)** A study of tragic dramatic literature and its criticism from classical through contemporary periods.

**DRM 2202. Development of Drama: Comedy (II; 3)** A study of comic dramatic literature and its criticism from classical through contemporary periods.

**DRM 2204. African American Theatre (Odd years - II; 3)** Development of African American Theatre (genres, artists, social impact, and literature).

**DRM 2215. Acting I (I; 4)** Basic training and practice in vocal, physical, and creative process skills for the actor. Will include study and experimentation in preparation of improvised and scripted scenes. Emphasis on contemporary character and role development. *Equivalent to TAG OAH027.*

**DRM 3315. Acting II (II; 4)** Advanced theory and practice of acting. Emphasis on period style in character and role development. Continued improvisation and scripted scene work. *Prerequisite: DRM 2215 or permission of the instructor.*

**DRM 3320. Theatre Design (On demand; 3)** Survey of the history and use of design in theatre including contributors and major trends. *Prerequisites: Two of the following: DRM 2201, DRM 2202, and DRM 2204.*

**DRM 3330. Directing and Stage Management (On demand; 3)** Theory and practice

in the fundamentals of play direction and stage management. *Prerequisites: Two of the following: DRM 2201, DRM 2202, and DRM 2204.*

**DRM 3350. Theatre Administration (On demand; 3)** Fundamentals and practice of administration for the arts: organization, fundraising, grantsmanship, contacts and agreements, and their importance as business requisites for performance. *Prerequisite: Junior or senior standing.*

**DRM 3360. Seminar: Extensions (On demand; 3)** Study and presentation of contemporary trends in performance art. *Prerequisites: Junior or senior standing.*

**DRM 4896. Internship / Practicum (I, II; 3)** An internship is usually an off-campus activity, and the practicum is an on campus activity with a more limited objective (or task-oriented). The practicum may be supervised by the student's departmental advisor. Before the end of the previous semester in which the student was enrolled, the student must submit a proposal to the intended supervisor and send a copy to the department chair (who later assigns the course grade). Upon completion of the activity, the student writes an exit paper and submits an evaluation form. *Prerequisite: Permission of the department chair. Equivalent to TAG OAH025.*

## EARLY CHILDHOOD EDUCATION

**ECE 2210. Introduction to Early Childhood (1, II; 3)** This course provides candidates with an overview of the major dimensions of early childhood education, including child development from birth through eight years of age, theories of early childhood education, and ethical issues relevant to early childhood education. Pre-candidates will apply knowledge by which students in early childhood construct meaning and develop skills, including the use of different types of learning strategies and play and techniques for making knowledge accessible and meaningful for all students including students who are English Language Learners and students with exceptionalities. *Prerequisites: Complete 30 hours of General Education Courses with a cum 2.5 or better and be formally admitted into the ECE Teacher Preparation Program.*

**ECE 3103. Curriculum and Instruction in Mathematics for ECE (I; 3)** This course provides ECE candidates with the ability to develop lesson and unit plans, and instructional activities in mathematics for age-appropriate students. Candidates will have the opportunity to consider the cognitive, social, emotional and physical development of young children in relationship to the learning of mathematics concepts and skills as articulated by the Ohio Common Core Standards for Mathematics content and the National Council for Teachers of Mathematics and the National Science Teachers Association. *Prerequisites: ECE 2210; EDU 2262, 2264, 2266; formal acceptance into a program in the College of Education.*

**ECE 3104. Curriculum and Instruction in Physical Science for ECE (I; 3)** This course provides ECE candidates with the ability to develop lesson and unit plans, and instructional activities in physical science for age-appropriate students. Candidates will have the opportunity to consider the cognitive, social, emotional and physical development of young children in relationship to the learning of mathematics concepts and skills as articulated by the Ohio Content Standards for Science content and the National Science Teachers Association. *Prerequisites: ECE 2210; EDU 2262, 2264, 2266; formal acceptance into a program in the College of Education.*

**ECE 3220. Child Growth and Development (1, II; 3)** This course provides an in-depth examination of the ages and stages of child growth and development from birth to eight years. Theories explaining children's physical, social, emotional, cognitive, moral and language development and programs based on these theories are analyzed and contrasted. A review of current brain research studies is used to understand implications for early childhood education. This course requires 20 clock hours of field experience in an early childhood setting to which candidates will be assigned. Students are responsible for the cost of the BCI and FBI background checks. *Prerequisites: Complete all General Education courses with a grade of "C" or better in each course and a cum GPA of 2.75, Clear BCI and FBI background check, and formal admittance into the ECE Teacher Preparation Program.*

**ECE 3240: Early Childhood Nutrition and Safety: (I; 3)** This course is designed to

provide candidates with in-depth knowledge of the safety and nutrition requirements for licensed child care providers in Ohio. Emphasis is particularly applied to safety and nutrition issues that meet the needs of the overall health for children and staff in group settings with an emphasis on classrooms and playgrounds. It provides a window into understanding how preventive health concepts differ from traditional ideas of health and safety in Early Childhood. Teacher candidates will study the connections between movement and good health and learn the skills necessary to demonstrate knowledge of the elements, characteristics, tools, technologies and materials of drama, creative movement, and dance approaches for creating developmentally meaningful drama, creative movement and dance experiences. *Prerequisites: Complete 30 hours of General Education courses with a grade of "C" or better in each course and a cum GPA of 2.75*

**ECE 3302. Learning Environments and Creative Play (I; 3)** This course focuses on the use of play in teaching language arts, mathematics, science and social studies concepts to young children. Teacher candidates will learn the skills necessary to integrate movement, art, music, technology and play in appropriate learning environments and demonstrate knowledge of the elements, characteristics, tools, technologies and materials of the visual arts and music and approaches for creating developmentally meaningful music and visual arts experiences. *Prerequisites: Complete 30 hours of General Education courses with a grade of "C" or better in each course and a cum GPA of 2.75*

**ECE 3561. Language Arts Methods for ECE/Field (1, II; 3)** This course provides experience in using developmentally appropriate curriculum, materials strategies and pedagogy in Language Arts teaching for the Early Childhood Teacher candidate. The methodology will include integrated curriculum, developmentally appropriate materials, the integration of children's literature and trade books, exposure to and analysis of a variety of commercial Language Arts textbooks, and strategies for meeting Common Core language Arts Standards. Candidates will also utilize their skills in assessing student learning as a result of their teaching and engage in planning for next steps based on assessment results Forty hours of teaching in a PreK-3 classroom is required. Students will need to secure a background check before teaching in the PreK-3 classroom. *Prerequisites: Complete all General Education courses with a grade of "C" or better in each course, complete EDU 2200, EDU 3310, EDU 3315, and EDU 3320 with a grade of "B" or better, a cum GPA of 2.75, Clear BCI and FBI background checks, and formal admittance into the ECE Teacher Preparation Program.*

**ECE 3562. Mathematics Methods for ECE/Field (1, II; 3)** This course provides experience in using developmentally appropriate curriculum, materials, strategies and pedagogy in Mathematics teaching for the Early Childhood Teacher candidates. The methodology will include integrated curriculum, developmentally appropriate, hands-on experiences in mathematics, exposure to and analysis of a variety of commercial math teaching programs, and strategies for meeting Common Core Math standards. Candidates will also utilize their skills in assessing student learning as a result of their teaching and engage in planning for next steps based on assessment results. Forty hours of teaching in a PreK-3 classroom is required. Students will need to secure a background check before teaching in the PreK-3 classroom. *Prerequisites: Complete all General Education courses with a grade of "C" or better in each course, complete ECE 3315 and MTH 3000 with a "B" or better, a cum GPA of 2.75, Clear BCI and FBI background checks, and formal admittance into the ECE Teacher Preparation Program.*

**ECE 3571. Social Studies Methods for ECE/Field (1, II; 3)** This course provides experience in using developmentally appropriate curriculum, materials, strategies and pedagogy in Social Studies teaching for the Early Childhood Teacher candidate. The methodology will include an overview of the four disciplines included in early childhood Social Studies, history, Geography, economics and citizenship, as well as integrated curriculum, developmentally appropriate materials, the incorporation of children's literature and trade books, developmentally appropriate, hands-on experiences in Social Studies, exposure to and analysis of a variety of commercial Social Studies textbooks, and strategies for meeting Ohio Social Studies Standards. Candidates will also

utilize their skills in assessing student learning as a result of their teaching and engage in planning for next steps based on assessment results. Forty hours of teaching in a PreK-3 classroom is required. Students will need to secure a background check before teaching in the PreK-3 classroom. *Prerequisites: Complete all General Education courses with a grade of "C" or better in each course, a cum GPA of 2.75, Clear BCI and FBI background checks, and formal admittance into the ECE Teacher Preparation Program.*

**ECE 3572. Science Methods for ECE/Field (1, II; 3)** This course provides experience in using developmentally appropriate curriculum, materials, strategies and pedagogy in Science teaching for the Early Childhood teacher candidate. The methodology will include integrated curriculum, hands-on, experiential learning including interactions with the natural world, exposure to and analysis of a variety of commercial Science programs, strategies for meeting Common Core Science Standards, appropriate science experiments and demonstrations, safety and storage of lab materials, and features of scientific thought and inquiry. Candidates will also utilize their skills in assessing student learning as a result of their teaching and engage in planning for next steps based on assessment results. Forty hours of teaching in a PreK-3 classroom is required. Students will need to secure a background check before teaching in the PreK-3 classroom. *Prerequisites: Complete all General Education courses with a grade of "C" or better in each course, complete ECE 3315 with a "B" or better, a cum GPA of 2.75, Clear BCI and FBI background checks, and formal admittance into the ECE Teacher Preparation Program.*

**ECE 3881. Early Childhood Capstone (I, II; 3)** This course is designed to improve content knowledge, skills and assessment strategies for candidates preparing to be Early Childhood Education teachers of students ages 3 through 8. This course is aligned with the Special Program Area Standards, Ohio Teaching Standards and the elements of the OAE Content and Professional Knowledge assessments. Candidates learn self-direction in mastering content concepts, skills and pedagogy to prepare for teaching as an Early Childhood Education Teacher and completion of the Teacher Work Sample (TWS). Prerequisites: All courses in the candidate's program, including general education, professional education, and content courses, must be completed before registering for this course, cum GPA 2.75 or above, approval of Director of Field and Clinical Experience, Early Childhood Education Program Coordinator and Department Chair; co-requisite: EDU 4491. Candidates must register for this seminar one semester before the course begins, i.e. Register in spring for fall class; Register in fall for spring class.

**ECE 4420. Professional Ethics and Responsibilities (II; 3)** This course is designed to address the NAEYC standards of professional development and ethics, including the responsibility in early childhood education to foster DAP learning in urban schools. *Prerequisites: Complete all General Education courses with a grade of "C" or better in each course, complete ECE 3320 and ECE 4435 with a grade of "B" or better, a cum GPA of 2.75, and formal admittance into the ECE Teacher Preparation Program.*

**ECE 4430. Family and Community Relations (II; 3)** Provides practice in working with families and identifying community resources to assist with the growth and development of the young child and examines ecological theories of development. *Prerequisites: Complete all General Education courses with a grade of "C" or better in each course, complete ECE 3320 and ECE 4435 with a grade of "B" or better, a cum GPA of 2.75, and formal admittance into the ECE Teacher Preparation Program.*

**ECE 4435 Observing, Documenting, and Assessing Young Children (II; 3)** This course prepares teacher candidates to assess young children in diverse settings. Students are trained in the art and science of observation and appropriate and detailed documentation, in order to assess and evaluate the learning progress young children are making. Students are trained to make programmatic and curricular changes based on assessment information. This course requires 20 clock hours of field experience in an early childhood setting to which candidates will be assigned. Students are responsible for the cost of the BCI and FBI background checks. *Co-requisite: any ECE Methods course; Prerequisites: Complete all General Education courses with a grade of "C" or better in each course, complete*

*ECE 3320 and ECE 3302 with a "B" or better, a cum GPA of 2.75, clear BCI and FBI background checks and formal admittance into the ECE Teacher Preparation Program.*

## ECONOMICS

**ECO 2200. Introduction to Economics (I, II, III; 3)** This course introduces non-business majors to a broad understanding of economics. It shows how an understanding of economics leads to an understanding of business structure in the United States. It also covers terms used in analyzing economic variables, social and economic institutions, and the various functions of economists.

**ECO 2210. Principles of Microeconomics (I, II; 3)** This course covers such important subjects as economic resources, scarcity, opportunity cost, supply and demand, the theory of the firm, cost of production, and various types of markets for goods and factors of production. *Equivalent to TAG OSS004.*

**ECO 2220. Principles of Macroeconomics (I, II; 3)** This course introduces students to important macroeconomics subjects, such as national income, aggregate consumption, employment, inflation, economic development, international economics, and the multiplier effect. *Prerequisite: ECO 2210. Equivalent to TAG OSS005.*

**ECO 2230. Economic Growth and the Problems of Underdeveloped Nations (II; 3) (Odd Years)** This course introduces an empirical and theoretical consideration of long-term economic changes, including changes in industrial technology, structure, and level of national product with emphasis on developing economies. *Prerequisites: ECO 2210 and ECO 2220.*

**ECO 2260. Urban Economics (I; 3 (Even Years)** This course covers development of political/economic theoretic perspectives for applied problem-solving in the urban economic context. The following problem areas will be surveyed: employment, education, poverty, crime, health, housing, transportation, and environment. *Prerequisites: ECO 2210 and ECO 2220.*

**ECO 2270. Economic Problems of the Black Community (II; 3)** This course analyzes current economic problems based upon the history of socioeconomic roadblocks to progress.

**ECO 2280. Comparative Economic Systems (II – even years; 3)** A study of economic decision-making, including institutions, ideology and practices, by comparing capitalist, socialist and communistic economic systems. *Prerequisites: ECO 2210 and ECO 2220.*

**ECO 3300. Consumer Economics (II; 3)** This course is designed to help students become well-informed consumers in the U.S. economy. Available aides and restrictions, as well as personal budgeting, the consumer credit market, purchase of stocks and bonds, insurance, and similar topics will be discussed.

**ECO 3320. Money and Banking (I; 3)** This course analyzes the nature and significance of money, the commercial banking system, the Federal Reserve System, and the impact of monetary policy on money supply and the stabilization of price levels. *Prerequisites: ECO 2210 and ECO 2220.*

**ECO 3330. Intermediate Microeconomic Theory (II; 3)** This course analyzes value and distribution, the theory of household behavior and the theory of the firm. Whenever possible, theoretic economic concepts are provided in an operational context with the main emphasis being on the tools of economic thinking. *Prerequisites: ECO 2210 and ECO 2220.*

**ECO 3340. Intermediate Macroeconomic Theory (II; 3)** This course is designed to implement a mathematical approach in the calculation of national income accounting, aggregate consumption, saving, inflation, employment, fiscal and monetary policy, and international trade. *Prerequisites: ECO 2210 and ECO 2220.*

**ECO 3350. Public Finance (I; 3)** This course analyzes principles, practice, justice, taxation, public spending, public debt, tax reform, and fiscal policy. *Prerequisites: ECO 2210 and ECO 2220.*

**ECO 3360. International Economics (I; 3)** This course evaluates comparative advantage, balance of payments, tariffs, foreign exchange, inflow and outflow of capital, and other topics related to international finance. *Prerequisites: ECO 2210 and ECO 2220.*

**ECO 3370. Labor Economic Problems (II; 3) (Odd Years)** This course examines demographic characteristics and labor force participation rates by

various segments of the population. It includes analysis and comparisons of American and European labor unions and labor markets, as well as the impact of unemployment on the American economy. *Prerequisites: ECO 2210 and ECO 2220.*

**ECO 4450. Independent Study in Economics (I, II; 1-3)** This course requires supervised reading in economics for students of superior ability. It provides an opportunity for advanced work through reading, research and discussion in an area of particular interest to the student. *Prerequisites: ECO 3330 and ECO 3340, at least junior standing, and permission of the instructor.*

**ECO 4466. Internship in Economics (III; 1-6)** Students may complete an internship during the summer semester with a major organization or company. The internship is designed for the economics major to gain practical experience. Up to 6 semester hours may be earned and students must register before applying for an internship. *Prerequisite: Permission of the Department Chair.*

**ECO 4895. Senior Seminar in Economics (II; 3)** This course prepares seniors to discuss and present seminar papers on such economic problems as inflation, unemployment, minority economic problems, fiscal policy and topics related to international economy. This is a capstone course designed to prepare seniors for their major field exam. *Prerequisites: ECO 3330, ECO 3340 and senior standing.*

## EDUCATION

**EDU 1210. The Residence Life Experience (II; 3- On Demand)** This introduction to the role of the Resident Assistant, includes Student Affairs theory, Higher Education Best Practices, Leadership theory, and Critical and Creative thinking. Emphasis on developing community among residence life staff members. Classroom instruction will be supplemented by other training programs such as fall pre-service training, staff meetings, and in-service training. The objective is to provide students with the knowledge and skills to be effective RAs. *Prerequisite: Permission of instructor.*

**EDU 2200. Introduction to the Teaching of Reading (I, II; 3)** An introductory overview course reviewing current research, approaches, and methodology of teaching reading and literacy processes and skills in today's schools. The course is intended to introduce candidates to: (a) an understanding of the reading process; (b) a knowledge of research-based reading and literacy strategies; (c) competencies and attitudes for teachers of literacy; and (d) acquaintance with materials used in teaching, reading, writing, and spelling. *Prerequisite: EDU 2300, EDU 2264, EDU 2262; formal acceptance into a teacher preparation program.*

**EDU 2300. Educational Psychology (I, II; 3)** This course addresses systems of learning theory and social development. Candidates are exposed to prominent theorists and research that shape current educational programs. Through this course prospective teachers should understand the interactions of the cognitive, behavioral, and intelligence theories that provide the basis for sound educational planning. *Prerequisite: None. Equivalent to TAG OED003.*

**EDU 2500. Professional Education Seminar (I, II, III; 2)** This first seminar in Education is for students who have interest in joining the College of Education for their studies. Topics related to the standards and assessments significant to teaching and becoming a teacher will be addressed. Candidates will be introduced to Ohio and National Expectations for teaching and learning and the assessment process for teacher candidates and their assessment of student learning. Candidates preparing to teach will be introduced to requirements, responsibilities, skills and dispositions involved in becoming successful teacher candidates at Central State University. *Prerequisites: Sophomore standing; completion of a minimum of 40 semester hours; successful completion of the General Education writing and math requirement; having passed the PPST or ACT of 21; a GPA of 2.7.*

**EDU 2600. Introduction to Teacher Education (I, II, 3)** This course is designed to address aims of education and role of schools in a democratic society. Students will have the opportunity to study economic, legal and political context of schools in America. Additionally, culturally responsive and inclusive teaching; legal issues and professional responsibilities of teaching profession will be examined. Successful completion of this course for

formal admission into a program in the College of Education.

**EDU 3205. Adolescent and Young Adult Literature (I, II; 3)** Candidates will critically study and evaluate the genre and its connections to other forms of literature, examine the modes and themes in the literature, discuss and apply theories undergirding the teaching of young adult literature, investigate strategies for encouraging student reading, and consider how young adult literature can be used to promote both life-long reading and critical thinking. The candidates will meet these goals by using young adult literature commonly found in courses in nearby school districts. Pre-requisites: Formal acceptance into the AYA Integrated Language Arts Program

**EDU 3262: Educational Foundations (I, II; 3)** This course is designed for the pre-professional development of historical, philosophical and sociological perspectives for successful teaching and learning in schools. Students will have the opportunity to experience diverse school, community and college laboratory settings, and to explore the various options in classroom teaching to help them determine whether teaching is the appropriate field for them. Successful completion of this course is required for formal admission into a program in the College of Education.

**EDU 3263: Classroom Management and Student Discipline (I, II; 3)** This course is designed to teach the various strategies and techniques for managing a classroom. The major emphasis is placed on a preventive problem approach. Consideration is given to identifying inappropriate classroom behavior, and on selecting and applying appropriate techniques for modifying inappropriate behavior. Candidates will investigate various classroom management models and research. In addition, attention is given to designing the learning environment to maximize teaching effectiveness. Candidates are required to spend 20 clock hours observing in pre K-12 classrooms. Guidelines will be provided describing the activities to complete during the field observation. Students are responsible for the cost and submission of clear BCII and FBI background checks.

**EDU 3264: Multicultural Education (I, II; 3)** This course is designed to focus on interrelationships of social forces and education, including an introduction to multicultural and global issues in contemporary society, and their application to the educational process and schooling. This course provides strategies for supporting the needs of diverse populations in the classroom. Successful completion of this course is required for formal admission to a program in the College of Education. Twenty (20) clock hours in field placements is required in which students will connect the day-to-day classroom environment to the concepts they are learning in this course. Guidelines will be provided describing the activities to complete during the field experience. Students are responsible for their own transportation to field site. Prerequisites: Clear BCII and FBI background check.

**EDU 3265. Educational Technology (I, II; 3)** This course provides students with the definition of Educational Technology and discusses the importance of educational technology in the Information Age by examining the future of teaching and learning as it relates to Information Age trends. These include constructivism and student-centered learning, constructionism, project-based learning and higher-order learning. Explanations to the concepts of affordances, digital natives, web 2.0 and learning 2.0 will be covered. 21st century skills and the ISTE national educational technology standards will be discussed so when choosing a learning method, the ISTE national educational technology standards will be met. Students will learn the use of managing a wiki for student-centered learning, how to create and configure a class blog and how to create a website. Google Drive applications will be discussed to support student-centered learning. Explanations on how using different technologies can support location-based learning, including global positioning systems, augmented reality and mapping tools. Students will learn about selecting appropriate technological tools and applications for a project. Quality of resourced based learning activities will be embraced including the key practices needed to determine the accuracy of an information source. The children's Internet protection act and its effect on schools will be clarified. Components of the interactive whiteboard systems and how to choose activities that support higher-order learning will be elucidated. The key concepts related to distance learning will be explained and the major

reasons that educational institutions provide distance learning and how to identify the learning tools needed for synchronous distance learning.

**EDU 3266: Individuals with Special Needs: Inclusion and Collaboration (I, II; 3)** This course provides an overview of the characteristics of children for whom educational modifications are necessary in the general education classroom. Exceptional children include individuals with mental retardation, the intellectually gifted, children with auditory handicaps, the visual handicaps, and children with specific learning and behavioral disabilities. Candidates will be introduced to models of differentiated instruction and various types of assistive technology to help all children learn. Students are required to spend 20 clock hours observing in preK-12 classrooms. Guidelines will be provided describing the activities to complete during the field observation. Students are responsible to provide their own transportation to placement site.

**EDU 3310. Language and Literacy/Microteaching (I, II; 3)** This course focuses on the language development and literacy growth of young children, ages birth through eight years. Strategies for planning, teaching, and assessing a high quality, early childhood language arts program will be emphasized. The course includes an opportunity for students to engage in microteaching experiences requiring them to plan and practice-teach in diverse settings as a way to develop their teaching proficiencies. *Prerequisites: EDU 2200, EDU 3262, EDU 3264,EDU 3266; formal acceptance into a teacher preparation program.*

**EDU 3315. Teaching Reading Through Children's Literature/Microteaching (I, II; 3)** This course looks at the current knowledge base of the reading process as it influences the use of children's literature for reading instruction in early and middle childhood. Particular emphasis is placed on teaching to elicit personal response, reading for different purposes, appreciation of a range of culturally responsive literature. The course examines the reading curriculum for early and middle grades, particularly the Ohio Common Core Content Standards for English Language Arts. It includes an opportunity for students to engage in microteaching experiences requiring them to plan and practice-teach in diverse settings as a way to develop their teaching proficiencies. *Prerequisites: EDU 2200, EDU 3262, EDU 3264,EDU 3266; formal acceptance into a teacher preparation program.*

**EDU 3320. Phonics and Reading/Microteaching (I, II; 3)** This course focuses on the research and knowledge concerning phonemic awareness, phonics, and fluency and their relationship to skill development in reading. It focuses on learning to identify words by using specific skills and on understanding the challenges of using the skills in learning to read. The course includes an opportunity for students to engage in microteaching experiences requiring them to plan and practice-teach in diverse settings as a way to develop their teaching proficiencies. *Prerequisite: Must be formally admitted to a teacher preparation program.*

**EDU 3325. Assessment and Measurement (I, II; 3)** This course focuses on developing the skills necessary to become effective assessors of student learning, with emphasis on identifying instructional objectives and using the evaluation results to modifying the content, pace, format, and style of delivery. Covered in this course will be fundamentals of varied classroom assessments, such as pre-tests, formative and summative tests, authentic assessments and concepts of standardized testing. Candidates will develop assessments and analyze how assessment data is used to improve instruction and learning. Pre-requisite: formal acceptance into a teacher preparation program.

**EDU 3330. Teaching Reading in the Content Areas/ Microteaching (I; 3)** An introduction to the range of strategies and programs for teaching the reading process in the content area, including the nature of the reading process, assessment techniques and instructional strategies to increase comprehension. The use of trade books and informational books in the microteaching experiences requiring candidates to plan and practice-teach in diverse settings as a way to develop their teaching proficiencies. Specific course assignments and microteaching experiences are tailored to the student's licensure areas. Pre-requisite: formal admittance into a teacher preparation program.

**EDU 3340**. **Special Education Law (I, II; 3)** Special Education Law focuses on the study of court cases, state-level

legislation and related historical events that preceded the passage of the *Individuals with Disabilities in Education Act (IDEA) and Every Student Succeeds Acts (ESSA).* This course covers definitions, procedural requirements and legal safeguards of IDEA of IDEA and ESSA, and is essential in the preparation of INS candidates to be successful on the Ohio Assessment for Educators (OAE). Emphasis will be placed on how the ODE is meeting and exceeding federal requirements. *Pre-requisites:* EDU 2262, EDU 2264 and EDU 2266 and formal acceptance into a teacher preparation program.

**EDU 3341. Survey of Exceptional Students/Mild-Moderate (I, II; 3)** This course provides background in the foundations and theories, etiology, diagnosis, and individual learning differences of individuals with mild to moderate disabilities. *Pre-requisites:* EDU 2262, EDU2264, and EDU2266 and formal acceptance into a teacher preparation program.

**EDU 3361. Middle Level and AYA Language Arts Methods/Field Experience (I, II; 3)** This course will provide teacher candidates of Middle Level and Adolescent youth with various teaching and assessment strategies and models which provide language arts concepts and skills learning necessary for students to both understand and apply language arts concepts and skills in various contexts. The course will include a field dimension of at least 60 hours in which candidates will be assigned to work with a field teacher in an appropriate setting. During this time, candidates will gain greater command of their abilities to plan, implement and evaluate student learning in language arts, manage the classroom and differentiate their instruction to meet individual student learning needs. Evaluation of candidate performance will be a collaborative effort between the university instructor and the field teacher using established assessment instruments. Candidates will be required to have state-required FBI and BCII Background checks before teaching in grades 4 through 9 and 7 through 12 classrooms. It is the student's responsibility to secure the appropriate background checks. *Prerequisites: Formal acceptance into a teacher preparation program. Approval of Program Advisor.*

**EDU 3362. Middle Level and Adolescent Mathematics Methods/Field Experience (I, II; 3)** This course will provide teacher candidate of Middle Level and Adolescent youth with various teaching and assessment strategies and models which provide mathematics concepts and skill learning necessary for students to both understand and apply mathematics concepts and skills in various contexts. The course will include a field dimension of at least 60 hours in which candidates will be assigned to work with a field teacher in an appropriate setting. During this time, candidates will gain greater command of their abilities to plan, implement and evaluate students in mathematics, manage the classroom and differentiate their instruction to meet individual student learning needs. Evaluation of candidate performance will be a collaborative effort by the university instructor and the field teacher using established assessment instruments. Candidates will be required to acquire state-required FBI and BCII Background checks before teaching in grades 4 through 9 and 7 through 12 classrooms. Financial outlay required to pay for background checks. *Prerequisite: Approval of Program Advisor.*

**EDU 3371. Middle Level and Adolescent Social Studies Methods/Field Experience (I, II; 3)** This course will provide teacher candidates of Middle Level and Adolescent youth with various teaching and assessment strategies and models which provide social studies concepts and skill learning necessary for students to both understand and apply social studies concepts and skills in various contexts. The course will include a field dimension of at least 60 hours in which candidates will be assigned to a field teacher in an appropriate setting. During this time, candidates will gain greater command of their abilities to plan, implement and evaluate students in social studies, manage the classroom and differentiate their instruction to meet individual student learning needs. Evaluation of candidate performance will be a collaborative effort between the university instructor and the field teacher using established assessment instruments. Candidates will be required to acquire state-required FBI and BCII background checks before teaching in grades 4 through 9 and 7 through 12 classrooms. Financial outlay required to pay for background checks. *Prerequisite: Approval of Content advisor.*

**EDU 3372. Middle Level and Adolescent Science**

**Methods/Field Experience (I, II; 3)**.This course will provide teacher candidates of Middle Level and Adolescent youth with various teaching and assessment strategies and models, which provide science concepts and skill learning necessary for students to both understand and apply science concepts and skills in various contexts. The course will include a field dimension of at least 60 hours in which candidates will be assigned to work with a field teacher in an appropriate setting. During this time, candidates can differentiate their instruction to meet individual student learning needs. Evaluation of candidate performance will be collaborative effort between the university instructor and the field teacher using established assessment instruments. Candidates will be required to acquire state-required FBI and BCII Background checks before teaching in grades 4 through 9 and 7 through 12 classrooms. Financial outlay to pay for the background checks. *Prerequisites: Approval of Program Advisor.*

**EDU 3851. Intervention Specialist Capstone (I, II; 4)** This course is designed to improve content knowledge, skills and assessment strategies for candidates preparing to be Intervention Specialist teachers of students in grades K-12. The program is aligned with the Special Program Area Standards, Ohio Teaching Standards and the elements of the OAE Content and Professional Knowledge assessments. Students learn self-direction in mastering content concepts, skills and pedagogy to prepare for teaching as an Intervention Specialist and completion of the Teacher Work Sample (TWS). Prerequisites: All courses in the candidate's program, including general education, professional education, and content courses, must be completed before registering for this course, cum GPA 2.75 or above, approval of Director of Field and Clinical Experience, Intervention Specialist Program Coordinator and Department Chair; co-requisite: EDU 4491. Candidates must register for this seminar one semester before the course begins, i.e. Register in spring for fall class; Register in fall for spring class.

**EDU 3861. Language Arts Content Capstone (I, II; 4)** This course is designed to improve content knowledge, skills and assessment strategies for better comprehension of Language Arts Content for middle and AYA programs as aligned with Special Program Area Standards, Ohio Teaching Standards and Ohio Common Core Language Arts Content Standards. Candidates learn self-direction in mastering Language Arts content concepts, skills and pedagogy to prepare for teaching and completion of the Teacher Work Sample (TWS). Prerequisites: All courses in the candidate's program, including general education, professional education, and content courses, must be completed before registering for this course, cum GPA 2.75 or above, approval of Director of Field and Clinical Experience, Language Arts Program Coordinator and Department Chair; co-requisite: EDU 4491. Candidate must register for this seminar one semester before the course begins, i.e. Register in spring for fall class; Register in fall for spring class.

**EDU 3862. Mathematics Content Capstone (I, II; 4)** This course is designed to improve content knowledge, skills and assessment strategies for better comprehension of Mathematics content for middle and AYA programs, as aligned with Special Program Area Standards, Ohio Teaching Standards and Ohio Common Core Mathematics Content Standards. Candidates learn self-direction in mastering Mathematics content concepts, skills and pedagogy to prepare for teaching and completion of the Teacher Work Sample (TWS). Prerequisites: All courses in the candidate's program, including general education, professional education, and content courses, must be completed before registering for this course, cum GPA 2.75 or above, approval of Director of Field and Clinical Experience, Mathematics Program Coordinator and Department Chair; co-requisite: EDU 4491. Candidate must register for this seminar one semester before the course begins, i.e. Register in spring for fall class; Register in fall for spring class.

**EDU 3871. Social Studies Content Capstone (I, II; 4)** This is a course to improve content knowledge, skills and assessment strategies for better comprehension of Social Studies content and to improve skills and assessment strategies for middle and AYA programs as aligned with the Special Program Area Standards, Ohio Teaching Standards and Ohio Content Standards for the Social Studies. Candidates learn self-direction in mastering Social Studies content concepts, skills and pedagogy to prepare for teaching and completion of the Teacher Work Sample (TWS).

Prerequisites: All courses in the candidate's program, including general education, professional education, and content courses, must be completed before registering for this course, cum GPA 2.75 or above, approval of Director of Field and Clinical Experience, Social Studies Program Coordinator and Department Chair; co-requisite: EDU 4491. Candidate must register for this seminar one semester before the course begins, i.e. Register in spring for fall class; Register in fall for spring class.

**EDU 3872. Science Content Capstone (I, II; 4)** This is a course to improve content knowledge, skills and assessment and to improve skills and assessment strategies for better comprehension of Science content for middle and AYA programs as aligned with Special Program Area Standards, Ohio Teaching Standards and Ohio Science Content Standards. Candidates learn self-direction in mastering science content concepts, skills and pedagogy to prepare for teaching and completion of the Teacher Work sample (TWS). Prerequisites: All courses in the candidate's program, including general education, professional education, and content courses, must be completed before registering for this course, cum GPA 2.75 or above, approval of Director of Field and Clinical Experience, Science Program Coordinator and Department Chair; co-requisite: EDU 4491. Candidate must register for this seminar one semester before the course begins, i.e. Register in spring for fall class; Register in fall for spring class.

**EDU 4491. Student Teaching (I, II; 9)** A semester of practical teaching experience at the relevant early childhood, middle level, adolescent to young adult and K-12 levels in public or private schools located in rural, urban and suburban settings. The candidate is under the daily supervision of the field supervisor in a classroom appropriate for the teacher candidate's preparation, and periodic supervision of the University Supervisor, who has experience and education in the area of the candidate's preparation. It is expected that the candidate will successfully exhibit the appropriate skills in lesson planning, lesson presentation, assessment, and classroom management expected of a novice teacher. Co-requisite: EDU 3000 class series. Candidate must register for this course one semester before the course begins, i.e., register in spring for fall class; register for fall in spring class. Prerequisites: All courses in the candidate's program, professional education and general education, must be completed before registering for student teaching, GPA 2.75 or above, clear FBI and BCII background check, passing scores for Ohio Assessment for Educators: Content and Professional Knowledge approval from Director of Field and Clinical Experience Program Coordinator and Department Chair. Students are responsible for the cost of the BCII and FBI background checks.

**EDU 4895. Capstone Seminar (I, II; 3)** This culminating professional education course focuses on the requisite professional knowledge, skills and dispositions required of teacher candidates completing the Central State University, College of Education Teacher Preparation Programs. The seminar focuses on the cumulative pre-professional development of relevant knowledge bases, performance skills and dispositions as aligned with the College of Education's Conceptual Framework (CF), the Special Program Areas (SPA's), the Ohio Standards for the Teaching Profession (OSTP), the Ohio Assessment for Educators (OAE) I Content and the Professional Education Examinations. Candidates learn self- direction in mastering specific content in licensure area, skills and pedagogy to prepare for teaching and completion of the Teacher Work Sample (TWS). Prerequisites: All courses in the candidate's program, including general education, professional education, and content courses, must be completed before registering for this course, cum GPA 2.75 or above, approval of Director of Field and Clinical Experience, Science Program Coordinator and Department Chair; co-requisite: EDU 4491. Candidate must register for this seminar one semester before the course begins, i.e. Register in spring for fall class; Register in fall for spring class.

## ENGLISH

**ENG 1100. Introduction to Writing and Reading for College (I, II, III; 5)** An intensive introduction to writing and reading for college. Students will read literary and non-literary texts and compose essays that demonstrate proficiency in college-level writing and mechanics. At least one paper will be a reader-response essay based on a literary text. Students will also be introduced to the basic principles of documentation and write one essay using documentation.

Lecture/discussion periods will focus on assigned readings and the conventions of academic prose, including elements of Standard English grammar and mechanics. Individualized and small group work on the writing process is included.

**ENG 1101. Introduction to Writing for College (I, II, III; 4)** Informative writing based on literary and non-literary texts. Students will compose essays that demonstrate proficiency in mechanics. At least one paper will be a reader-response essay based on a literary text. Students will also be introduced to the basic principles of documentation and write one essay using documentation. Individualized and small group work on the writing process included.

**ENG 1102. ENG 1102. Writing and Researching the Essay (I, II; 4)** Research-based analytic and argumentative writing using library and Internet sources. Students will continue to develop proficiency in college-level writing and mechanics. Students will write brief essays and at least one longer research paper using both print and electronic sources. The research paper will be oriented toward the student's major field or area of interest. *Prerequisite: Grade of C or above in ENG 1100 or ENG 1101 or equivalent.*

**ENG 2020. Vocabulary Development and Applications (I, II, and on-demand; 2)** This is the first of three linguistics courses. It traces the growth and structure of English vocabulary, from its beginnings to contemporary American usage, and from the Anglo-Saxon and Nordic base, to the contributions of Classical Latin and Greek, medieval French, and modern European, Asian, and African languages. Topics include affixes and roots; patterns of word formation, pronunciation, and semantic change; and standard and nonstandard usage, with discussions of jargon, slang, and colloquialisms. Other considerations include neologisms, idioms, abbreviations, and names. For expansion and refinement of one's vocabulary. Recommended for pre-professional majors. Not for General Education. *Prerequisite: ENG 1100 or ENG 1101 or equivalent.*

**ENG 2100. Great Books, Great Films (I; 3) A** writing-intensive course focusing on the study of significant literary works and their film adaptations. Students will investigate the relationship between literary texts and film adaptations and learn how to read, view, discuss, and write about literature, film, and their intersections. *Prerequisite: ENG 1102.*

**ENG 2101. Literature and the Global Village (I; 3)** A writing-intensive course focusing on issues of globalization and culture as expressed through literature. Includes texts from a range of periods and cultures. *Prerequisite: ENG 1102.*

**ENG 2102. Literature and Our Times (II; 3) A** writing-intensive course focusing on literature from a range of periods and cultures as it relates to contemporary social and political issues. *Prerequisite: ENG 1102.*

**ENG 2103. The Literary Tradition (II; 3)** A writing intensive course focusing on major authors and master works of literature written in English; for example, Chaucer, Shakespeare, Wordsworth, Dickens, Poe, Twain, Morrison, Wright. *Prerequisite: ENG 1102.*

**ENG 2115. Literature and Gender (I; 3)** A writing intensive course focusing on the status, roles, and related experiences of men and women as expressed through literature. Examines ideas of masculinity and femininity during different historical periods and from various cultural perspectives. *Prerequisite: ENG 1102.*

**ENG 2200. Introduction to Literary Studies (I II, III; 3)** An appreciation of literature through a variety of critical perspectives. Includes the study of literary types, forms, and techniques using historical and modern literary examples. Students meet the literature faculty, discuss career choices for English majors, and preview the required and elective courses in the major. *Pre- or co-requisite ENG 1102.*

**ENG/FLA 2290. Foreign Literature in Translation (On demand; 3)** A reading and discussion course for non-majors designed to acquaint the student with selected major works by foreign language authors in translation. Emphasis on European, Latin American, and Francophone African writers. Content may change each time offered. May be repeated for credit when content changes.

**ENG/FLA 2293. Hispanic American Literature in Translation (On demand; 3)** An introductory reading and discussion course to acquaint students with foundational overview of Hispanic America from her encounter with Europe

until her independence from Spain through selected major works by Hispanic American authors in English translation. Works to be studied are written or set in colonial and post-colonial periods in Hispanic America. The course will give students the opportunity to study the selected works and to analyze and interpret them in their socio-cultural, historical, and political contexts. *Prerequisite: None; Gen Ed course*.

**ENG/FLA 2294. Francophone African Literature in Translation (On demand; 3)** An introductory reading and discussion course to acquaint students with selected major works by Francophone African authors in English translation. Works to be studied are written or set in pre-colonial, and post-colonial periods in Francophone Africa. The course will give students the opportunity to study the selected works and to analyze and interpret them in their socio-cultural, historical, and political contexts. *Prerequisite: None; Gen Ed course.*

**ENG/FLA 2295. The African Storyteller (On demand; 3)** An introductory course on traditional story-telling in Africa. African storytellers do not merely narrate stories; there is performance. The course will examine the art of the African storyteller including image, narrative technique, rhythm and symbolism. African storytelling from oral to written form will also be discussed. Students will have the opportunity to study performance and aesthetics of African oral narratives, and interpret them within their socio-cultural relevance. *Prerequisite: None; Gen Ed course.*

**ENG 2300. Introduction to Creative Writing (On demand; 4)** Introduction to the study and practice of various forms of creative writing. Students will read and write a variety of published stories, essays, poems, or drama in terms of craft and learn how to apply the techniques of other writers to their writing. Students who successfully complete this course will have a working knowledge of creative writing and should be better prepared to go on to intermediate and advanced levels in the genre of their choice. *Prerequisite: ENG 1100 or 1101.*

**ENG 2310. Creative Nonfiction Workshop (On demand; 3)** Intermediate and continuing practice and proficiency in creative writing with a focus on the art of nonfiction. This course offers students the further exposure to the most recent techniques, conventions, and narrative strategies of today's creative nonfiction writing across various nonfiction markets. Students generate original works and receive feedback through the workshop process for revision. Students collect and compose revised work for submission at semester's end. *Prerequisite: ENG 1100 or 1101 and ENG 2300.*

**ENG 2320. Poetry Workshop (On demand; 3)** Intermediate and continuing practice and proficiency in creative writing with a focus on the art of poetry. This course offers students the further exposure to the most recent techniques, conventions, and narrative strategies of today's poetry writing across various markets. Students generate original works and receive feedback through the workshop process for revision. Students collect and compose revised work for submission at semester's end. *Prerequisite: ENG 1100 or 1101 and ENG 2300.*

**ENG 2330. Fiction Workshop (On demand; 3)** Intermediate and continuing practice and proficiency in creative writing with a focus on the art of fiction. This course offers students the further exposure to the most recent techniques, conventions, and narrative strategies of today's fiction writing across various fiction markets. Students generate original works and receive feedback through the workshop process for revision. Students collect and compose revised work for submission at semester's end. *Prerequisite: ENG 1100 or 1101 and ENG 2300.*

**ENG 2400. Introduction to Rhetoric (I, II; 4)** Students will begin to learn the foundational concepts and theories of rhetoric (defined by the department as the art communication, persuasion, and argumentation). Students will engage with literary and rhetorical texts in order to make connections between those texts and their mutual influences on one another. Students will further use their knowledge to ractice the concepts and theories as they apply to potential professional and/or career Writing. In this writing intensive class, students will compose using various modes. *Prerequisite: ENG 1100 or ENG 1101.*

**ENG 3000. Advanced Composition (I, II, III; 2)** Students will read, analyze, and write informative and persuasive essays, with a focus on voice, purpose, and style. Analysis of the effective use of evidence in

the construction of arguments and review of the use of documentation. Includes instruction in the preparation of resumes and professional letters. *Prerequisite ENG 1102 or equivalent.*

**ENG 3001. Technical Writing (Odd years - II; 3)** **Fundamental** principles and skills used in scientific and technical writing and research. *Prerequisite ENG 1102.*

**ENG 3006. Creative Writing: Poetry and Short Story (II; 3)** Directed experience in the writing of poetry and short stories. Includes practice in traditional and contemporary concepts of form, reading and discussion of a wide range of traditional and modern texts, and presentation and discussion of student's creative works. *Prerequisite: ENG 1102.*

**ENG/FLA 3010. African Literature (II; 4)** Studies of texts written in English and English translations of texts written by the descendants of peoples indigenous to the African continent. May include oral literature, essays, poetry, fiction, and drama. *Prerequisite: ENG 2200 or instructor permission.*

**ENG 3020. African American Literature I (I; 3)** Studies of significant African American writers from 1746 to 1912. *Prerequisite: ENG 2200 or instructor permission.*

**ENG 3021. African American Literature II (II; 3)** Studies of significant African American writers from 1913 to the present. *Prerequisite: ENG 2200 or instructor permission.*

**ENG 3030. American Literature I (I; 3)** Studies of significant American texts from the colonial period to 1860. *Prerequisite: ENG 2200 or instructor permission. Equivalent to TAG OAH053.*

**ENG 3031. American Literature II (II; 3)** Studies of significant American texts from 1860 to the present. *Prerequisite: ENG 2200 or instructor permission.*

**ENG 3040. British Literature I (I; 3)** Studies of significant British texts from Beowulf through 1789. *Prerequisite: ENG 2200 or instructor permission.*

**ENG 3041. British Literature II (II; 3)** Studies of significant British texts from 1789 to the present. *Prerequisite: ENG 2200 or instructor permission.*

**ENG 3051. World Literature I (I; 3)** The study of representative world literatures from the classical eras to 1900 (excluding African, American, and British literature). The texts are in English. *Prerequisite: ENG 1102.*

**ENG 3052. World Literature II (II; 3)** Studies of representative world literatures (excluding African, American, and British works) from 1900 to the present. The texts are in English. *Prerequisite: ENG 1102.*

**ENG 3060. Literature by Women (II; 3)** Studies of significant texts by women, written in English. Focuses on the literary techniques and concerns of women within diverse cultural traditions. *Prerequisite: ENG 2200 or instructor permission.*

**ENG 3100. Literary Criticism: Theory and Practice (I; 3)** A study of theoretical, practical, and historical approaches to literary study from Plato to the present. Focuses on understanding the major critical questions and approaches. Required of all English majors. *Prerequisites: ENG 2200 and at least one 3000-level literature course.*

**ENG 3200. History of the English Language (I; 3)** Chronological study of the vocabulary, pronunciation, and syntax of the major varieties of English, primarily British and American. Practice in using the International Phonetic Alphabet. *Prerequisite: ENG 1102.*

**ENG 3540. Creative Writing: Prose (I; 3)** An advanced level of directed experience in the writing of both fiction and creative nonfiction. Includes reading and discussion of works in both genres, the development of a student prose portfolio, workshop discussion of each student's creative work, and the final presentation of a developed story or essay of the student's own choosing. *Prerequisite: ENG 3006.*

**ENG 3550. Creative Writing: Poetry and Performance (II; 3)** An advanced level of directed experience in the writing of poetry to include presentation and performance. Includes reading and discussion of contemporary book-length poetry collections, the development of a student poetry portfolio, workshop discussion of each student's creative work, study and practice of presentation/performance skills, and the final presentation/performance of the student's collection. *Prerequisite: ENG 3006.*

**ENG 4000. Topics in Literature (Even years - II; 3)**

**Concentrates** on a single issue, genre, cultural group, or author. Focus varies with each course offering. May be repeated once for credit. *Prerequisite: ENG 3100 or instructor permission.*

**ENG 4015. Advanced Research Writing (I, II, and on-demand; 3)** This course addresses upper-division and post-graduate writing needs. Analytical formats of inquiry, e.g., for abstracts, reviews, critiques, the scientific hypothesis paper, and for advanced writing needs in the various disciplines, including those of capstone and honors courses. Examines presentation styles, e.g., MLA, APA, Chicago, CBE and CSE. *Prerequisite: Enrollment is by permission of the instructor only.*

**ENG 4020. Special Topics: Creative Writing (On demand; 3)** Concentrates on a single issue, genre, cultural group, or author. Focus varies with each course offering. May be repeated once for credit. *Prerequisite: Any 3000-level creative writing workshop or minimum Sophomore standing with the course instructor permission.*

**ENG 4050. Forms and Genres: The Novel (Odd years - I; 3)** Focused study of the novel as a literary genre. Traces the development of the novel as an art form and examines the range of its conventions using historic and contemporary models with particular emphasis on American and British authors. *Prerequisite: ENG 3100 or instructor permission.*

**ENG 4060. Forms and Genres: Poetry (Odd years - II; 3)** Focused study of poetry as a literary genre. Traces the developments of poetry as an art form and examine the range of its conventions using historic and contemporary models with particular emphasis on American and British authors. *Prerequisite: ENG 3100 or instructor permission.*

**ENG 4070. Forms and Genres: Drama (Even years - I; 3)** **Focused** study of drama as a literary genre. Traces its developments as an art form and examines the range of its conventions using historic and contemporary models with particular emphasis on American and British authors. *Prerequisite: ENG 3100 or instructor permission.*

**ENG 4080. Shakespeare and His Influence (II and on-demand; 3)** Focused study of Shakespeare's work, life, times, and enduring influence with an emphasis on his major plays. *Prerequisite: ENG 3100 or instructor permission.*

**ENG 4090. American Literary History (Even years - II; 3)** Traces the major authors and movements in American literature from Puritan times to the present and their relationship to political and social events. *Prerequisite: ENG 3100 or instructor permission.*

**ENG 4092. British Literary History (Odd years - II; 3)** Traces the major authors, excluding Shakespeare, and movements in British literature from medieval times to the present and their relationship to political and social events. *Prerequisite: ENG 3100 or instructor permission.*

**ENG 4196. Internship or Practicum (On Demand; 1-4)** An internship is usually an off-campus activity while the practicum is an on-campus activity with a more limited objective (or task orientation). Generally, internships carry 2-4 semester hours. The practicum may carry from 1-4 semester hours and may be supervised by the student's departmental advisor. *Prerequisites: ENG 2200 and departmental permission.*

**ENG 4197. Individual Study (On Demand; 1-4)** An individual study is a research project or course of study, not a performance activity and not otherwise offered as an existing course. The individual study may carry from 1-4 semester hours and may be supervised by the student's departmental advisor. Before the end of the previous semester and in consultation with the departmental advisor, the student must submit a proposal to the Department chair. Prerequisites: ENG of all English majors. Pre/co-requisite for 3000-4000 level literature courses. *Prerequisite: ENG 1102.*

**ENG 4200. Linguistics and American Grammar (II; 4)** Covers topics such as the language brain; language acquisition; phonology, morphology, syntax, and semantics; and the varieties of American English. The contributions of psycho-and sociolinguistics and approaches to modern grammar instruction are emphasized. Includes spelling strategies and composition theory for classroom teachers and practice in the International Phonetic Alphabet. *Prerequisite: ENG 1102.*

## ENTREPRENEURSHIP

**ENT 3135. Entrepreneurship Management (I; 3)** This course exposes students to key management and information systems principles, and techniques essential for entrepreneurship. This course focuses on identifying and evaluating entrepreneurial opportunities and the student's potential for contributing new business ventures. Central to the course is a "learning by doing" approach.

**ENT 3355. Comparative Entrepreneurship Enterprise (II; 3)** This course introduces students to a comparative analysis of various types of entrepreneurial enterprises including for-profit and not-for-profit enterprises. This course will expose students to entrepreneurship opportunities in diverse fields such as the arts, literature and social enterprises. Differences and similarities between these enterprises will be considered. *Prerequisite: ENT 3135.*

**ENT 3505. Entrepreneurship & New Ventures (I; 3)** This course concentrates on starting and growing new businesses. By investigating various ways to create and grow entrepreneurial projects, the course explores innovation across a wide range of scenarios. This course examines the process by which the entrepreneur conceives, develops, and manages new ventures. *Prerequisite: ENT 3135.*

**ENT 4460. Social Enterprise Management (II; 3)** This course is about the opportunities and challenges of using managerial skills and entrepreneurial talents creatively and appropriately to help solve social problems and to make a positive difference in the lives of others. Focus is on organizations with an explicit civic mission or social purpose, from well-known nonprofits like Habitat for Humanity, National Foundation for Teaching Entrepreneurship and City Year to widely regard for profits. Course materials include readings, cases and films (where relevant*). Prerequisite: ENT 3135.*

**ENT 4570. Entrepreneur Financing (I; 3)** This course covers various aspects of financing an entrepreneurial venture. Major topics include attracting seed and growth capital from sources such as venture capital, investment banking, government, and commercial banks. Among the issues discussed are valuing a company, going public, selling out, acquisitions, bankruptcy, different legal forms of organization, partnerships, and taxes. *Prerequisite: ENT 3135.*

**ENT 4895. Entrepreneur Capstone Course (II; 3)** This course is to explore the interfaces between management, strategy finance, and entrepreneurship in the context of 1) independent ventures, 2) non-profit ventures and 3) large firms. The goal of this course is to develop – in each student – a mastery of the skills and competencies that facilitate opportunity recognition, innovation and creation in the face of a dynamic and uncertain marketplace. Students will be challenged to develop a business along the idea path: idea; opportunity; competition research and advantage; market and strategic analysis; financial pro formas; growth and exit. Students will be challenged to act boldly, and to break with conventional thinking when it comes to the realities of the marketplace and their own ideas. *Prerequisite: ENT 3135.*

## ENVIRONMENTAL ENGINEERING

**ENE 2200. Introduction to Environmental Engineering (I; 3)** An introductory course that gives students some basic understanding of stoichiometry, chemical equilibrium, mass balances and kinetics (chemical and biological) in continuous and batch unit operations pertaining to environmental systems. Characterization of pollution in open systems such as streams, lakes and soil will be covered. Applications include drinking water, wastewater, municipal and industrial landfills, and hazardous waste operations. Site characteristics, risk analysis and assessment, toxicology, and site remediation will be briefly addressed. Students will work on generating an environmental impact statement for a construction project. *Prerequisites: CHM 1201, MTH 2503.*

**ENE 3305. Fluid Mechanics and Hydraulics (I; 3)** First course that deals with statics and dynamics of incompressible fluids in general, and water in particular. Fluid properties; Principles of hydrostatics; Kinematics and dynamics of fluid flows; Flow visualization; Mass, momentum, and energy conservation; Bernoulli's principle; Introduction to fluid flow in closed conduits and open channels; Introduction to turbo-machinery - pumps and turbines. Laboratory work includes demonstration of Bernoulli's principle and Reynold's laminar and turbulent flow concepts; estimating pipe friction; energy principles in open channel flow and steady flow formulas -

Chezy and Manning's formulas; Hydraulic behavior of turbo machinery. Additional two contact hours are required for laboratory experiments. Three one hour lectures/one two hour lab. *Prerequisites: MTH 2503 and PHY 2411*.
*Equivalent to OET009.*

**ENE 3309. Water Chemistry (I; 3)** This is an applied course in chemistry dealing with chemical reactions in water. Chemical equilibrium speciation studies - Aqueous speciation, Precipitation-Dissolution, Oxidation Reduction in both natural and impaired aqueous environments. Rate laws and kinetics of aquatic reactions of environmental importance – Hardness Removal, Acid mine drainage, Disinfection. Laboratory experiments include estimation of total metals using atomic absorption spectrometer, organics using HPLC and Gas chromatograph/Mass spectrometer using EPA approved methods. Estimation of pH, dissolved oxygen, and conductivity. Colorimetric methods for estimation of chloride, nitrite, and nitrates in water. Use of a water chemistry model, MINTEQA2 to estimate species concentrations given the total metal, pH, and redox conditions. One additional contact hour for the laboratory is required. Three one hour lecture/one two hour lab. *Prerequisites: CHM 1202 and MTH 2503.*

**ENE 3315. Fundamentals of Air Quality Engineering (II; 3)** Characterization and control of air pollution problems. Analysis of fundamental chemical and physical processes governing pollutant transport and dispersion in air. Combustion chemistry of hydrocarbon fuels. Air pollution control systems. Pollution sources, control techniques with introduction to sensors. Transformations, atmospheric transport, deposition and modeling. Indoor Air quality management. Three one hour lecture.

**ENE 3320. Engineering Hydrology (I; 3)** Physical hydrology phases hydrologic cycle -evaporation, precipitation, infiltration and runoff. Physical and empirical models of evaporation from water bodies, evapotranspiration models; Precipitation measurement and assessment of temporal and spatial variability; Infiltration theory and modeling; rainfall runoff correlation in watersheds - overland flow, hydrographs and flow routing; Empirical models of rainfall-runoff correlation; statistical hydrology concepts; Environmental Hydrology. Three one hour lecture/one two hour lab. *Prerequisites: ENE 3305 and MTH 2001.*

**ENE 3325. Groundwater Hydraulics (II; 3)** Study of aquifers and their characteristics- porosity, specific yield and specific retention, permeability and transmissivity. Darcy's law and fluid continuum in soils; steady flow through confined/ unconfined/artesian aquifers with and without recharge; hydraulics of wells in confined and unconfined aquifers; design of wells; estimating groundwater characteristics using pumping data; groundwater contamination - site assessment, geologic study, plume delineation and remedial action. Introduction to groundwater flow models using MODFLOW; Well-head protection. Three one hour lecture/one two hour lab. *Prerequisites: ENE 3305, GEL 1101 or instructor's permission.*

**ENE 4405. Applied Hydraulics (II; 3)** Application of principles of fluid mechanics to flow in pipes, pipe networks, open channels and hydro-machinery. Estimation of pressure distribution in pipe networks; Design of pipe networks; friction loss computation using Darcy-Weisbach, Hazen-Williams and Manning equations, solutions to pipe network problems using Hardy-Cross method, and use of computer models for the hydraulic design of pipe networks. Nonuniform flow in open channels and its application to flooding in rivers; introduction to unsteady flow in pipes and open channels; dimensional analysis; hydraulics of pumps and turbines; and introduction to sediment transport in rivers. *Prerequisite: ENE 3305.*

**ENE 4410. Water Model Applications (I; 4)** This will be an applied course in the use of various water quality and water quantity models used in the water industry. The areas will cover hydrology, hydraulics, and groundwater and water quality. Emphasis on problem solving with real world conditions. Models considered include HEC-HMS and RAS, GMS, QUAL2EU, EPANET, WMS. *Prerequisite: ENE 3325 or permission of the instructor.*

**ENE 4415. Water Supply (I; 3)** The course will focus on the design and operation of water supply facilities-collection, treatment, and distribution. US EPA regulations on water quality, water quality standards, clean water act; water abstraction systems; theory and design of physical and chemical treatment systems-screening, sedimentation, coagulation,

filtration, softening and disinfection. Water distribution pipe networks; laboratory experiments include jar testing for coagulants, and also an analysis of trihalomethanes. Three one hour lecture/one two hour for laboratory work and design calculations. Field trip to a local water treatment plant. *Prerequisites: ENE 3309 and MTH 2503.*

**ENE 4425. Solid and Hazardous Waste Management (II; 3)** Municipal solid waste topics include history, regulations, sources, composition, properties, engineering principles in handling, transferring and transporting, material separation, processing technologies, recycling, thermal conversions, design of incinerators, biological and chemical conversions, and remediation. Topics related to hazardous waste including identification, segregation, labeling, storing, disposal and clean up, and related hazardous waste regulations. Three one-hour lecture classes. *Prerequisite: CHM 1202.*

**ENE 4430. Wastewater Treatment Systems (II; 3)** A process design approach to studying wastewater treatment systems. Study of wastewater flows- quantity and quality. Study of sewer system design and maintenance. Fundamentals of reactor design with illustrations from wastewater treatment systems. Theory and design of key unit operations in wastewater treatment plant. Primary treatment processes-grit settling chambers and Parshall flume design, mechanically agitated screens, primary clarifier and odor control unit; Secondary treatment suspended growth systems; activated sludge with various configurations on feed and oxygen introduction, and oxidation ditch; attached growth systems theory of biofilms, design of trickling filters and rotating biological contactors. Solids handling: sludge digester theory and design, sludge loading and dewatering, digester gas and cogeneration. Field trip to a wastewater treatment plant. Laboratory experiments include wastewater characterization and disinfection bi-products identification using gas chromatograph/mass spectrophotometer. Three one hour lecture/one two hour for laboratory work and design calculations.. *Prerequisites: BIO 2650, ENE 4415.*

**ENE 4435. Soil and Water Pollution Control (II; 4)** An advanced course that deals with physical and chemical characteristics of pollutants in soil and water and their fate and transport; thermodynamic properties of organic and inorganic pollutants in soil and water; equilibrium partitioning of pollutants in the environment; air to water partitioning using Henry's Law; vapor pure liquid partitioning using Raoult's Law; soil-water partitioning using Freundlich, Langmuir and BET sorption isotherms; modeling fate and transport of pollutants in soil and water, non-aqueous phase liquids. Use of 1-D groundwater models such as CXTFIT; Groundwater contamination using CHEMFLO and MODFLOW; Overview of remedial technologies discussion on engineering controls such as pump and treat and soil washing, biological treatments such as bioremediation and phytoremediation; case study on non-point source pollution. *Prerequisites: ENE 3309 and ENE 3325.*

**ENE 4440. Environmental Professionals Seminar (I, II; 1)** Discussions led by working professionals in the field of Environmental Engineering on selected topics in the field. Designed to expose students to a wide range of practitioners and issues.

**ENE 4496. Senior Capstone Design Project I (I; 1)** The first part of a two course sequence. It is designed for graduating seniors to integrate the knowledge they had gained in all ENE courses and apply in a field application/capstone design project related to a topic of interest within the field. Each student/student team will be required to work on an engineering project such as designing a typical environmental engineering system or recommending improvements in the operation of an environmental control system. Students will be expected to submit a formal report and an oral presentation to the Environmental Engineering Professionals class. This course involves selection of a topic and advisor(s), conducting literature search, understanding codes and regulations, conceptual design, selection of design tools, plan of work, and securing necessary resources.

**ENE 4497. Special Problems in Environmental Engineering (I, II, III; 3)** Individual study in advanced water resources management research. Open only to juniors and seniors.

**ENE 4498. Senior Capstone Design Project II (II; 2)** The second part of a two course sequence. It is designed for

graduating seniors to integrate the knowledge they had gained in all ENE courses and apply in a field application/capstone design project related to a topic of interest within the field. Each student /student team will be required to work on an engineering project such as designing a typical environmental engineering system or recommending improvements in the operation of an environmental control system. Students will be expected to submit a formal final report and an oral presentation to the Environmental Engineering Professional class. This course involves design implementation, evaluation of alternatives, economic analysis, and inclusion of public health, safety and welfare aspects.

**ENE 4596. Internship (I, II, III; 0)** On the job training in agencies and/or companies engaged in activities related to environmental engineering/ water resources management. Not open to students who have participated in the co-op

## EXERCISE SCIENCE

**EXS 1100. Introduction to Exercise Science with Lab (I, II; 4)** This course provide an overview of selected topics in exercise science and sports medicine with emphasis on practical application. This introductory course content is essential for all exercise science majors, as well as other health professionals, who may council the general public on exercise and physical activity. Laboratory portion of this course will include basic physical assessment techniques, proper use, and calibration of lab equipment.

**EXS 1140. Introduction to Exercise (I, II, III; 3)** A general introduction to exercise science focusing on sport, wellness, research and clinical aspects of human movement. Topics such as career opportunities, significant contributions pf the various areas within exercise science, essential foundation needed for advanced studies in exercise science and related areas such as athletic training and sports medicine. Discussion related to how exercise science principles are applied in practice to optimize health and athletic performance.

**EXS 1155. Research Practicum I (I, II, III; 1)** This is an experience in observation related to ongoing research in an on/off campus research setting. Students observe procedures, design, concepts and theories of research related to health, exercise or human performance. Students observe procedures, design, concepts and theories of research related to health, exercise or human performance. *Prerequisite: EXS 1140*

**EXS 1156. Clinical Practicum I (I, II, III; 1)** This course is an experience in either an on campus/off site health/sports-related facility or clinical setting. Students observe practical applications of the concepts and theories of a career related to health, corporate, community, or clinical setting. Students observe practical applications of the concepts and theories of a career related to health, corporate, community or clinical setting. *Prerequisite: EXS 1140*

**EXS 2101 Applied Anatomy and Physiology I (I, II;3)** An introduction to human anatomy and physiology, characteristics of life, levels of system organization, biochemical processes, cellular structure/function, integumentary system, skeletal system, muscular system and nervous system with emphasis on the application of the structures and functions to human movement. Designed for students interested in pursuing study in physical education, health education, community health and exercise science.

**EXS 2102 Applied Anatomy and Physiology II (I, II;3)** An introduction to human anatomy and physiology, special senses, endocrine system, lymphatic system, blood, cardiovascular system, respiratory system, digestive system, urinary system, water and electrolyte balance, female and male reproductive systems with emphasis on the application of the structures and functions to human movement. Designed for students interested in pursuing study in physical education, health education, community health and exercise science. *Prerequisite: EXS 2101*

**EXS 2202 Nutrition for Health and Exercise Across the Lifespan (I, II; 3)** This course discusses the nutritional requirements of an individual throughout the lifespan. A review of the specific assays and examinations to determine good nutrition health will be discussed. The course highlights the general nutrition needs of pregnancy, infancy, children, adolescents, adult and the older adults. There will be discussions related to eating disorders, metabolic disease and physical activity.

**EXS 2204 Research Design and Statistics in Health and Exercise (I,II; 3)** This course is designed to introduce the

students to research and principles of qualitative and quantitative research methods. The students will discuss the application of research principles related to health and human performance, current research related to human subjects and ethical treatment of human and animals in research. *Prerequisite: EXS 1140*

**EXS 2210 Salutogenesis (I,II; 2)** This course investigates the underlying causes of health and well-being versus disease. Salutogesis creates an exemplary new paradigm in medical research which is directed towards the origins of health. Intensive review of salutogenuc research and discussions will be basis of this course.

**EXS 2410. Medical Terminology (I, II; 3)** This course is designed to familiarize students with the basics of vocabulary used in the medical and health professions. Students will gain understanding of the basic elements, rules of the building and analyzing medical words, and medical terms associated with the body as a whole. Utilizing a systems-approach, the student will define, interpret, and pronounce medical terms relating to structure and function, pathology, diagnosis, clinical procedures, oncology, and pharmacology. In addition to medical terms, common abbreviations applicable to each systems will be interpreted.

**EXS 2255 Research Practicum II (I,II; 2)** This course is an experience in observation related to ongoing research in an on/off campus research setting. Students observe procedures, design, concepts and theories of research related to health, exercise or human performance. Students may participate in the active research with permission of the Principal Investigator. *Prerequisite: EXS 1155*

**EXS 2256 Clinical Practicum II (I, II; 2)** This course is an experience in either an on campus/off site health/ sports-related facility or clinical setting. Students observe practical applications of the concepts and theories of a career related to health, corporate, community or clinical setting. Students will observe and may begin to integrate in the setting by performing tasks approved by clinical setting administration.

**EXS 2301. Anatomy & Physiology I with Lab (I; 4)** This course will introduce the fundamental structures of the human body and physiological mechanisms involved in normal functioning, disease, and exercise through lecture and student participation activities. In this course, students will learn to identify human organs, bones, muscles, and nerves. Students will also be introduced to the collection and presentation of scientific data. There will be a strong emphasis on the connection between structure and function, usually in the healthy individual but with some exploration of abnormalities found in disease states. There will be three hours of lecture and two hours of lab per week. *Prerequisites: BIO 1750 or BIO 1801*.

***EXS 2302. Anatomy & Physiology II with Lab (II; 4)*** *This course will introduce the fundamental structures of the human body and physiological mechanisms involved in normal functioning, disease, an exercise through lecture and student participation activities. In this course, students will learn to identify the cardiovascular system, endocrine system, and immune system. There will be a strong emphasis on the connection between structure and function, usually in the healthy individual but with some exploration of abnormalities found in disease states. There will be three hours of lecture and two hours of lab each week. Prerequisite: EXS 2101.*

**EXS 3100. Egronomics (I, II; 3)** This course provides the basics of egronomics and determining healthy movement in work situations. Emphasis will be on determining safe movements in industrial and farming areas. *Prerequisite: EXS 2102*

**EXS 3200. Prevention & Care of Athletic Injuries (II; 4)** Course stresses importance of prevention of injuries by conditioning and material aids and offers supervised training in caring of injuries. The course will also provide students with the opportunity to become certified in CPR and first aid. The course will consist of lecture and demonstration of these safety procedures.

**EXS 3280 Exercise as Medicine (I, II; 3)** The study of the mechanisms to make physical activity and exercise a standard part of a global disease prevention and treatment medical paradigm. Physical activity will be considered as a strategy for all health care providers as a vital sign in every patient's visit, and that patients are effectively counseled and referred as to their physical activity and health needs, thus leading to overall improvement in the public's health and long-

term reduction in health care costs.

**EXS 3302. Nutrition in Health and Diseases (II; 3**) There is now a large body of evidence demonstrating that diet has a major impact on health. The course will begin by looking at nutrition research. Without some understanding of how nutrition advances are made, you cannot properly appreciate the significance of conflicting claims. Dietary causes of chronic diseases related to lifestyle, including hypertension, coronary heart disease, diabetes, obesity, and cancer. Later units deal with other special topics. *Prerequisite: EXS 2202*

**EXS 3312 Psycho-Behavioral Aspects of Physical Activity (I, II; 3)** The course is an overview of behavioral change and how utilizing both modern and tradition models can impact behavior in relation to motivation and identifying the various how stages of readiness. This course examines common theories of behavior change and identifies scientific evidence supporting the utilization of the models of change to support a healthy lifestyle.

**EXS 3333 Exercise and Health Disparity (I, II; 3)** This course focuses on some basic issues to health disparity in the United States. The identification and metrics associated with identifying health disparity will be discussed. An in depth discussion will focus on the impact of exercise on health disparity and strategies of delivering positive heath practices to various populations and geographic environments.

**EXS 3342 Applies Exercise Physiology (II; 3)** In-depth examination of the effects of acute and chronic exercise on the human body and applications to sport, work, wellness, research and clinical settings. Topics will cover the application of exercise physiological principles as related to and impact on environments such as occupational/work, employee wellness, sports, safety/public governmental agencies, health, disease prevention, pedagogy, coaching and rehabilitation. *Prerequisite: HHP 3330 and HHP 3340*

**EXS 3355 Research Practicum III (I, II; 3)** This course is an experience in observation related to ongoing research in an on/off campus research setting. Students observe procedures, design, concepts and theories of research related to health, exercise or human performance. Students participate in the active research with permission of the Principal Investigator. *Prerequisite: EXS 1155 and EXS 2255*

**EXS 3356 Clinical Practicum III(I,II; 3)** This course is an experience in either an on campus/off site health/sports-related facility or clinical setting. Students observe practical applications of the concepts and theories of a career related to health, corporate, community or clinical setting. Students will integrate in the setting by performing tasks approved by clinical setting administrations.

**EXS 3380 Molecular and Cellular Aspects of Human Movement (II;3)** An advanced study of human body biochemical and molecular processes during exposure to acute and chronic physical stress and the impact upon health and performance. Detail to applied biometrics that measure energetics-body composition. Caloric, oxygen consumption and related assessments of organ systems impacted by exercise exposure. *Prerequisite: HHP 3330 and HHP 3340*

**EXS 3381 Genetics for Exercise Science and Health (II; 3)** The study of the basics of DNA and genetics as they relate to health, physical activity and sport. Specific skills and strategies for interpreting, applying genetics finding in research and how genetics research may affect sport performance training and clinical practice. Ethical issues of genetics in society and sport will be discussed. *Prerequisite: HHP 3380*

**EXS 4401 Seminar: Current Research in Exercise Science (I, II; 1)** This course covers current topics related to the field of exercise science. The seminar will address current issues in exercise science as determined through researching relevant literature. This course will include interactive discussions and presentations related to exercise science topics.

**EXS 4419 Principles of Sports Conditioning (I; 3)** Theory and application of biochemical and physiological principles to the development of strength and conditioning programs for selected sports. The course will cover the applied exercise training principles related to youth, amateur, collegiate and professional sports. Successful completion of the course will prepare students for national certification examinations for the National Strength and Conditioning Association or the American College of Sports Medicine. *Prerequisite: HHP*

*3330, HHP 3340, and HHP 3380*

**EXS 4420 Introduction to Exercise Electrocardiography (I; 2)** Study of basic normal and abnormal electrocardiography at rest and during exercise. The course is designed to train students in exercise science to recognize normal and abnormal heart rhythms associated with rese and exercise. Electrocardiographic recognition skill development will be critical in the supervision of graded exercises test. The course will prepare the student for national certification by the American College of Sports Medicine. *Prerequisite: 3340*

**EXS 4421 Clinical Exercise Testing and Prescription (II; 3)** Practical experience conducting graded exercise tests using various modes of exercise and utilizing the data to develop appropriate exercise prescription with emphasis on normal and disease populations. The course will prepare students for the national certification examinations by the American College of Sports Medicine. *Prerequisite HHP 3330, HHP 3340, and EXS 4420*

**EXS 4422 Exercise in Special Populations (I; 2)** An advanced course in prescribing exercise and supervision of populations with various patho-physiological conditions. Overview of exercise testing, electrocardiogram (EKG) interpretation, and exercise prescription and programming for monitoring individuals with special conditions due to age or disease (e.g. cardiac disease and abnormalities, hypertension, obesity, cancer, diabetes, neuromuscular disease, etc.). *Prerequisite: EXS 2102*

**EXS 4425 Workplace Wellness and Health Promotion (II; 3)** An overview of the theoretical and pragmatic aspects of conducting health promotion programs in the workplace. Discussions of rationale and relative effectiveness of various health components will be covered. Topics such as preseneteeism, financial impact of illness on the financial health of a company and development of wellness services within a corporate environment will be discussed. Various assessments to determine the health of employees and program development to address corporate health and wellness needs will be addressed.

**EXS 4440 Work Physiology (I, II; 3)** A general introduction to anatomical structure, metabolism and biomechanics related to various occupation. This course, while presenting the anatomy and physiology needed to understand occupational life, will provide information related to conditions of physiological stress humans experience under occupational conditionals and training strategies to reduce stressors to promote a safe work environment. *Prerequisite: HHP 3340 and EXS 3342*

**EXS 4490 Exercise Clinical Experience (I, II, III; 8)** The student will actively participate in corporate, clinical, educational or field-related organizations receiving practical experience under the supervision of the cooperating agency/corporation and the University Coordinator. Students will not be permitted to take any other courses during this internship/research course due to the intensive time commitment. *Prerequisite: Sophomore Standing*

**EXS 4491 Exercise Science Research Project (I, II, III; 12)** Students in the Integrated Exercise Physiology track will submit a research project for approval prior to taking this course. The results of the project will be completed and presented in a professional format during the semester. Students will not be permitted to take any other courses during this research project due to intensive time commitment. *Prerequisite: EXS 3355*

## FINANCE

**FIN 2233. Personal Finance (II; 3)** Personal money management problems are examined with special attention given to credit, borrowing, insurance, buying and selling a home and taxation. Analysis of investment companies, securities, estate planning, retirement, Medicare, and Social Security. *Prerequisites: BUS 1100 and ENG 1102.*

**FIN 3332. Investments (II; 3)** Introduces historical risk returns, return variability analysis; buying/selling securities; investor objectives; constraints and strategies; securities types, derivatives and options; mutual funds; and stock market organization and reporting. *Prerequisite: BUS 3331.*

**FIN 3333. Financial Institutions (I; 3)** This course provides an overview of financial markets and institutions; determination of interest rates; structure of interest rates; organization of the Federal Reserve and its monetary tools; monetary theory and policy and its relation to

fiscal policy. *Prerequisite: BUS 3331.*

**FIN 3334. Principles of Real Estate (I, II; 3)** Course surveys the entire field of real estate designed for a broad basic knowledge to form a foundation for many facets included in the real estate profession. *Prerequisite: BUS 3331.*

**FIN 3335. Insurance (II; 3)** Fundamental nature of risk and its importance and place in personal, business and national life. A study of risk-bearing and the theory of probability. Topics in life, health and accident insurance. *Prerequisite: BUS 3331.*

**FIN 3336. Real Estate Law (I; 3)** Basic concepts of Real Estate Law will be taught, introducing the concept of a dynamic law which reflects the economic, political, and social needs in relation to the state of real estate in our time. *Prerequisites: BUS 2200 and FIN 3334.*

**FIN 3337. Real Estate Appraisal (II; 3)** A study in determining values, both actual and potential for real estate properties and interest employing standard methods and techniques. *Prerequisite: FIN 3334.*

**FIN 3338. Real Estate Finance (I; 3)** Course involves conventional financing techniques; specialized financing arrangements such as financial aspects of condominiums cooperatives, real estate trusts (REITS), syndication, land contracts, sale of leasebacks, equity participation, wrap around mortgages, GNMA pass-through securities; the operation of PHLBB, FHLMA, GNMA as well as financial arrangements involving banks, savings or loan associations. *Prerequisite: FIN 3334.*

**FIN 4431. Financial Management (II; 3)** A study of capital budgeting and cash flow principals used in expansion, replacement and long term investments. Calculate and interpret payback period, net present value, and internal rate of return. Understand the importance of explicitly recognized risk in the analysis of capital budgeting projects; understand the financial planning process, including bankruptcy reorganizing or liquidating a bankrupt firm. *Prerequisite: BUS 3331.*

**FIN 4432. Investment Analysis** (; 3) A study in stock price behavior and market efficiency, measuring bond yields, and nominal interest rates, corporate bonds, and government bonds. *Prerequisite: FIN 3332*.

**FIN 4437. International Finance (I, II; 3)** An introduction to international business finance, financial firms and foreign exchange markets. Includes a study of international money and the balance of payments. Additional topics include foreign exchange markets, forecasting, examining parity relationships, management of foreign exchange rate exposure, and analysis in global financial management. *Prerequisite: BUS 3331.*

**FIN 4438. Seminar in Finance (I, II; 2)** A course dealing with contemporary finance problems. Prerequisites: Senior standing and permission of the instructor.

**FIN 4442. Financial Statement Analysis (II; 3)** This course provides a broad framework for using financial statement analysis to evaluate a firm's operation and to predict its future condition. This course allows the student to develop a critical user perspective for analyzing and interpreting financial statements and gaining further insight into a firm's operational and financial performance. *Prerequisite: ACC 3302*

**FIN 4466. Internship in Finance (On Demand; 1-6)** Course provides the opportunity to explore practical experience in finance. Student activities will be supervised by the organization sponsoring the internship. The Office of Career Services and the responsible faculty monitor internships. A comprehensive report is required at the completion of the internship. Prerequisite: Permission of the instructor.

**FIN 4497. Independent Study in Finance (II; 1)** This course offers the student the opportunity to investigate current trends and advanced problems in finance. Student research will be under the direction of the instructor. Prerequisites: Senior standing and permission of the instructor.

**FIN 4500. Finance Capstone Seminar (I, II; 3)** The course consists of group discussions among several cases and readings, as well as lecture sessions. Most of the problems raised in the cases are strategic in nature rather than tactical. In addition to the lectures and case discussions, we use articles from the business press to focus on controversial issues and discrepancies between theory and practice. Prerequisites: FIN 4437; Senior standing and permission of the instructor

## FIRST YEAR SEMINAR

**FYS 1101. First-Year Seminar (I, II; 1)** This course is designed to help first-year students make a successful academic and social transition to CSU. The one credit hour seminar will focus on study skills, time management and library use, and the history of Central State University. This course is a General Education requirement for all first-year students.

**FYS 1102 - First-Year Seminar II (II; 1)** This course builds on the learning skills introduced in FYS 1101 and engages the student in activities to improve academic success. This course is **required** for all first-year students placed on academic probation at the end of their first semester at CSU.

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**FYS 1201 - Major and Career Seminar (I, II; 1)** First-year students explore their intended or potential majors and careers. The seminar focuses on personal development through identifying abilities, aptitudes, and interests; writing a resume and starting a career portfolio; enhancing communication skills such as practical public speaking; and engaging in service-based and other learning activities. Students meet faculty from the colleges. Required of all students with fewer than 30 semester hours who has not officially declared a major with the Office of the Registrar.

## FOREIGN LANGUAGE : (*See INTERNATIONAL LANGUAGES AND LITERATURES*)

## GEOGRAPHY

**GEO 1101. World Geography: Western** geographic **Hemisphere (I; 3)** A survey of the western hemisphere to acquaint non-majors with cultural and geopolitical facts and principles that will assist them in interpreting contemporary events. *Equivalent to TAG OSS008.*

**GEO 1103. World Geography: Eastern Hemisphere (II; 3)** A geographic survey of the eastern hemisphere to acquaint non-majors with cultural and geopolitical facts and principles that will assist them in interpreting contemporary events in Africa, Asia and Oceania.

**GEO 1110. Fundamentals of Geography (I, II; 4)** The course gives students an understanding and appreciation of the earth as the home of man, and studies the rudiments of the physical and cultural environment and the cognate and coordinating character of geography among the social sciences. This course serves as a point of departure for future studies in geography. *Equivalent to TAG OSS006.*

**GEO 2202. Economic Geography (II; 3 - Even Years)** A study of the geographic environment as related to the economic activities and pursuits of mankind. The major economic activities of man as well as the resource patterns of the earth are studied.

**GEO 2203. Geography of Latin America (II; 3 - Odd Years)** A study of the geographic factors, physical and cultural, that are basic to an understanding of the historical and contemporary development of Mexico and the countries of Central America, the West Indies, and South America.

**GEO 2204. The Geography of Anglo-America (I; 3 – Even Years)** A regional study of the U.S., Canada and U.S. territories which emphasizes analysis of the geographic environment and its impact on the socioeconomic development of regions.

**GEO 3302. The Geography of Asia (II; 3 - Odd Years)** A regional study of the Near, Middle and Far East. Emphasis is placed upon the interpretation of the environmental elements of the continent, and their relevance to the socioeconomic and geopolitical aspects of the continent.

**GEO 3313. Weather and Climate (II; 3)** Designed to give some understanding of the elements and control of climate, climatic phenomena, climatic types, and the characteristics of the major types and classifications of climates as they are found on the continents. Daily observations will be made by the student in the laboratory and a log will be kept.

**GEO 3323. The Geography of Europe (II; 3 - Even Years)** A regional study of Europe with an emphasis on the analysis of the geographic environment of Northern, Western, Southern and Eastern Europe and its impact on the socio-economic and geopolitical aspects of the continents.

**GEO 3370. Introduction to Geographic Information System (I; 3)** Topics of instruction will include analyses of selected, spatially distributed information of national resources and other societal parameters. Nature, characteristics, specification, types, acquisition, processing, organization, and management

of spatial or geographic data. Application of the basic functional and analytical capabilities of GI systems using raster methods and vector methods and vector methods. The course will include practical instruction on commonly used geographic information software (GIS). *Prerequisites: BUS 1500 or CPS 1110. Equivalent to OSS026 or permission of the instructor.*

**GEO 4370. Advanced Geographic Information Systems (II; 3)** This course is designed for advanced learning of the Geographic Information Systems (GIS), covering the upper-level topics in GIS, including network analysis, spatial statistics, spatial analysis, 3D visualization, integration of the Global Positioning System (GPS), and Remote Sensing, as well as applications in transportation, public health, hydrology, and marine science. The course will focus on the advanced spatial analytical feature and tools of the foremost GIS software. *Prerequisite: GEO 3370.*

**GEO 4404. Conservation of World Natural Resources (I; 3 - Odd Years)** Economic and geographical appraisal of resource conservation in the world. Geography of reserves, production, and the uses of the world's metallic and non-metallic minerals. *Prerequisites: GEO 1110 and GEO 2202, or 10 hours of social science or permission of the instructor.*

**GEO 4405. World Political Geography (II; 3 - Odd Years)** The geographical character of the nation-state. The relation of geopolitics to political geography. *Prerequisites: GEO 1110 and GEO 2202, or permission of the instructor.*

**GEO 4406. World Cultural Geography (I; 3 - Even Years)** A study of the geographic occupation, settlement and development of selected regions of the world.

**GEO 4411. Urban Geography (I; 3 - Odd Years)** Origin and growth of cities. Structure and function of urban centers, their area expansion, and trade interrelationships; examples will be studied in relation to city planning. *Prerequisites: Junior or senior standing, GEO 1110 and GEO 2202.*

**GEO 4413. Geography of Russia and the Commonwealth (II; 3 - Even Years)** The study of the major Soviet regions. The resource base in relation to the economic and political structures or aspects in the Soviet regions. *Prerequisites: Junior or senior standing, or GEO 1110 and GEO 2202.*

**GEO 4414. Geography of Africa and Its Problems (I; 4 - Even Years)** A regional study of the many geographies of Africa, its environments, the development of its culture and economic life, and its problems; analysis of western and Islamic impact on the creation and development of geographic regions. *Prerequisites: Junior or senior standing, or GEO 1110 and GEO 2202.*

**GEO 4415. The Political Geography of Africa (II; 3 – Odd Years)** A survey of the geographic factors in the settlement, formation, structure and intraAfrican relations of African States. The relation of geopolitics to Africa's political geography.

**GEO 4450. Special Problems in Geography (I, III, III; 3)** Individual research in the area of the student's interest. *Prerequisites: Senior major or minor and permission of the instructor.*

**GEO 4470. Applied Remote Sensing (II; 3)** This course students will learn about different instrument systems attached to aircraft and satellites that collect environmental data. Practical instruction on how the remotely acquired data sets are processed and interpreted using appropriate software will be given. Interpretation of multi-spectral scanners, RADAR and thermal imagery data; Data analysis for detection of changes; image interpretation; study of spectral characteristics of vegetation, soils water, minerals, and other materials. Case studies will be presented for the different types of application. *Prerequisite: MTH 2501.*

**GEO 4495. Senior Project in Geography (On Demand; 3)** This course is designed for graduating seniors to integrate the knowledge they gained in all Geography courses and apply it to a topic of interest in a field application project. Students will be required to choose a topic from a variety of projects pertaining to the field of Geography. *Prerequisite: Senior standing in the major field.*

## GEOLOGY

**GEL 1101. Physical Geology (I; 4)** The origin of the earth, the solar system and the universe; the interior of the earth and its materials. A study of the agents, including the atmosphere, the oceans, surface water on land and their effects on shaping the surface of the earth. There will

be one all-day field trip. Lab is required. The lab includes plate tectonics, mineral and rock identification, geologic time relationships, interpretation of topographic maps, identification and interpretation of geologic structures and groundwater. *Equivalent to TAG OSC011.*

**GEL 1105. Historical Geology (II; 4)** The history of the earth and how geologists have learned to interpret it. The origin of life and the history of organic evolution. Physiographic and tectonic changes through earth history with special emphasis on North America. Three hours of lecture and a two-hour laboratory per week and one all-day field trip. *Equivalent to TAG OSC012.*

**GEL 1110. Oceanography (I; 3)** Physiography of the ocean floors. Composition and structure of the ocean crust. Field and laboratory methods in marine geology. Marine sedimentation and the hydrodynamic, chemical and biochemical processes involved. Origin and evolution of the oceans and the ocean basins.

**GEL 1240. Natural Disasters (I, II; 3)** An examination of the causes, effects, and options available to mitigate natural disasters such as earthquakes, volcanic eruptions, landslides, subsidence, flooding, severe weather, and meteoritic impacts. No prerequisites are required and the course does not include a lab.

**GEL 2205. Environmental Geology (II; 3)** Covers broad range of topics, all related by the interactions between geologic processes and society. These include natural hazards, natural resources, and their policy implications in the face of an unrelenting increase in human population and economic growth. Students will be able to define and discuss fundamental geologic principles. *Prerequisite: GEL 1101 or permission of the instructor.*

**GEL 3305. Introduction to Geophysics (II; 3)**
This course is an introduction to methods used to visualize and understand the history, shape, mechanical structure, and dynamics of the solid-earth system. We will discuss how geophysical tools, including seismology, gravity, magnetism, heat flow, geochronology, and geodesy, are used to understand the age, whole-earth and near-surface structure, and to quantify the kinematics and dynamics of plate tectonics. Students will explore the most common geophysical methods applied in environmental studies, geohazards, water resources and engineering studies; physical parameters are measured using each method. Supplemental math instruction included. *Prerequisite: GEL 1101, MTH 1750 or PHY 1181.*

**GEL 3311. Paleontology (I; 4 - Odd Years)** A detailed study of fossils. Special emphasis is given to more stratigraphically significant types, especially invertebrates. Three one-hour lectures and one two-hour laboratory per week. Lab is required and is part of the five-hour credit. *Prerequisite: GEL 1105.*

**GEL 3321. Mineralogy (I; 4 - Even Years)** Description, properties, occurrences and methods of determination of the more important minerals, and an introduction to the principles of crystallography: Lab is required and is part of the four-hour credit. *Prerequisite: CHM 1201 and GEL 1101 or permission of the instructor. Equivalent to OSC013.*

**GEL 4401. Stratigraphy and Sedimentation (I; 3 – Even Years)** The principles of stratigraphy; correlation, facies relationships, fossil distribution and stratigraphic maps. The principles of sedimentation; nature of sedimentary rocks; and environmental controls on their composition, texture and distribution. *Prerequisites: GEL 1101 and GEL 1105.*

**GEL 4421. Petrology (II; 3 - Odd Years)** Study of origin, formation an occurrences of igneous, sedimentary and metamorphic rocks with particular reference to modern geochemical investigations. Examination and description of hand specimens and thin sections under the petrographic microscope. *Prerequisite: GEL 3321.*

**GEL 4435. Mineral Deposits (II; 3 - Odd Years)** A study of the geology, economics and politics of mineral deposits, including their genesis, classification and description. *Prerequisites: GEL 1101, 1105 and 3321 or permission of the instructor.*

**GEL 4450. Special Problems in Geology (I, II, III; 3)**
Individual research in the of the student's interest.
*Prerequisites: Senior standing (major or minor in geography) and permission of the instructor.*

**GEL 4460. Process Geomorphology (II; 4)** This course is a study and analysis of the origin, characteristics, and modification of landform on Earth's surface by dynamic systems through geologic time.

Includes Earth's dynamic surface systems, such as orogenesis (mountain building); tectonics; erosion; shoreline processes; landslides; and transport and deposition by rivers, glaciers, wind, and gravity. The analysis of landforms and processes in this course will be directed using a largely quantitative approach, with written reports and a field-oriented project. Supplemental math instruction included. Field trips will provide opportunities for students to observe Ohio and Kentucky examples of several geologic processes and their resulting landforms. *Prerequisites: GEL 1101, MTH 1750 or PHY 1181.*

**GEL 4495. Senior Project in Geology (II; 3)** This course is designed for graduating seniors to integrate the knowledge they have gained in all geology courses and apply it in a field application project related to a topic of interest within the field. Students will be required to choose a topic from a variety of projects pertaining to the field of geology.

## HEALTH and HUMAN PERFORMANCE

**HHP 1000. Health and Wellness (I, II, III; 2)** Designed to enable students to enhance personal wellness by gaining understanding of the social, physical, spiritual, and emotional dimensions of health, and by applying various strategies for improving personal health behaviors. (Required for graduation.)

**HHP Activity Courses (I, II; 1) Designed** to provide students with the knowledge, skills, practice, and understanding needed for successful participation in selected activities.
HHP 1101. Archery
HHP 1103. Cycling
HHP 1104. Fencing
HHP 1105. Golf
HHP 1106. Advanced Golf
HHP 1107. Racquetball
HHP 1108. Beginning Swimming
HHP 1109. Advanced Beginning Swimming
HHP 1110. Intermediate Swimming
HHP 1111. Beginning Tennis
HHP 1112. Advanced Tennis
HHP 1113. Volleyball
HHP 1114. Aerobic Dancing
HHP 1115. Conditioning and Weight Training
HHP 1116. Prescriptive Exercise
HHP 1117. Badminton
HHP 1118. Walking for Fitness
HHP 1119. Water Aerobics
HHP 1120. Basketball
HHP 1121. Fitness for Life

**HHP 1130. Introduction to Health, Physical Education, and Recreation (I; 2)** An orientation course concerned with the philosophy and career opportunities in the three fields. Open to majors and minors in HHP or students who are not sure of a major area of concentration.

**HHP 1131. Skills I (II; 2)** Provides Recreation majors and minors with the knowledge, skills, practice, and understanding of gymnastics from beginning to advance level. Focuses on fundamental motor skills, mixers, and line, ballroom, and square dance needed for successful participation. Exposes students to a variety of teaching methods for these activities. *Prerequisite: HHP 1130; open to majors only.*

**HHP 1132. Skills II (I; 2) Provides** Recreation majors and minors with the knowledge, skills, practice, and understanding of volleyball and soccer needed for successful participation. Exposes students to a variety of teaching methods for these two sports. *Prerequisite: HHP 1130*.

**HHP 1133. Skills III (II; 2) Provides** Recreation majors and minors with the knowledge, skills, practice, and understanding of badminton and track and field needed for successful participation. Exposes students to a variety of teaching methods for these two sports. *Prerequisite: HHP 1130.*

**HHP 1134. Skills IV (I, II; 2)** Provides Recreation majors in methods techniques and basic skills in racket sports needed for successful participation.

**HHP 1202. Nutrition for Health and Weight Control (I; 1) Study** of eating habit formation and modification for optimum wellness. Special emphasis will be given to sound, effective approaches to body weight reduction and maintenance.

**HHP 2222. History and Principles of Recreation (I; 2) A** study of the philosophical, psychological, educational, and sociological foundations of sports, recreation, and leisure services. Covers the individuals, events, and principles that influenced the development of organized sports, recreation, and leisure services.

**HHP 2230. First Aid and Terminology (I, II; 3)** An intensive study of the skills and knowledge involved in providing first aid, basic life support, cardio-pulmonary resuscitation (CPR), safety education, and methods of

preventing accidents. Includes instruction in medical terminology.

**HHP 2231. History of Modern Dance (I; 1)** An analysis of the history of dance, teaching its role as religious ritual, art form, or popular entertainment, and viewing it in relation to the social context of each period and other major art forms.

**HHP 2232. Beginning Modern Dance (I; 1)** the purpose of this course is to support interest in and appreciation of modern dance through participation in it as a creative form. Two one-hour laboratory periods are required.

**HHP 2243. Lifeguard Training (II; 2) Completion** leads to Red Cross Certification. Open to all University students who meet the prerequisite. Prerequisite: Satisfactory evidence of skill in swimming beyond intermediate level. *Prerequisite: HHP 1110.*

**HHP 2255. Clinical Teaching (I, II; 1) this** course is designed to give the student practical experience as a teacher-assistant in non-major physical education classes or in off-campus school or community agencies. A total of 20 laboratory hours are required. *Prerequisite: Skill or experience in selected activity. HPER freshmen, sophomores, juniors only.*

**HHP 3301. Mental, Substance, and Stress Education (I, II; 4) Knowledge**, techniques, and strategies for developing optimal mental and emotional wellbeing; includes an intensive examination of effective substance abuse education and stress management.

**HHP 3303. Healthful Lifestyles (II; 1)** Analysis of the impact of lifestyle on well-being, and strategies for making health promoting lifestyle changes. Prerequisite: A personal and community health course.

**HHP 3307. Health and the Environment (II; 1) Examination** of current environment-altering forces and their impact on health. *Prerequisite: HHP 1000 or the equivalent.*

**HHP 3310. School Health Programs (I; 2)** Health programs within the school. Special attention is given to school health services, healthful living, and the teacher's role in screening for referral and emergency care. Open to Health or Physical Education majors only.

**HHP 3312. Sports Psychology (II; 2)** A study of the social and psychological contributors of sports to human development and the psychological factors associated with sports performance.

**HHP 3317. Sports Officiating (II; 2)** this course provides knowledge of rules, techniques, and procedures for officiating individual, dual, and team sports. (Elective)

**HHP 3318. Principles of Coaching (I; 2)** this course provides knowledge of techniques, procedures, philosophies, and the psychology of coaching individual, dual, and team sports.

**HHP 3320. Physical Education for Elementary School (II; 3) Methods** and materials for teaching individual and group activities in the elementary school. Study of the characteristics of elementary school children and active experience in appropriate activities to meet their needs. Observation of children required.

**HHP 3322. Recreation Leadership and Programming (I; 3)** an intensive examination of the knowledge, skills, methods, duties, and responsibilities inherent in providing leadership, programming, and delivery of services in recreation and sports.

**HHP 3325. Physical Education Methods/Field Experience (I, II; 4)** This course focuses on the development of various teaching and assessment methods and models for helping Adolescent and Young Adult candidates in Physical Education develop the skills necessary to both understand and apply language arts concepts in their classrooms. This course will include a field dimension of at least 80 hours during which candidates will be assigned to work with a cooperating teacher in an appropriate setting and gain greater command of their abilities to plan, implement and evaluate students in physical education. Evaluation of candidate performance will be a collaborative effort by the university instructor and the cooperating teacher using established assessment instruments. *Prerequisite: Approval of program advisor.*

**HHP 3326. Motor Development (I, II; 3)** Motor development from birth through maturity; factors influencing the development and performance of motor skills; application of assessment and intervention strategies to improve motor performance for preschoolers through the elderly. Course

includes 5-7 hours of an on-campus intervention clinical experience with preschool children. *Prerequisite: Junior standing.*

**HHP 3330. Kinesiology (II; 3) an** integration of the anatomic and kinetic principles in the study of human motion. Application to the analysis and teaching of movement skills is stressed.

**HHP 3332. Creative Dance for Children (II; 1)** Instruction in children's movement experiences and how they may be presented in a creative and exploratory manner. Laboratory experiences required (Elective).

**HHP 3335. Commercial Recreation (I; 2)** the study of commercial recreation and sports organizations, including types of ownership and organization, and legal and financial operations (Elective).

**HHP 3340. Physiology of Exercise (II; 3)** This course focuses on the physiological response of the healthy body to exercise and training, stressing utilization of sound physiological principles in physical education and athletics. Consists of three lectures and a two-hour laboratory period per week. *Prerequisite: HHP 3330.*

**HHP 3343. Water Safety Instruction (II; 2)** Completion leads to Red Cross Certification in WSI. This course consists of two one-and-one-half hour laboratory periods per week. *Prerequisites: HHP 2243 and Certification in Lifeguard Training.*

**HHP 3345. African Traditional Dances: Cultural Significance (I; 1)** an examination of the traditional dances of Africa and their cultural significance for the various African peoples. Emphasis will be placed on introduction and historical background; costumes; instruments; and preparations, formations, and procedures (Elective).

**HHP 3348. Family Life and Disease Education (I, II; 3)** An intensive examination and development of methods and materials for effective sex and family life education; includes an examination of various factors in the cause and prevention of disease.

**HHP 3350. History and Principles of Physical Education (I; 3)** A historical view of physical education and a study of the scientific and philosophical information used in planning, organizing, conducting, and evaluating modern physical education programs.

**HHP 3355. Clinical Teaching (I, II; 1)** This course is designed to give the student practical experience as a teacher-assistant in non-major physical education classes, intramural sports, and off-campus school and community agencies. A total of 20 laboratory hours are required. *Prerequisites: HHP 2255 and skill or experience in selected activity. HPER freshmen, sophomores, juniors only.*

**HHP 3361. Introduction to Therapeutic Recreation (I; 2) A** study of recreation services provided for the developmentally and physically disabled, mentally ill, the aged and other special populations.

**HHP 3362. Program Design in Therapeutic Recreation (I; 2) A** study of principles, procedures, and techniques for developing therapeutic recreation programs for the aged and challenged populations (Elective).

**HHP 3363. Leisure Counseling (II; 2)** A study of the techniques and procedures involved in providing leisure guidance, remedial-normalization, and lifestyle development services (Elective).

**HHP 4401. Seminar: Gerontological Health Issues (II; 1)** Review of health-related issues of special relevance to the elderly. *Prerequisite: HHP 1000 or the equivalent (Elective).*

**HHP 4402. Seminar: Holistic Health (II; 1)** Examination of the tenets and perspectives of the holistic health movement (Elective).

**HHP 4408. Seminar: Current Issues in Health (II; 1) Examination** of current areas of controversy in health which arise from the ethical, economic, and legislative milieu of our times. *Prerequisite: HHP 1000.*

**HHP 4410. Organization and Administration, of School and Community Health Programs (I; 3)** Principles, policies, and procedures for administering school and community health programs. *Prerequisite: Senior standing in Health Education or a health-related major.*

**HHP 4430. Foundations of Health (I; 2)** an introductory course which reviews concepts and policies for the conduct of school and community health programs. *Prerequisite: Professional standing in Health Education or a health-related major.*

**HHP 4432. Tests and Measurements of Physical Education (II; 2)** A study of evaluation, including test selection and procedures for interpretation and utilization of measurement data for physical education. Course consists of two hours of lecture and two hours of laboratory per week. Prerequisite: Professional standing (HPER majors only).

**HHP 4450. Adapted Physical Education (I, II; 3)** A course to prepare prospective teachers to adapt a physical education program so that all children can successfully participate in activity programs. Focus on the study of the atypical child in order to organize and administer a program which will meet individual needs. Clinical field experience required. *Prerequisites: HHP 3320 and HHP 3330.*

**HHP 4455. Clinical Teaching (I, II; 1)** This course is designed to give the student practical experience as a teacher assistant in non-major physical education classes, intramural sports or off-campus school and community agencies. Open to HHP majors only. *Prerequisites: HHP 2255, HHP 3355 and skill or experience in the selected activity. HPER seniors only.*

**HHP 4460. Organization and Administration of Physical Education and Athletics (I, II; 3)** Study of policies, standards, and procedures in the organization and administration of physical education and athletic programs. *Prerequisite: Professional standing.*

**HHP 4462. Therapeutic Recreation Administration (II; 2) A** study of the organization and administration of therapeutic recreation services with emphasis on personnel, program, facility, and financial management (Elective).

**HHP 4463. Management of Recreation and Intramural Sports (II; 2)** A study of the organization and administration of recreation and intramural sports programs with an intensive examination of policy and procedures, financial management, program development, legal issues, and risk management.

**HHP 4470. Organization and Administration of Recreation (II; 3)** A study of the management of recreation agencies, facilities, personnel, finances, public relations, maintenance, and evaluation. *Prerequisite: Junior or senior standing.*

**HHP 4471. Outdoor Education (II; 2)** A course designed to help the student to use the out-of-doors as a resource in teaching. *Prerequisite: Professional standing.*

**HHP 4472. Legal and Financial Aspects of Sports and Recreation (II; 2)** an intensive study of the legal and financial operations of public, private, voluntary, and commercial park, recreation, and sports organizations.

**HHP 4480. Health Education Method/Field Experience (I, II; 4)** This course focuses on the development of various teaching and assessment methods and models for helping Adolescent and Young Adult candidates in health education develop the skills necessary to both understand and apply language arts concepts in their classrooms. The course will include a field dimension of at least 80 hours during which candidates will be assigned to work with a cooperating teacher in an appropriate setting and gain greater command of their abilities to plan, implement and evaluate students in health education. Evaluation of candidate performance will be a collaborative effort by the university instructor and the cooperating teacher using established assessment instruments. *Prerequisite: Approval of program advisor.*

**HHP 4485. Honors Seminar in Health (I, II, III; 1) Provides** the opportunity for outstanding students to investigate a health-related problem or issue of their choosing. Formal presentation of findings required. *Prerequisites: Senior standing in Health and a 3.2 or above GPA. (Elective).*

**HHP 4486. Senior Problem in Recreation and Sports Administration (I; 3)** An introduction to research and problem-solving practices and procedures. A research project is Required. *Prerequisite: HHP Senior standing.*

**HHP 4490. Field Work in Recreation (I, II, III; 10)** The student will actively participate in a community or private recreation program, receiving practical experience in recreation under the supervision of the agency and the University coordinator. *Prerequisite: Professional standing. One semester or 409 clock hours.*

**HHP 4492. Internship in Community Health (II; 12) the** student will spend 200 clock hours in a community setting related to the major. *Prerequisite: Professional standing.*

**HHP 4494. HHP Capstone Course (I; 3)** A review course to prepare students for the senior assessment in health, physical education and recreation. Praxis II and Praxis III.

## HISTORY

**HIS 1100. Ohio History (Odd years - I; 3)** A general survey of state history with emphasis on social, economic, religious and political development from colonial times to the present as well as the role and contribution of African and Native peoples. Recommended especially for elementary and secondary teachers who plan to teach in Ohio and for American History majors.

**HIS 1110. Introductory History of Africans in the U.S. (I, II; 3)** A general history survey of people of African descent in North America, covering such topics as slavery, the abolitionist movement, reconstruction and the rise of segregationist laws, the Harlem Renaissance, and the movement for human and democratic rights. The unique experience of people of African descent in America and its affinity with the main themes of North American history will be emphasized. *Prerequisite: ENG 1100 or ENG 1101.*

**HIS 1121. Global History to 1500 (I, II; 3)** Beginning with the emergence of humanity in Africa, this course will deal with trends in the development of human culture in China, India, the Middle East, Europe, Africa, and the Americas. Each of these regions will be examined in their efforts to build systems of government, religion, and national unity. Interactions among these regions will be examined from the standpoint of trade, war, empire, and scientific and technological exchange. *Prerequisite: ENG 1100 or ENG 1101.Equivalent to TAG OHS041 (Combination of HIS 1121 and HIS 1122 equals TAG OHS009).*

**HIS 1122. Global History Since 1500 (I, II; 3)** Efforts to build centralized states in Western Hemispheric, African, European, and Asian cultures will be examined. Trade and exploration leading to Europe's rise to worldwide hegemony will be examined from the standpoint of the impact on Native, African, and Asian cultures resulting in slavery, colonialism, and world war, concluding with the Cold War and independence struggles in the 20th Century. *Prerequisite: ENG 1100 or ENG 1101. Equivalent to TAG OHS042. (Combination of HIS 1121 and HIS 1122 equals OHS009).*

**HIS 2100. Historiography and Historical Research Methods (I; 3 –On Demand)** Research Methods History 2100 is an introduction to the study and discipline of history. As such, this course focuses on the philosophy, methodology, and practice of history as an academic discipline, with an emphasis on the diversity of modern historiography, the problem of objectivity, and the professional standards of historical scholarship. The ultimate goal is to prepare the student for success as a student and professional in the field of history. *Prerequisites: ENG 1102; HIS 1110, HIS 1121 or HIS 1122 or permission of the instructor .*

**HIS 2201. History of the U.S. To 1877 (I; 3)** The origins of society in North America will be examined with emphasis on themes such as slavery, native removal, regional economic growth and development, national formation, independence, compromise, expansion, sectional conflict, international war and conflict, African and native American resistance and war, and finally civil war and reconstruction. *Prerequisites: ENG 1102; HIS 1110, HIS 1121 or HIS 1122 or permission of the instructor . Equivalent to TAG OHS043.*

**HIS 2202. History of the U.S. Since 1877 (II; 3)** This course will study the growth of big business, western and imperial expansion, the growth of the social reform movements, movements for human and democratic rights, the depression, both World Wars, and the emergence of the Cold War as the United States becomes a dominant world power in the mid-20th century. *Prerequisites: ENG 1102; HIS 1110, HIS 1121 or HIS 1122 or permission of the instructor . Equivalent to TAG OHS044.*

**HIS 2245. Introduction to African Civilizations (I; 3-OddYears)** This course provides an introduction into the classical civilizations of Africa, beginning with the origins of humanity, to the development of Ancient Egypt (Kemet), Nubia, and Kush, as well an exploration of the Great Kingdoms of Central and Western Africa. Africa's social spiritual, cultural, and political development will be examined in detail, as well as the maintenance of cultural continuity with the migration of African people. Key individuals and events will also be discussed.

**HIS 2280. History of Asia (I; 3- Odd Years)** This course is a

general survey of the history of Asia from its ancient origins to the present. As the largest and most populous continent with more than 60% of the population on earth, Asia is home to three great ancient civilizations: Mesopotamia, Indus, and China; and to such dynamic economies of the world today as China, Japan, and India. This course traces the progress of Asian civilization from ancient to modern times in four major regions: East, South, West, and Southeast, with special emphasis on their encounters with the West, and on their struggles and triumphs for development and modernization.

**HIS 3270. Pan African History (II; 3- Odd Years)** This interdisciplinary exploration of African Diaspora history is guided by the Black/Africana Studies discipline and Afrocentricity, which uses a varied of disciplines to better understand the dynamics of African cultural integrity. Histories, documentaries, independent research and discussions will be used to explore relationships between Africans and African descendant populations. Disciplinary tools used in this course include the History, Africana Studies, Political Science, Geography, Linguistics and Arts.

**HIS 3301. African American History To 1877 (I; 3-Even Years)** This course is a history of the struggle and contributions of Africans in North America from the period of European colonial settlement to the end of Reconstruction in 1877. This course will examine issues such as early African resistance, rebellion, and war; the realities of enslavement, abolitionism, the debates between Douglass and Delany, the Black Convention Movement, the Underground Railroad, the African Colonization Society, the Civil War, and Reconstruction. *Prerequisites: HIS 1110 or permission of the instructor.*

**HIS 3302. African American History Since 1877 (II; 3 – Even Years)** This course is a history of the struggle and contributions of Africans in the North America from the post-Reconstruction period to the present. This course will examine such issues as segregation, anti-lynching campaigns, Africans in World Wars I and II, Korea and Vietnam, the Harlem Renaissance, school desegregation, and struggles for human and civil rights in the 1960s and beyond. In addition, the ideas of Booker T. Washington, Marcus Garvey, W.E.B. DuBois, Martin Luther King, Jr. and Malcolm X will be examined. *Prerequisites: HIS 1110 or permission of the instructor.*

**HIS 3311. American Diplomatic History I (On Demand - Odd Years)** This course examines the history of American foreign relations and follows the development of diplomacy in its international and domestic contexts from the colonial era to the aftermath of World War I. Topics covered include: the problems of organizing a new nation, expansion in North America and beyond, the impact of racism, war, and revolution, the rise to world powers, as well as consideration of the economic, political, and social imperatives behind foreign policy making. This course is open for non-majors. *Prerequisite: HIS 2201 or HIS 2202 or Instructor's permission*

**HIS 3312. American Diplomatic History II (On Demand - Odd Years)** This course examines the history of American foreign relations and follows the development of diplomacy in its international and domestic contexts from the aftermath of World War I to the present. This course is open for non-majors. *Prerequisite: HIS 2201 or HIS 2202 or Instructor's permission.*

**HIS 3320. History of Europe To 1500 (I; 3)** A study of the history of Europe from Greece to the beginnings of the Italian Renaissance. *Prerequisites: HIS 1121.*

**HIS 3321. History of Europe Since 1500 (II; 3)** A study of the history of Europe from the Renaissance to the present. European modern state formation, the expansion of its colonial empires, its involvement in both World Wars, and its decline as the dominant force in global politics will be examined. *Prerequisites: HIS 1122.*

**HIS 3330. History of Modern China & Japan (II; 3- Odd Years)** This is a specialized upper-level history course, covering modern China and Japan from feudal imperial empires to economic powerhouses is a critical link in modern global history, and vital to an explicit understanding of today's increasingly globalized and interconnected world. This course explores China and Japan's encounters with the West and their struggles for modernization; their differing paths to communism and militarism; and the "miracles" of their rapid postwar economic development.

**HIS 3355. Community Participation (II; 3)** Affords the student an opportunity to utilize the theory of the classroom in a practical community activity, such as research, data collection, and public relation activities. Students will conduct local history research as well as perform community service in the African American museum. *Prerequisites: HIS 1110, HIS 2201 and HIS 2202, or permission of the instructor*.

**HIS 3360. Oral History Seminar (I; 3)** Students will master the techniques and methodology of conducting oral history interviews as well as develop a clear understanding of the life experiences and memories of an earlier generation. *Prerequisites: HIS 1110, HIS 2201, HIS 2202, HIS 1121, and HIS 1122.*

**HIS 3370. History of the Black Woman (I; 3)** This course is designed to present an overview of the History of the Black Woman across the Diaspora, from Africa to the United States and the Caribbean. This course will examine the particulars of the life of the Black Woman, from exploring her role in traditional African culture, to understanding her experience under enslavement, to her activism during Reconstruction, Civil Rights, and Black Power Eras. Of particular importance will be the intersecting dynamics of her roles as leader, worker, wife, and mother. Key individuals will be explored in detail. *Prerequisites: HIS 1110 or permission of the instructor*.

**HIS 3455. Colonial Latin America (II; 3)** An examination of the transfer of Iberian culture and structures to the Western Hemisphere resulting in the colonial clash of Native, African, and European cultures. The effects of colonialism on native cultures, the European-controlled slave trade, and the nature and organization of colonial society under Spanish and Portuguese rule will be examined. *Prerequisites: HIS 1121 or HIS 1122.*

**HIS 3460. Islam in Africa (II; 3)** Islam now plays an increasing important role in shaping African societies. This course examines how Islam spread chiefly into the Western, Sudanic, Northern, and Eastern, including the coastal, regions of Africa. It focuses on the processes of adoption, adaption, and transformation as these affected indigenous African societies as well as peninsular Islamic standards and practices. The role of Islam in the state formation and nation-building, the varieties of contemporary African political Islam, and sectarian issues, among other topics, also will be studied. *Prerequisite: HIS 1121 or HIS 1122.*

**HIS 3550. Museum Studies (II; 3)**This course provides mentorship experiences designed to introduce students to the basics of museum operation with four focus areas:

- Museum administration
- Collections care and management
- Exhibitions
- Museum education and programming

In the United States and other parts of the world, museums have become significant and enduring institutions. According to a recent estimate, over 30,000 museums exist in the United States and Canada, and they attract over 70 million visitors annually. Although this course will deal with museums in general, it will use the National Afro American Museum and Cultural Center as a resource and practice facility. In this program students will learn how museum professionals catalog, research, exhibit and interpret the holdings of a museum for the benefit of a community. Students will gain experience through the development of independent projects and will have the opportunity to visit local historical sites and museums to study how these agencies carry out their mandated duties. *Prerequisites: HIS 1121, HIS 1122, HIS 2201, and HIS 2202.*

**HIS 3560. Archival Studies (I; 3)** The course introduces students to the theories and principles that guide archivists, including the use of archival records, their management, physical storage, organization, and preservation. In addition, students will gain introductory experience working directly with archival material. Students will also become acquainted with professionals and professional opportunities in related fields. *Prerequisites: HIS 2100, HIS 1121, HIS 1122, HIS 2201, and HIS 2202.*

**HIS 4370. Recent America: 1900-1941 (I; 3)** A detailed study of the domestic issues from the turn of the twentieth century to the economic depression of the 1930s as well as the involvement of the nation in World War I. *Prerequisites: HIS 2202.*

**HIS 4371. Recent America: 1941-Present (II; 3)** A study of World War Il, the Cold War, the politics of protest and social reform, America's involvement in Vietnam, and the assumption of the role of America as a

super-power. *Prerequisites: HIS 2202.*

**HIS 4420. Africa Before 1885 (I; 3- Odd Years)** This course examines Africa's socio-political development from an African centered perspective. In particular, the course will examine the nature of oral history vs. written history, the concept of nation-state vs. acephalous societies, African democracy, communal organization, and Africa's economic structures. The destabilization of African nations resulting from European conquest and slaving will be explored within the context of its impact upon Africa. The course will also analyze the impact of European cultural forms on the continent and the beginnings of European colonialism. *Prerequisite: HIS 2245 or permission of instructor.*

**HIS 4430. Africa After 1885 (II; 3- Odd Years)** This course examines the impact of the Berlin Conference and the beginnings of colonialism upon the continent of Africa. The changes to traditional African socio-political, cultural, and economic forms due to the force of European culture will be analyzed in detail. Africa's participation in the two World Wars, Africa's liberation movements, and the beginnings of Pan-Africanism will also be explored. Africa's integration into the global economy via the continued policies of Neo-Colonialism will be researched in depth. Finally, the course will study the impact of the Cold War in the creation of the modern African nation-state, as well as examine the dynamics of Africa's political process. *Prerequisites: HIS 2245 or permission of instructor.*

**HIS 4497. Special Topics in History (Even Years/On Demand - II; 3)** Topics in this course will vary. Instructors will have an opportunity to teach topics that they are currently researching or topics of special interest to them. *Prerequisites: HIS 1121; HIS 1122; HIS 2201; and HIS 2202;or permission of the instructor.*

**HIS 4640. Islamic History To 1798 (I; 3)** This course explores the history and culture of the Arab and Muslim peoples in the Middle East including the Maghrib from the late 6th century to Napoleon Bonaparte's invasion of Egypt in 1798. Throughout this course, emphasis is placed on the interrelations of socio-economic structures and intellectual developments in Islamic theology and Sharia law. The historical emergence of Islam, its maturation in the Classical Age, the consolidation of imperial states under Islam, and the decline of the Islamic Middle East and the Maghrib to the end of the eighteenth century are the major areas of focus in this course. *Prerequisite: HIS 1121 or HIS 1122.*

**HIS 4650. Modern Middle East History (II; 3)** This course takes an interdisciplinary approach to the major problems of the Muslim Middle East in the modern period. It focuses on internal Arab and Muslim social, intellectual, and economic developments. Muslim responses to European colonialism including the debate on westernization and/or versus modernization, modern Arab and Muslim nationalisms, major political trends since independence, and Islamic reformist and Islamic revivalist movements are among the chief topics emphasized in this course. *Prerequisite: HIS 1122.*

**HIS 4995. Global History Capstone Seminar (On demand - II; 3)** This is the history major's capstone course. Students will be required to develop a senior thesis from their specialty area with a global focus that will pull together knowledge and skills from both the core and elective areas of the major. *Prerequisite: Completion of the history major or permission of the instructor.*

## HONORS

**HON 3300. Honors Colloquium (I, II; 3)** The colloquium is designed for advanced Honors Scholars and other qualified students with strong research, writing, and documentation skills. Through rigorous discussion guided by instructors, students will explore a topic in depth from an interdisciplinary perspective. Students will formulate their hypotheses and discoveries and share them with fellow students, faculty, and the University community. The colloquium is reading-intensive and facilitates growth in oral and written communication skills. Themes may vary from semester to semester. *Prerequisite: ENG 1102 or the equivalent.*

**HON 3310. Research and Information (I, II; 1)** This course is a weekly, 1-credit study concentrating on research methods, presentation and documentation. Students preparing for the Honors Thesis requirement are directed to this course.

**HON 4400. Honors Thesis/Project (II; 3)** To fulfill Honors Program requirements, honors students must complete

an honors thesis or project in the major field in the senior year.

## HOSPITALITY MANAGEMENT

**HMP 1100. Introduction to Hospitality Management (I, II; 3)** This course explores and analyzes the management functions, methods, and concepts in various segments of the hospitality industry. An overview of management careers, opportunities, and responsibilities in the hospitality industry will be presented.

**HMP 2211. Hospitality Internship I (I, II; 1)** Students will be required to work in various areas of the industry for a minimum of 100 hours. An oral or written presentation before faculty, students or industry personnel is required to complete this phase of the internship. Report covers information required by the internship manual. *Prerequisite: Permission of the instructor.*

**HMP 2220. Sanitation (II; 3)** Course examines the causes and prevention of food poisoning and food borne illness including the current problems facing the industry. Proper sanitation practices, hygiene and a study of health regulations and inspections are also studied. *Prerequisite: HMP 1100.*

**HMP 2222. Food Production (II; 3)** Course introduces students to basic food service preparation. Emphasis is placed on management concepts, menu planning and preparation supervision. Students learn service techniques, handle problems in customer relations, and keep accurate accounting records on the profit and loss phases of the operation. Staffing, merchandising, and cost control procedures are integral parts of the course. *Prerequisite: HMP 1100.*

**HMP 2250. Culinary Arts (II; 3)** This course in advanced food production and service techniques is designed to provide the student with realistic production, service and managerial experience. Students will be rotated through production and service areas. *Prerequisites: HMP 2220 and 2222.*

**HMP 3310. Hospitality Law (I; 3)** Course covers basic laws that affect hotels, motels, and restaurants, with common law used as a basis. The student is introduced to the fundamental laws, rules, and regulations applicable to the hospitality industry. *Prerequisite: HMP 1100.*

**HMP 3311. Hospitality Internship (I, II; 2)** Students will be required to work in various areas of the industry for a minimum of 200 hours. An oral or written presentation before faculty, students, or industry personnel is required at the completion of this phase of the internship. Report covers information as requested in the internship manual. *Prerequisite: Permission of the instructor.*

**HMP 3330. Hotel Management (II; 3)** This course explores the duties of hotel management including front desk operations and property and room management. *Prerequisite: HMP 1100.*

**HMP 3331. Hospitality Operations Management (II; 3)** Course explores management systems, methods and procedures related to the operation of food service. Course includes the study of the management tools available to control sales and expenses within the hospitality operations. Also examined are fundamentals of food and beverage cost controls for hotel and restaurant operations. *Prerequisite: HMP 1100.*

**HMP 4401. Tourism (I; 3)** This course focuses on the understanding of tourism from the perspectives of travelers and destinations, while identifying tourism's economic, socio-cultural, and environmental impacts on communities. *Prerequisite: HMP 1100.*

**HMP 4402. Hospitality Marketing (II; 3)** Course examines the marketing principles, theories and concepts used to maximize profits in hospitality organizations. During this course, students will analyze methods used by sales and service departments with emphasis on selling, planning and marketing. *Prerequisite: HMP 1100.*

**HMP 4411. Hospitality Internship (I, II; 3)** Students will be required to work in various areas of the industry for a minimum of 300 hours. An oral or written presentation before faculty, students, or industry personnel is required at the completion of this phase of the internship. Report covers information as requested in the internship manual. *Prerequisite: Permission of the instructor.*

**HMP 4412. Hospitality Ethics (II; 3)** This course exams the managerial decision-making process within hospitality organizations. Ethical cases for review include workers' rights, consumers' rights, managerial response, community obligation and social responsibility. *Prerequisite: HMP 1100.*

**HMP 4418. Franchising (I; 3)** This course studies franchise administration, operations, and marketing, with special emphasis on hospitality related franchises. The legal regulations of franchises, the franchisee-franchisor relationship, and unique problems in franchise operations are included. *Prerequisite: HMP 1100.*

**HMP 4426. Club and Casino Management (II; 3)** Students are exposed to organizations, administration, operation, and opportunities within the casino and private club industry, with emphasis on the manager's duties. *Prerequisite: HMP 1100.*

H**MP 4436. Seminar in Hospitality Management (II; 3)** Hospitality management topics are discussed with a major emphasis on operations management. *Prerequisite: Junior standing.*

**HMP 4439. Risk and Quality Management for Hospitality (I; 3)** This course is designed to enhance the student's ability to obtain and maintain a quality focus, and reinforces the concept that a risk and quality management program impacts customers and involves all levels of an organization. *Prerequisites: HMP 1100.*

**HMP 4466. Internship in Hospitality Management (On Demand: 1-6)** Course provides the opportunity to explore practical experience in hospitality management. Student activities will be supervised by the organization sponsoring the internship. The Office of Career Services and the responsible faculty monitor internship. A comprehensive report is required at the completion of the internship. *Prerequisite: Permission of the instructor*.

## INDUSTRIAL TECHNOLOGY

**INT 1110. Engineering Print Reading (I; 3)** Prepares the student to read, understand and use blueprints with confidence; provides instruction in basic definitions, symbols, rules and concepts of GD and T as they relate to work holding, assemblies, tolerance zones, limits of size, datums, target, and feature control frame; reviews 13 basic geometric characteristics (flatness, straightness, circularity, cylindricity, profile of a line and surface, perpendicularity, angularity, parallelism, position, concentricity, and circular and total run out) and their associated symbolism as defined in ANSI Y14.5M specifications. Two lectures and two laboratory/group project periods per week.

**INT 1210. Engineering Computer Graphics (I, II; 3)** Graphics and modeling fundamentals for engineering design: multiview projections, auxiliary views, GD and T, computer modeling of solid geometry, generation of engineering drawings, and assemblies. Introduction to reverse engineering, computer-aided design, and manufacturing. Individual and team projects will be used to explore application of the design process and problem. solving. One lecture and four laboratory periods per week. *Equivalent to TAG OET012.*

**INT 2311. Circuit Analysis I (I; 3)** Basic circuit and troubleshooting techniques for DC circuits with emphasis on industrial applications. Topics include the concepts of resistance, inductance, capacitance, power, nodal and mesh analysis, network theorem, RL, RC, and RCL analyses, and applications of operational amplifiers. Conventional and computer analysis techniques are utilized. Two lecture hours and two laboratory hours per week. *Prerequisite: MTH 1750.*

**INT 2312. Circuit Analysis II (II; 3)** Basic circuit and troubleshooting techniques for AC circuits with emphasis on industrial applications. Topics include the concepts of resistance, inductance, capacitance, power, nodal and mesh analysis, network theorem, RL, RC, and RCL analyses, and applications of operational amplifiers. Conventional and computer analysis techniques are utilized. Complex frequency, complex power, resonance, and polyphase systems are also discussed. Two lecture hours and two laboratory hours per week. *Prerequisite: INT 2311 and MTH 2501. Equivalent to TAG OET003.*

**INT 2320. Advanced 3-D Modeling (I; 3)** Designed to provide advanced CAD users with in-depth knowledge and required skills as related to constructing and integrating 3-D solid modeling and surface generation to part models, assembly, and animation. Commercial CAD modeling packages will used. One lecture and four laboratory periods per week. *Prerequisite: INT 1210. Equivalent to TAG OET021*

**INT 2410. Industrial Safety and Health (II; 3)** Covers issues and problems commonly associated with OSHA in the work place. Work place settings considered will be manufacturing, industrial, or

office. The impact of human and ergonomic factors on safety design will be explored. Safety rules and regulations, management responsibilities, and roles of safety and health personnel will be considered as part of an integrated safety management system. Three lectures per week.

**INT 2420. Industrial Instrumentation and Process Control (II; 3)** A study of industrial control systems as applied to process control and positioning systems. Application of transducers in mechanical, fluid, and electrical measurements. Study of transducers, recorders, indicators, controllers, and statistical analysis of data. Control topics include the application of sensors, actuators and servo controllers in industrial processes. Two lectures and two laboratory periods per week. *Prerequisite: INT 2310.*

**INT 2430. Electronic Devices and Circuits (II; 4)** A study of semiconductor properties, transitor and analog integrated circuit based circuits analysis and design. Topics include concepts of semiconductors, BJT, FET, and JFET. CMOS based circuits, negative and positive feedback and applications. Thyristors and power supplies and applications of commercially available analog integrated circuits. Digital circuits are introduced. Three lecture hours and two laboratory hours per week. *Prerequisite: INT 2310. . Equivalent to TAG OET005.*

**INT 2440. Circuit Analysis II (I; 3)** Basic circuit and troubleshooting techniques for AC circuits with emphasis on industrial applications. Topics include the concepts of resistance, inductance, capacitance, power, nodal and mesh analysis, network theorem, RL, RC, and RCL analyses, and applications of operational amplifiers. Conventional and computer analysis techniques are utilized. Two lecture hours and two laboratory hours per week. *Prerequisite: MTH 2501 and INT 2310.*

**INT 2450. Seminar in Commercial Construction (II; 3)** Covers individual investigations into present and future trends as related to commercial construction projects. Guest lecturers including engineers, project managers, and contractors will discuss present and future trends based on their multiple years of experience. Some site visits will be required. Three lecturers per week. *Prerequisite: INT 2330.*

**INT 2460 Applied Statics: (II; 3)** This course covers static force vectors, and combining forces into a resultant. Computation of moments and couples. Evaluation of system of forces and moments. Static equilibrium applied to members in a truss, frame and pulley. Application of friction to wedges and inclines. Also center of gravity, centroids, and moments of inertia will be introduced. Two lectures and two laboratory periods per week. *Prerequisite: MTH 2501. Equivalent to TAG OET007.*

**INT/AGR 3120. Agriculture Machines and Mechanization (I; 4)** This course introduces students to mechanization in agriculture which involves selection, basic design, operation, maintenance and management of machinery and power systems typically used in the agriculture field operations and in production. The course also provides an overview of precision agriculture and sensors, GPS and real time kinematic GPS, remote sensing technologies, and computer guided delivery systems for precise and targeted delivery of irrigation water, fertilizers, and pesticides. Course in particular introduces agricultural power and machinery (engines, power transmissions including hydraulics, tillage machinery, calibrations, and harvesting machines), agricultural mechanization for improved agricultural materials handling, pest control applications, agricultural electrification including (circuits, motors, controls) and agricultural structures plans and constructions. Three hour lecture and two lab contact hours per week. *Prerequisite: INT 1210, AGR 1150, AGR 1250 and MTH 2501*

**INT 3510. Materials and Machine Processes (I; 3)** Covers identification of metals, characteristics, and working qualities of common industrial materials along with the precision measurement, machine tools and metal working processes which include turning, drilling, milling, electric discharge machining and grinding. Two lectures and two laboratory periods per week. *Prerequisite: INT 1110.*

**INT 3520. Digital Systems (I; 4)** An introductory course on the basic tools for the analysis and troubleshooting of combinational and sequential logic as employed in digital computers and control systems. Topics include number systems, Boolean algebra, logic gates, combinational elements and circuits, synchronous sequential circuits, memory and storage

devices, programmable logic devices. Three lecture hours and two laboratory hours per week. *Prerequisite: INT 2430. Equivalent to TAG OET002.*

**INT 3530. Quality Control and Experimental Design (SPC/DOE) (I; 3)** Introduces the fundamentals of statistical quality control of variables and attributes data. Emphasis is placed on hands-on construction of control charts and the interpretation of various control charts patterns relevant in industry for part and assembly quality and for various manufacturing processes. The course also introduces the fundamentals of designing valid experiments supporting sound statistical inferences with emphasis on full factorial designs, fractional factorial designs and the Taguchi screening designs as utilized in industrial applications. Two lectures and two laboratory periods per week. *Prerequisite: MTH 2001.*

**INT 3540. Programmable Logic Controllers (I; 3)** Introduction to the installation and application of programmable logic controllers in industry. Topics include ladder logic, input-outputs, timers and interrupts, sequencing and programming, and installation and interfacing techniques. Two lecture hours and two laboratory periods per week. *Prerequisites: INT 2310 and INT 2420.*

**INT 3550. Applied Strength of Materials (I; 3)** Analyze stress, strain in a member carrying tensile or compressive loads. Compute shear stress, torsional shear stress and combined loadings in beams. Determine stress concentration in members. Study deflection of beams due to a variety of loading and support. Two lecture periods and two laboratory periods per week. *Prerequisite: INT 2460. . Equivalent to TAG OET008.*

**INT 3610. Plastics Technology (II; 3)** This course involves the study of plastics materials and manufacturing processes, including coverage of thermosetting and thermoforming material properties and applications. Emphasis is placed on common industrial processes including injection molding, extrusion, blow molding, and thermoforming. Two lectures and two laboratory periods per week. *Prerequisite: MFE 1110.*

**INT 3620. Computer Numerical Control (II; 3)** Covers manual programming as well as CAM programming for both CNC mills and lathes. Emphasis is placed on understanding standard G-codes, controllers, tool selection, tool length offsets, cutter diameter compensations, canned cycles and fixturing. Projects will make extensive use of laboratory facilities. One lecture and four laboratory periods per week. *Prerequisite: INT 3510.*

**INT 3630. Microprocessors (II; 4)** Introduction to the applications and development of software and hardware for effective use in interfacing to microprocessor-based systems. Software topics include software architecture, software development tools and assembly language programming. Hardware topics include microprocessor architecture, bus timing and structure, memory, input-output ports interfacing, Interrupt handling, clock generation and timing. Three lecture hours and two laboratory hours per week. *Prerequisite: INT 3520. Equivalent to TAG OET004.*

**INT 3650. Surveying (On Demand; 3)** Course will cover the fundamental use of laser levels, transits, and GIS systems. Emphasis will be placed on linear measurements angular measurements, extending straight lines, profile leveling, and the keeping of surveyor's data and notes. Lecture two hours, laboratory two hours.

**INT 4710. Manufacturing Processes (I; 3)** This course covers heat treating, properties of materials, forming and joining, and casting, as well as emphasizing measuring devices and fixturing. Numerous outside assignments and field trips will be required. Two lectures and two laboratory periods per week. *Prerequisite: INT 3620. . Equivalent to TAG OET010.*

**INT 4720. Communication Systems (I; 3)** A study of modulation techniques for transmission of electromagnetic energy. Topics include modulation and demodulation techniques, transmitters and receivers, and applications in telecommunication systems. Two lectures and two laboratory periods per week. *Prerequisite: INT 3630.*

**INT 4730. CAD/CAM/CAE (I; 3)** A study of integrating 3-D CAD/CAM/CAE into designing, planning, and manufacturing. 3-D parts will be created and then analyzed using FEA software for computation of stress and strain of components under different loadings. Using FEA tools, the part design will be evaluated, modified or optimized. After finalizing the part design, parts will be sent to CAM packages for programming and

manufacturing using CNC machines. Two lectures and two laboratory periods per week. *Prerequisite: INT 3620.*

**INT 4740. Plant Layout and Material Handling (I; 3)** Provides students with a broad understanding of the issues involved in layout planning and design and the material operation factors in an industrial production system. Topics include plant location, site planning and techniques for layout of plants and their optimization, plant rate determination, process design, equipment selection, auxiliary storage facilities, plant assembly line balancing, materials handling principles and equipment, and the impact of computerization on practice. A course design project pooling all the information presented in class will be provided. Field trip to a material handling organization is required. Two lectures and two laboratory/recitation periods per week. *Prerequisite: INT 1210.*

**INT 4795. Senior Design Capstone I (I; 2) A** compilation of all previous course work, and strongly emphasizes a team work environment. It includes extensive use of CAD/CAM/ CAE packages to arrive at a design methodology for product design. Technical reports and presentations of all work are required. One lecture and two laboratory periods per week. *Prerequisite: Senior standing.*

**INT 4810. Machine Design (II; 3)** Covers the fundamentals of design of mechanical components and systems as used in diverse industrial applications. Introduction to design concepts, design safety and ethics, design for strength, and design for rigidity as applied to components of machines and mechanical systems. Examples of components include shafts, beams, bearings, springs, gears, belt drives, couplings and brakes. A design project will be assigned to students to apply the concepts and knowledge learned throughout the course. Lecture two hours, laboratory two hours per week. *Prerequisite: INT 3550.*

**INT 4895. Senior Design Capstone II (II; 2)** This course is a continuation of INT 4795. Emphasis is placed on Industrial Partners design and testing requirements to be determined at the start of each course. Technical reports and presentations of all work will be required. One lecture and two laboratory periods per week. *Prerequisite: INT 4795.*

## INTERDISCIPLINARY STUDIES

**IDS 2300. Global Perspectives (I, II; 3)** This course is intended to broaden and deepen the student's understanding of various subject areas, and from multiple interlocking perspectives. Through readings in the disciplines, such as, but not limited to, history, culture, politics, science, social science, education, economics, and technology, the course provides students with the knowledge and critical-thinking skills to participate substantively in global conversations. Taught by faculty from all CSU colleges.

## INTERNATIONAL LANGUAGES AND LITERATURES

**FLA 1100. Topics in Foreign Languages (On demand; 1-4)** A special interest section of Spanish, French, or Swahili, or an introductory course in a language not included in the catalog. Topics vary from semester to semester. May be repeated for credit. *Prerequisite: Permission of instructor.*

**FLA 1131. Basic Spanish I (I; 4)** Introduction to basic Spanish language structure: noun/adjective agreement, verb conjugations in present tense, selected irregular present tense verbs, *ser/estar*, possessives, demonstratives, the preterit, imperfect, future, and conditional tenses, and the reflexive verb. Active vocabulary development to 600 words. Reading vocabulary developed through study of cognates. Reading and translation skills with a dictionary for simple news items, advertisements, and simple prose.

**FLA 1132. Basic Spanish II (II; 4)** Continuation and completion of basic Spanish language structure: comparatives, relative and interrogative pronouns, compound tenses, enhanced constructions, *por* and *para*, passive voice, the subjunctive. Conversation around situational exercises to enhance survival communication skills, and more complex level of conversation developed around situational exercises to polish oral communication skills. Active vocabulary development to 1,200 words. Reading and translation skills for intermediate level texts. At the end of the two-semester sequence, a student will (1) understand the basic grammatical structure of Spanish; (2) be able to carry out a conversation about most simple everyday topics; and (3) be able to read or translate with a dictionary Spanish prose of average difficulty. *Prerequisite:*

*FLA 1131, its equivalent, or permission of the instructor.*

**FLA 1141. Basic French I (I; 4)** Introduction to the French language, emphasizing a communicative approach. Conversation on everyday topics. Students will acquire a minimum vocabulary of 600 words and mastery of the following basic structures: the concept of gender and how it is reflected in the language, asking and answering questions, regular -er, -ir, and -re verbs, common irregular verbs, commands, possessive structures, expanded control of the present tense, study of the *passè composè*, and study of negations. Introduction to objective pronouns and pronominal verbs, ways of talking about the past including using the present tense (*venire de* and *depuis* expressions).

**FLA 1142. Basic French II (II; 4)** Continuation and completion of basic French language structure. Introduction to making comparisons, the *imparfait*, comparison of *passé composè* and *imparfait*. Expansion into the future and conditional tenses. Exploration of more complex notions: relative pronouns, double object pronouns, faire + infinitive. Active vocabulary to 1,200 words. Reading and selections will acquaint students with lesser-used tenses for recognition only. At the completion of the two-semester sequence, students will be able to (1) understand the basic grammatical structures of French; (2) function within a limited number of everyday situations using authentic language and culturally appropriate behavior; and (3) read French texts of average difficulty, with the aid of a dictionary. *Prerequisite: FLA 1141, its equivalent, or permission of instructor.*

**FLA 1151. Basic Swahili I (I; 4)** Introduction to Swahili. Development of basic listening, speaking, reading and writing skills emphasizing a communicative approach. Conversation on everyday topics. Reading texts based on Swahili culture. Students will acquire a minimum core vocabulary of about 600 words and mastery of the following basic structures: Swahili noun class system; associative *-a*; present affirmative and negative tenses; the imperative; emphatic pronouns; *n i* and *si* expressions; yes and no questions; question words; noun/adjective agreement; possessive adjectives; monosyllabic verbs; reciprocal and prepositional verbs.

**FLA 1152. Basic Swahili II (II; 4)** Continuation and completion of work on basic listening, reading, speaking and writing skills emphasizing a communicative approach. Conversation on everyday topics. Reading texts based on Swahili culture. Active vocabulary to increase to 1,200 words. Reinforcement of structures learned in FLA 1151 and mastery of the following new basic structures: the verb *kuwa* and *kuwa na*; object prefixes with verbs; demonstratives; *-li-, -ku-, -ta-,-me-, -ja-*, and *-hu-* tenses; reflexive, prepositional, and passive verbs; statements about place with *-po, -ko*, and *-mo;-ka* and *-ki* tenses; the subjunctive; the conditional *–nge ;*causative verbs; the *-vyo* of manner; advanced word order. At the end of the two-semester sequence, a student will (1) understand the basic grammatical structure of Swahili; (2) be able to engage in a conversation about most simple everyday topics; and (3) be able to read or translate with a dictionary Swahili prose of average difficulty. *Prerequisite: FLA 1151, its equivalent, or permission of instructor.*

**FLA 1161. Basic Chinese I (I; 4)** Introduction to Chinese Pinyin Romanization system and basic conversational Mandarin Chinese structures: rules of phonetic spelling, tones, and pronunciation drill; basic sentence patterns for daily use; greetings, ordering at a restaurant, asking for time and directions, etc.; introduction of Chinese characters: creation and evolution, stroke order and structure; language related Chinese culture. By the end of the course, students are expected to know the basic sound system and simple sentence structures, to be able to conduct daily conversation in simple Chinese characters (approximately 600 words).

**FLA 1162. Basic Chinese II (II; 4)** Continuation and further development of Chinese Pinyin Romanization system and basic conversational Mandarin Chinese structures: sentence patterns that help students carry on simple conversations in Chinese on a considerable range of topics; the Chinese character writing system, sentence composition and development of language skills in listening, speaking, reading, and writing. Computer skills with Chinese programs and simplified Chinese character input will also be included. By the end of this course, students are expected to have a good command of the Pinyin system, to acquire the rudimentary knowledge of Chinese writing system, to be able to communicate in some real-life situations in a Mandarin

speaking environment, and to read and write with an active vocabulary of 250 simplified characters (approximately 1,200 words). *Prerequisite: FLA 1161.*

**FLA 1171. Basic Arabic I (I; 4)** This beginning course provides an introduction to basic elements of modern Standard Arabic vocabulary and structures needed for basic communication. Emphasis on reading, writing, and listening based on Arabic traditions. Oral Arabic drills will be done in the classroom. The focus is on interactive communicative tasks involving student/teacher, as well as group interactions. Conversations on everyday topics. Students will learn to use personal identification, morning and evening greetings, describe themselves and talk about family and friends, read signs in Arabic used in Arab countries. Students will acquire a minimum vocabulary of approximately 600 words. This course seeks to develop in students basic linguistic and analytical skills, as well as cultural and literary knowledge. *Prerequisite: None.*

**FLA 1172. Basic Arabic II (II; 4)** Continuation and completion of basic levels of writing, listening, reading, and speaking Arabic. Emphasis will be on vocabulary learning geared toward using language to accomplish basic communicative tasks: how to ask questions in Arabic about family members, the weather, the seasons, discussing family life, compare similarities and differences in family. Incrementally include the use of authentic films, recordings, short stories, newspaper articles and songs to reinforce the knowledge of the diversity and richness of Arabic culture. The course aims to give students a strong foundation in understanding the syntax as well as basic morphological and grammatical structures of Arabic: negation, object pronouns etc. to develop linguistic competence. *Prerequisite: FLA 1171 or permission of instructor.*

**FLA 2200. Topics in Foreign Languages (On demand; 1-3)** A special interest section of Spanish, French, or Swahili, or an intermediate course in a language not included in the catalog. Topics vary from semester to semester. May be repeated for credit. This course may be applicable to the foreign language minor. *Prerequisite: Permission of instructor.*

**FLA 2231. Advanced Spanish (On demand; 4) —** Review of basic Spanish structure with focus on traditional trouble spots: preterit vs. imperfect, pronouns, compound tenses, subjunctive, passive voice, *por* vs. *para*. Intensive application of grammar through journal writing and workbook assignments. Increase of active vocabulary to 2,000 words through readings, conversation, and assigned compositions. *Prerequisites: FLA 1132 or the equivalent, entrance examination, and permission of instructor.*

**FLA 2232. Advanced Writing in Spanish (On demand; 4)** This course will focus on writing techniques and grammar review; literary and film analysis incorporating grammatical points. Taught in Spanish. *Prerequisite: FLA 2231 (grade of C or better).*

**FLA 2241. Advanced French (On demand; 4)** Review of basic French structure with focus on traditional trouble spots: *passè composè* vs. *imparfait*, pronouns, compound tenses, passive voice, subjunctive, relative and interrogative pronouns. Intensive application of grammar through journal writing and workbook assignments. Increase of active vocabulary to 2,000 words through readings, conversation, and assigned compositions. *Prerequisites: FLA 1142 or the equivalent, entrance examination, and permission of instructor.*

**FLA 2242. Advanced Writing in French (On demand; 4)** This course will focus on writing techniques and grammar review; literary and film analysis incorporating grammatical points. Taught in French. *Prerequisite: FLA 2241.*

**FLA 2251. Advanced Swahili (On demand; 4)** Review of basic Swahili structure with focus on traditional trouble spots: pronouns, tenses, subjunctive, statements about place, *kuwa* and *kuwa na*. Intensive application of grammar through journal writing and workbook assignments. Increase of active vocabulary to 2,000 words through readings, conversation, and assigned compositions. *Prerequisites: FLA 1152 or the equivalent, entrance examination, and permission of instructor.*

**ENG/FLA 2290. Foreign Literature in Translation: Francophone African Literature (On demand; 3)** A reading and discussion course for non-majors designed to acquaint the student with selected major works by foreign language authors in translation. Emphasis on European, Latin American, and Francophone African writers. Content may

change each time offered. May be repeated for credit when content changes.

**ENG/FLA 2293. Hispanic American Literature in Translation (On demand; 3)** An introductory reading and discussion course to acquaint students with foundational overview of Hispanic America from her encounter with Europe until her independence from Spain through selected major works by Hispanic American authors in English translation. Works to be studied are written or set in colonial and post-colonial periods in Hispanic America. The course will give students the opportunity to study the selected works and to analyze and interpret them in their socio-cultural, historical, and political contexts. *Prerequisite: None; Gen Ed course.*

**ENG/FLA 2294. Francophone African Literature in Translation (On demand; 3)** An introductory reading and discussion course to acquaint students with selected major works by Francophone African authors in English translation. Works to be studied are written or set in pre-colonial, and post-colonial periods in Francophone Africa. The course will give students the opportunity to study the selected works and to analyze and interpret them in their socio-cultural, historical, and political contexts. *Prerequisite: None; Gen Ed course.*

**ENG/FLA 2295. The African Storyteller (On demand; 3)** An introductory course on traditional story-telling in Africa. African storytellers do not merely narrate stories; there is performance. The course will examine the art of the African storyteller including image, narrative technique, rhythm and symbolism. African storytelling from oral to written form will also be discussed. Students will have the opportunity to study performance and aesthetics of African oral narratives, and interpret them within their socio-cultural relevance. *Prerequisite: None; Gen Ed course.*

**ENG/FLA 3010. African Literature. (II; 4)** Studies of texts in English and English translations of texts written by the descendants of peoples indigenous to the African continent. May include oral literature, essays, poetry, fiction, and drama. *Prerequisite: ENG 2200 or instructor's permission.*

**FLA 3300. Topics in Foreign Languages: Advanced French Conversation (On demand; 1-3)** Topics vary from semester to semester. A special interest section of Spanish, French, Swahili, Chinese, or Arabic or an advanced course in a language not included in the catalog. May be repeated for credit. This course may be applicable to the foreign language minor. *Prerequisites: FLA 2231, 2241, or equivalent or the consent of instructor.*

**FLA 3331. Literature of Spanish America (On demand; 3)** Survey course in the literature of Mexico, Central America, South America, and the Spanish Caribbean. Readings include selections from pre-Columbian, colonial, romantic, and modern periods. Continuing focus on correct language usage through composition assignments and study of grammar and vocabulary of literary works. Class and texts in Spanish. Term paper in Spanish required. *Prerequisite: Permission of instructor.*

**FLA 3332. Spanish Translation (On demand; 3)** A course on comparative stylistics of Spanish and English. Introduction to techniques of translation from and into Spanish. Texts to be studied will be good translations of Spanish texts translated into English as well as English texts translated into Spanish. Course will allow students to develop skills for analyzing and rendering Spanish texts accurately into English as well as vice versa. Students will examine the best ways to handle idiomatic expressions, tenses and other complex grammatical structures, familiarizing themselves with relevant terminology and theoretical issues. *Prerequisite: FLA 2232 or permission of instructor.*

**FLA 3441. Survey of French Literature (On Demand; 3)** A survey of French literature from the Middle Ages to the present. Students will read a selection of full-length works in French, designed to acquaint them with the major figures and periods of French literature. Authors studied may include Rabelais, Moliere, Corneille, Racine, Voltaire, Rousseau, Stendhal, Flaubert, Baudelaire, Hugo, Balzac, Malraux, Sartre, and Camus. Continuing focus on correct language usage through composition assignments and the study of grammar and vocabulary of literary works. Class and texts in French. Term paper in French required. Pre-requisite: *Permission of instructor.*

**FLA 4490. Study Abroad (On Demand; 1-15)** Students studying or taking part in an educational project abroad register for FLA 4490. Number

of credits is arranged with the department chair and the participating foreign institution. May be repeated for credit.

## INTERVENTION SPECIALIST

**INS 3001. Planning Instruction & Assessment (1) SLD and (2) Emotional & Behavioral Disability (I, II; 3)** For all developmental ages pre-K-21. Candidates will create a full formulation of The Special Education Process adhering closely to Special Education Law and using professional Intervention Specialist methods/tools for curriculum planning, instruction and assessment. *Prerequisite: Formal admission into College of Education.*

**INS 3002. Planning Instruction & Assessment for (3) Speech or language impairments, (4) Hearing Impairments, (5) Visual Impairments, (6) Deaf, Blindness and (7) Autism (I, II; 3)** For all developmental ages pre-K-21. Candidates will create a full formulation of The Special Education Process adhering closely to Special Education Law and using professional Intervention Specialist methods/tools for curriculum planning, instruction and assessment. *Prerequisite: Formal admission into College of Education.*

**INS 3003. Planning Instruction & Assessment for (8) Intellectual disability, (9) Orthopedic Impairment, and (10) Developmental Delay (I, II; 3)** For all developmental ages pre-K-21. Candidates will create a full formulation of The Special Education Process adhering closely to Special Education Law and using professional Intervention Specialist methods/tools for curriculum planning, instruction and assessment. *Prerequisite: Formal admission into College of Education.*

**INS 3004. Planning Instruction & Assessment for (11) Other Health Impairments, (12) Multiple Disabilities, and (13) Traumatic Brain Injury (I, II; 3)** For all developmental ages pre-K-21. Candidates will create a full formulation of The Special Education Process adhering closely to Special Education Law and using professional Intervention Specialist methods/tools for curriculum planning, instruction and assessment. *Prerequisite: Formal admission into College of Education.*

## LAW

**LAW 1100. Introduction to Law (I, II; 3)** The course familiarizes students with the broad array of issues and concepts found in the United States legal system, including its foundation, contemporary structures and functions, policies, and practices. Topics include the US court system, advocacy and mediation, and the legal areas of Torts, Consumer and Housing Law, Family Law, and Individual Rights and Liberties.

## MANAGEMENT

**MGT 3380. Human Resource Management (II; 3)** This course introduces the recruitment, training, and management of an effective, productive work force. Course will include consideration of governmental rules affecting human resource management. *Prerequisite: BUS 2343.*

**MGT 3381. Organizational Behavior (I; 3)** Focus is on individual and group behavior in the organizational setting. Employees in an organization are both individuals and members of groups, and it is necessary to consider both aspects of their behavior. *Prerequisite: BUS 2343.*

**MGT 3401. Government Regulation of Business (I; 3)** This course is a study of the regulatory environment of business. It begins with early laws such as the Interstate Commerce Act and the Sherman Act, includes industry specific regulation, and emphasizes the impact of non-industry specific regulation arising from more recent legislation intended to address broad societal problems. *Prerequisites: BUS 2200 and 2343.*

**MGT 4441. Labor-Management Relations (II; 2)** This course introduces the goals, strategies, issues, and methods involved in the relationship between management and the remainder of the work force. Emphasis will be placed on the negotiating process and government's role. *Prerequisites: BUS 2343 and ECO 2210.*

**MGT 4460. Small Business Management (I; 3)** This course investigates common problems encountered in establishing/managing a small business. Topics include search for profitable market niches, financing, hiring the right people, and becoming familiar with government rules and regulations. *Prerequisite: BUS 2343.*

**MGT 4471. Seminar in International Management (I,**

**II; 3)** This course introduces the international dimensions of management, including strategy formulation and implementation, globalization, the application of management principles in a cross-cultural environment, and the impact of international trade on economies and societies. *Prerequisites: BUS 2343, 3370.*

**MGT 4479. Seminar in Management (II; 2)** This is a course dealing with contemporary problems and key issues in management. *Prerequisite: Senior standing and permission of the instructor.*

**MGT 4497. Independent Study in Management (I; 1)** This course offers the student the opportunity to conduct in-depth study of certain areas of particular interest in management. Students accomplish research under the instructor's direction. *Prerequisite: Senior standing and permission of the instructor.*

## MANAGEMENT INFORMATION SYSTEMS

**MIS 2251. Word Processing for Business (I, II; 2)** This course expands the introductory word processing capabilities developed in BUS 1500 into more advanced techniques. Focus is placed on more extensive tables for word processing documents and incorporation of inserted symbols and pictures. The concept of personalized letters from a spreadsheet database of the target recipients is introduced and developed. *Prerequisite: BUS 1500 or the equivalent.*

**MIS 2252. Spreadsheets for Business (I, II; 2)** This course expands the introductory spreadsheet capabilities developed in BUS 1500 into more advanced techniques. Emphasis is placed on extensive computations using complicated equations. Work is required with data arrays and data sorting using multiple sort criteria. Optimal solutions are explored using sophisticated mathematical techniques. *Prerequisite: BUS 1500.*

**MIS 2253. Database Applications for Business (I, II; 2)** This course expands the introductory database capabilities developed in BUS 1500 into more advanced techniques. Emphasis is placed on creating databases without limitations of the database templates. Extensive work is required to create the database structure for ease of database query. Database queries will be developed to investigate the data. *Prerequisite: BUS 1500.*

**MIS 2254. Graphical Presentations for Business (I, II; 2)** This course expands the introductory presentation graphics capabilities developed in BUS 1500 into advanced techniques. Emphasis is placed on creating advanced presentations, using more of the professional options. Extensive work is required to incorporate pictures, animation, sound and video to enhance the quality of business presentations. *Prerequisite: BUS 1500.*

**MIS 3371. Information Management (I, II; 3)** This course exposes students to understanding and managing information in the digital age. Students will learn about the latest information technologies (IT), latest communication devices, and the newest uses of the internet and web as it impacts individuals and organizations. Current management information systems (MIS) components including the structure and analysis of information flows within an organization are explored. *Prerequisite: BUS 1500.*

**MIS 3372. Business Programming and Information Systems (II; 3)** This course provides the foundation associated with the management of information technology (IT) and systems in a business enterprise. Within this framework, the course will emphasize the process of software development for business using a modern programming language. *Prerequisite: MIS 3371.*

**MIS 4461. Systems Analysis and Design (I, II; 3)** This course introduces current systems analysis and design of computer support systems for business. Emphasis is placed on responding to user requirements, and documenting the changes to the current or proposed system. *Prerequisite: MIS 3352.*

**MIS 4462. Systems Design and Database Implementation (II; 3)** This course continues instruction in current systems analysis and design of computer systems for business. Emphasis is placed on incorporating database operations in the existing processing of collected data. Current database technology will be used for data repository and query. The required documentation of new system development or system modification will be included. *Prerequisite: MIS 4461.*

**MIS 4465. Database Development (I; 3)** This course examines current trends in database design and development. It also examines

current trends in data communications and networks, emphasizing the structure required for long-term support. The required documentation for new system development or system modification will be included. *Prerequisite: MIS 3352.*

**MIS 4466. Internship in Management Information Systems (On Demand: 1-6)** Course provides the opportunity to explore practical experience in MIS. Student activities will be supervised by the organization sponsoring the internship. The Office of Career Services and the responsible faculty monitors internship. A comprehensive report is required at the completion of the internship. *Prerequisite: Permission of the instructor.*

**MIS 4491. Seminar in Management Information Systems (I, II; 3)** General dimensions of management information systems concepts and the emerging technologies are examined. The contemporary management information system's problems and issues are also studied. *Prerequisite: Senior Standing.*

**MIS 4492. Management Information Systems Seminar (I, II; 2)** This course explores and projects future trends in management information systems, emphasizing the structural approach to design and development or change. *Prerequisites: MIS 4461 and senior standing.*

**MIS 4497. Independent Study in Management Information Systems (I, II; 1-3)** This course offers the student the opportunity to conduct independent research in the field of MIS. Students accomplish research under the instructor's direction, *Prerequisites: Senior standing and permission of the instructor.*

## MANUFACTURING ENGINEERING

**MFE 1110. Principles of Manufacturing (I; 3)** Provides a descriptive overview of diverse manufacturing processes and their relationship to product and process design. Covers the fundamentals of orthographic projection and geometric dimensioning and tolerancing as design and planning aids, basic principles of design for manufacturing, assembly, service and recycling. Laboratory assignments include hands-on application of diverse manufacturing and measuring devices including manual and CNC machines. Features a team design project with formal oral and written technical report requirements. Word processing, spreadsheets, presentation software and Internet usage are introduced to support the formal reporting requirements. Two lectures and two laboratory/recitation periods per week. *Equivalent to TAG OES001.*

**MFE 1210. Engineering Analysis I (II; 3)** Presents the fundamentals of linear algebra including properties of determinants, matrices and vector analysis with applications to engineering systems. Includes three-dimensional representation of displacement, velocity, acceleration, forces, and torques and solution of sets of algebraic equations. Introduces state-variables, eigenvalues and eigenvectors and the fundamentals of statistics and linear programming. Introduces MATLAB programming. Two lectures and two laboratory/recitations per week. *Co-requisite: MTH 2503.*

**MFE 1297. Selected Topics in Manufacturing Engineering (II; 1-3)** This course is designed to provide the flexibility to cover selected manufacturing engineering topics not normally available in the required major course. *Prerequisite: Approval of the department chair.*

**MFE 2310. Statics (I; 3)** The study of static equilibrium of particles, systems of particles and rigid bodies subjected to two- and three-dimensional loadings. Concepts of forces, moments, couples, resultants, centroids and moment of inertia are covered. Vector algebra and free body diagrams are utilized in the solutions. The solutions will be directed to real world examples and case studies. The skills acquired in the course will increase the ability of students to analyze components and systems in static equilibrium, leading to the enhancement of the problem solving ability of students. Computer exercises will be provided. Two lectures and one recitation/lab per week *Prerequisites: MTH 2503 and MFE 1210. Equivalent to TAG OES002.*

**MFE 2320. Computer-Aided Design (I; 3)** The goal of this course is to familiarize students with tools and the concepts necessary for mechanical design. The course covers the application of CAD software in the design of products; introduction to engineering software for drafting, solid modeling, design and analysis of mechanical components; introduction to the use of finite element analysis techniques; and the use of commercial CAD and FEA packages. A design project to implement concepts learned

during the course is required. Two lectures and one recitation/lab per week. *Prerequisites: MFE 1110 and INT 1210.*

**MFE 2410. Engineering Analysis II (II; 4)** Covers advanced mathematical concepts for engineering analysis including partial derivatives and multiple integrals. Introduces numerical methods for root solving, curve fitting, integration, differentiation and solution of ordinary and partial differential equations; and applications for electrical circuits, vibration analysis, heat transfer, beam deflection, etc. MATLAB programming. Four lecture periods per week. *Prerequisite: MTH 3110.*

**MFE 2420. Dynamics (II; 3)** The study of the kinematics and kinetics of particles, systems of particles and rigid bodies under rectilinear, plane curvilinear and space curvilinear motion. Covers relative motion and constrained motion of connected particles. Concepts of Newton's Law, work, energy, impulse and momentum are utilized in the solutions. Inertia concepts for rigid body translation, fixed axis rotation, and planar motion are presented. The solutions will be directed to real world examples and case studies, etc. The skills acquired in the course will increase the ability of students to analyze dynamic components and systems, thus enhancing problem solving ability. Computer exercises will be provided. Two lectures and one recitation/labs per week. *Prerequisites: MFE 2310 and MTH 3110. Equivalent to TAG OES003.*

**MFE 2430. Design of Engineering Experiments (II; 3)** Provides fundamentals for designing experiments and making technical inferences from measured variables with an emphasis on manufacturing applications. A brief review of pictorial and graphical representation of manufacturing data, statistical distributions, hypothesis testing, confidence interval estimation and applied design of manufacturing experimentation via treatment comparisons. Manufacturing process control and input parameter optimization using factorial, fractional factorials and orthogonal array. One-, two and three-way NOVA ensuring inferential validity. Computer exercises using DOE-PRO, SPSS, MINITAB, and STATISTICA AND EXCEL. Two lectures and two recitations/laboratories per week. *Prerequisite: MFE 1210. Equivalent to TAG OES004.*

**MFE 2440. Computer-Aided Manufacturing (II; 3)** This course covers a review of fundamental manual programming for numerical control machines. Topics include CNC machine types, controls, safety, and coordinate measuring systems; speed and feed calculations; power calculations; CNC tooling and fixturing; and programming CNC mills and lathes. Laboratory sessions are designed to gradually introduce the material and gain practical experience of the subject. Two lectures and one recitation/laboratory per week. *Prerequisite: MFE 2320.*

**MFE 2497. Selected Topics in Manufacturing Engineering (II; 1-3)** See course description for MFE 1297. Credit may range from 1 to 3 semester hours. *Prerequisites: Sophomore standing and approval of the department chair.*

**MFE 3510. Circuit Analysis (I; 4)** Provides the fundamentals of DC and AC circuit analysis including circuit elements, Ohm's law, Kirchhoff's law, mesh and node equations, circuit transformation techniques, first and second order circuits, operational amplifiers, phasor representations, power analysis, polyphase systems, linear and ideal transformers, complex frequency and computer simulation using PSPICE. Laboratory focuses on the measurement of circuit parameters and electrical quantities. Three lectures and two laboratory periods per week. *Prerequisites: MTH 3110 and PHY 2213.*

**MFE 3520. Microprocessors (I; 3)** Covers binary systems, Boolean algebra, logic gates, combinational and sequential circuits, microprocessors /microcontrollers in digital system design, assembly language programming and interfacing of microprocessor-based systems. Two lectures and two laboratory periods per week. *Co-requisite: MFE 3510.*

**MFE 3530. Strength of Materials (I; 3)** Introduces the concepts of stress and strain in elastic materials. Covers axial, torsional and bending deflections and stresses, and the analysis of combined stresses using Mohr's circle. Presents failure theories for ductile and brittle materials. Includes buckling theory for columns and the effect of impact loading. Laboratories include experimental stress analysis utilizing photo elastic techniques and electrical strain gages. Two lecture and two laboratory/recitation periods per week. *Prerequisite: MFE 2410.*

**MFE 3540. Material Science and Processes (I; 4)** Relates the composition, structure and properties of engineering materials to their performance in service. Metals, ceramics, polymers, and composites are studied. Atomic bonding, crystalline structure, noncrystalline structure, and phase diagrams are included. Mechanical properties are evaluated in the laboratory. Three lecture periods and two laboratory periods per week. *Prerequisite: CHM 1202 and Co-requisite MFE 3530.*

**MFE 3550. Thermodynamics and Heat Transfer (I; 3)** Introduces the theory of thermodynamics and heat transfer with application to cooling, cutting, fabrication, molding and welding processes. It covers the fundamental principles and methods of energy transformations, fundamental thermodynamics laws and relationships for ideal and real fluids, basics of heat transfer, and the rates of spatial and temporal energy changes and the properties of engineering systems undergoing such processes. Two lectures and two laboratories/recitations per week. *Prerequisites: MTH 3110 and MFE 2410.*

**MFE 3610. Automatic Control Systems (II; 3)** Analysis and design of linear feedback control systems, modeling of dynamic systems, sensitivity analysis, state variable representation, transfer functions, simulation, performance and stability, frequency response and root locus techniques. Two lectures and two laboratory/recitations per week. *Prerequisite: MFE 3510.*

**MFE 3620. Programmable Logic Controllers (II; 3)** This course covers the utilization of PLC's in industrial control applications. Topics include safety and grounding, ladder logic, inputs-outputs, timers and counters, sequencing and programming, installation and interfacing techniques, and communication between PLC's. Two lectures and two laboratories/recitations per week. *Prerequisite: MFE 3520.*

**MFE 3630. Manufacturing Processes (II; 4)** Introduces the fundamentals of manufacturing processes with a focus on quality products at an economical price on a prescribed schedule. Provides a broad overview of manufacturing methods including metal casting and joining, sheet metal bending, conventional metal removal, forging, plastics and composites processing. Includes mold and die design concepts. Experimental designs are utilized to investigate the effects of various process parameters. Three lectures and two laboratories per week. *Prerequisite: MFE 3540.*

**MFE 3640. Machine and Tool Design (II; 4)** Focus is on the application of analytical and empirical methods to assist in the design of mechanical systems with special emphasis in the area of tool design. Topics covered in detail include fatigue theory, Castigliano's method, workholding principles, fixture design, fits and tolerancing, and design principles for power screws, bearings and gears. A team design project with formal reporting requirements provides experience in the application of theory and the selection of commercial components. The project emphasizes the relationship between product and process design, and the engineering documentation needed to control product uniformity and quality. Three lectures and two laboratories/recitations per week. *Prerequisites: MFE 3530 and MFE 3540.*

**MFE 3697. Selected Topics in Manufacturing Engineering (II; 1-3)** See course description for MFE 1297. Credit may range from 1 to 3 semester hours. *Prerequisites: Junior standing and approval of the department chair.*

**MFE 4710. Measurement and Instrumentation (I; 3)** Preparation for diverse measurements required for research or production. Techniques for obtaining reliable and cost effective measurements including the proper selection and use of instruments and interpretation of measured data. Consideration of accuracy, precision and statistical analysis of error in measurements. Topics covered include sensors and transducers, digital instruments, frequency response, loading effects, noise, digital sampling rates, uncertainty and statistical data analysis. Two lectures and two laboratories/recitations per week. *Prerequisites: MFE 3510.*

**MFE 4720. Manufacturing Quality and Economy (I; 4)** Fundamentals of total quality engineering for optimizing process and product efficiency and effectiveness. Course covers contemporary quality control philosophies, total quality management, customer focus strategies, statistical process control, reliability and metrology. Overview of technical and managerial aspects of quality: principles of quality by design, human factors in quality control, experimental

design for quality, internal quality audits. Covers critical assessment of the time value of money, equivalence, discounted cash flow analysis, break-even and payback analysis of engineering alternatives for justification of machine procurement and processes; exposure to depreciation and inflation accounting, overhead costs and their application; and study of cost estimation and activity based costing, make or buy decisions. Case study assignment provided. Three lectures and two laboratories/recitations per week. *Prerequisites: MFE 2410 and MFE 3640. Equivalent to TAG OES005.*

**MFE 4730. Hydraulics and Pneumatics (I; 3)** Review of fundamentals of fluid properties. Analysis of incompressible flow in piping systems and conduits using Bernoulli's equation. Study of the sources of hydraulic power: pumps, actuators, directional control valves, pressure and flow control valves, servo valves, pipes and fittings, motors. Pipe sizing using concepts of factor of safety via burst and working pressures. Provides study of pump types, characteristics and their efficiencies and pump sizing based on flow demands and head requirements. Brief study of pneumatic components: compressors, orifices, air control valves, pneumatic actuators. The laboratory sessions focus on hydraulic and pneumatic components and systems. Two lectures and two laboratory/recitations per week. *Prerequisite: MFE 3550.*

**MFE 4795. Senior Design Project I (I; 1)** The first phase of the two-course, capstone design sequence to provide experience in the practical application of prior course work. Includes topic selection, selection of faculty advisor(s), literature search, conceptual design, development of a work plan, and arrangements to secure required resources. The project must involve realistic constraints such as cost, performance, reliability, manufacturability, safety, ergonomics and aesthetics. Requires formal oral and written reporting. Two laboratory/recitation periods per week. *Prerequisite: Senior standing in the MFE major.*

**MFE 4810. Design for Assembly and Systems Integration (II; 3)** This course provides students with the knowledge, methodologies, and practice to optimize the design of mechanical products for ease of assembly in manufacturing. The topics include significance of Design for Assembly (DFA), methods to characterize and describe assembly, types of assembly systems used in practice, application of DFA principles to mechanical product design, practice of designing parts to facilitate assembly, analysis of assembly in terms of DFA, and redesign to improve assembly. The course will address issues of manufacturing product and system integration, covering combination of hydraulic, electrical, mechanical and robotic parts and components into an integrated product. Two lectures and two laboratories per week. *Prerequisites: MFE 2440 and MFE 3640.*

**MFE 4820. Manufacturing Planning, Control and Simulation (II; 4)** Study of the techniques for planning, organizing and controlling the resources for the manufacture of quality products. Factory simulation and animation using ProModel or ARENA or WITNESS to model the operational characteristics of manufacturing and management systems to support efficient manufacturing and information flow. Coverage of project management principles, lean manufacturing, Just-In-Time concepts, theory of constraints, and manufacturing resources planning systems for large-scale manufacturers and small businesses. Discussion of forecasting techniques, demand management, master production scheduling, materials and capacity requirements planning, shop floor control, scheduling practices, inventory status and control, and manufacturing databases. Computer tools discussed include ERP and MRP – II. Assimilation and application of principles learned in the course by group simulation exercise of two manufacturing organizations using two student teams that play the "Manufacturing Game." Three lectures and two recitations/laboratories per week. *Prerequisite: MFE 4720.*

**MFE 4895. Senior Design Project II (I1; 2) —** The concluding phase of the two-course, capstone design sequence to provide experience in the practical application of prior course work. Requires completion of the project work plan including detailed design, fabrication of any needed hardware, any required assembly, testing, and evaluation of results. Requires formal oral and written reporting. Four lectures/ laboratories per week. *Prerequisite: MFE 4795.*

**MFE 4897. Undergraduate Research (II; 1-3)** Research performed by an individual student or a small team of

students. It is the responsibility of the student to identify an appropriate faculty research advisor willing to supervise the work. The research topic, work plan and number of credit hours are to be determined in advance by mutual agreement between the student and research advisor. A formal written final report is required. *Prerequisites: Junior or senior standing and approval of the department chair.*

## MARKETING

**MKT 3353. Entrepreneurial Marketing (I; 3- Even Years)** This course gives a practical view of marketing from a small business perspective. Focusing on lifetime marketing, customer focus, and alternative approaches to marketing. The course will help show how to compete with the large competitor on a small budget to gain lifetime customers. *Prerequisites: BUS 2353*

**MKT 3354. Sports Marketing (I;3)** This course is a study of the marketing, promotion, sales, and sponsorship strategies utilized in the sports industry, by both sports properties (teams, leagues, events, media, apparel and equipment manufacturers, etc.) and companies marketing their brands through sports. This course is meant to cover three basic components of sports marketing: (1) the use of sports as a marketing tool for other products; (2) the marketing of sports products; and (3) the emerging considerations relevant for both marketing through and the marketing of sports. By the end of this course, students should understand: The marketing tools (e.g., research, segmentation) and the marketing mix options for sports products in marketing and the perspectives of participants and spectators as sports consumers will be explored**.** *Prerequisites BUS 2353.*

**MKT 3355. Digital Marketing (II; 3)** This course investigates how "brick and mortar" organizations can incorporate the entrepreneurial and management side of internet marketing to create an online presence and increase market share. In addition to textbook and selected course readings, students will be introduced to e-marketing in a computer lab where they will evaluate search engines, construct blogs, web sites, and learn about other viral, email, social, and electronic marketing. The course focuses on applications, innovations, and future direction (not on the technology that enables the Internet and www). Heavy reading, electronic and in-class discussions, and internet browsing required. Prerequisites BUS 2353.

**MKT 3390. Retail Merchandising (I; 3)** This course studies the operation and management of retail establishments. Emphasis is placed on planning and operating policies of retail stores for merchandise buying, selling, and control. *Prerequisite: BUS 2353.*

**MKT 3395. Sales Management (II; 3)** This course covers the principles of planning, organizing, and controlling a sales force including selecting, training, compensating, supervising, and motivating sales personnel. *Prerequisite: BUS 2353.*

**MKT 3396. Consumer Behavior (I, II; 3)** This course is a study of consumer decision-making processes and the utilization of behavioral sciences for understanding buyer-seller behavior. *Prerequisite: BUS 2353.*

**MKT 3456. Purchasing (On Demand; 3)** An overview of the current purchasing function for Contemporary American Business. This includes negotiative contracts, delivery schedules and quality management.

**MKT 4451. Advertising (II; 3)** This course covers the managerial uses of advertising, fundamentals of copy, media selection, agency-client relations, and measuring effectiveness. Current and emerging advertising issues in various media will be examined. *Prerequisite: BUS 2353. Equivalent to TAG OCM012.*

**MKT 4455. Marketing Research (I; 3)** This course studies the collection and analysis of new market data applicable to planning, organizing, and operating research projects. Techniques used for market analysis such as sampling, questionnaires, interviewing are emphasized. Required of all marketing majors. *Prerequisites: BUS 2353 and MKT 3396.*

**MKT 4465. Marketing Management (II; 3)** This course studies marketing policies and strategies with emphasis on decision-making for marketing effectiveness. *Prerequisites: MKT 4455 and senior standing.*

**MKT 4466. Internship in Marketing (On Demand: 1-6)** Course provides the opportunity to explore practical experience in marketing. Student activities will be supervised by the organization sponsoring the

internship. The Office of Career Services and the responsible faculty monitors the internship. A comprehensive report is required at the completion of the internship. *Prerequisite: Permission of the instructor.*

**MKT 4467. International Marketing (I, II; 3)** This course focuses on international marketing concepts and the influence of culture on the marketing plan. Challenges and opportunities facing U.S. firms seeking expansion abroad are examined. *Prerequisites: BUS 2353 and 3370.*

**MKT 4479. Marketing Practicum (I; 3)** This course program will develop the student's "real world" marketing experience and prepare for a job search. In each session, students will work in teams to complete a marketing experience and prepare for a job search. Each session, students will also work in teams to complete a market project, receive extensive training and exposure to the marketing industry, hone their job-seeking skills, and develop a relationship with their business mentor. The course will require travel to the sponsor's place of business. Students may be responsible for travel. *Prerequisites: GPA 3.0 or higher; Junior or Senior standing; BUS 2353 and at least one upper-level class from the student's option or concentration are. The course is only open to business majors.*

**MKT 4485. Independent Study in Marketing (II; 1)** This course offers the student the opportunity to conduct in-depth study of certain areas of particular interest in marketing. Student research is accomplished under the direction of the instructor. *Prerequisites: Senior standing and permission of the instructor.*

## MATHEMATICS

**MTH 1550. Modern Applications of Mathematics (I, II; 3)** A study of the use and importance of mathematics to real world problems. Topics include logic, finance, probability and statistics, geometry, graphical representation of data, linear and exponential modeling, and mathematics in music, art, and voting systems. This course is not intended for students majoring in a discipline requiring advanced mathematics. This course fulfills a general education requirement.

**MTH 1750. College Algebra (I, II; 3)** Topics include functions, rational expressions, systems of linear equations, Factor and Remainder Theorem, operations on functions, radical equations, inequalities, matrices, variations and exponential and logarithmic functions, sequences, series, and the binomial theorem. *Equivalent to TAG TMM001.*

**MTH 2001. Probability and Statistics I (I, II; 3)** Topics include measures of central tendency, measures of dispersion, probability models, conditional probability, combinations, distributions, estimation and hypothesis testing. *Prerequisite: MTH 1750.*

**MTH 2002. Probability and Statistics II (II; 3)** Topics include testing populations means, proportions, variances, contingency tables, regression, ANOVA, computer applications and non-parametric statistics. *Prerequisite: MTH 2001.*

**MTH 2500. Pre-Calculus (I, II; 4)** This is an accelerated course in College Algebra and Trigonometry. Topics include linear, quadratic, polynomial, rational, radical, root, piecewise, exponential, logarithmic, trigonometric and inverse trigonometric functions; graphs and transformations; equations and inequalities; systems of equations; sequences and series; vectors and applications. *Prerequisite: placement exam.*

**MTH 2501. Trigonometry (I, II; 3)** Topics include conic sections, exponential and logarithmic functions, trigonometric functions, inverse trigonometric functions, identities and equations, lines, polar coordinates, vectors in the plane, application problems, and complex numbers. *Prerequisite: MTH 1750 or placement tests. Equivalent to TAG TMM003.*

**MTH 2502. Calculus I (I, II; 4)** Topics include limits of functions, infinite limits, derivative and techniques of differentiation, implicit differentiation, higher derivatives, graphing, maxima and minima, plane curves, motion, anti-derivatives, indefinite, and definite integrals, and Fundamentals Theorem of Calculus. *Prerequisite: MTH 2500 or MTH 2501. Equivalent to TAG TMM005.*

**MTH 2503. Calculus II (I, II; 5)** Topics include the fundamental theorem of calculus, the definite integral, techniques and applications of integration. Evaluation of improper integrals, indeterminate forms, graphs of polar equations, area in polar coordinates and parametric equations. Differentiation and integration a power series, Taylor and MacLaurin series.

Calculation and application of the dot and cross products of vectors. *Prerequisite: MTH 2502. Equivalent to TAG OMT006.*

**MTH 2540. Foundations in Mathematics (I, II; 3)** This course is an introduction to mathematical proof, symbolic logic, induction, set theory, relations, functions, countability, and selected topics in number theory. *Prerequisite: MTH 2502. Equivalent to TAG OMT006.*

**MTH 3000. Geometry for Teachers (II; 3)** Topics include definitions, axioms, plane figures, triangle theorems, similar triangles, areas, computation of areas, solids, volumes, computation of volumes, and history of geometry. *Prerequisite: MTH 1750.*

**MTH 3001. Linear Algebra (I;3)** Topics include matrices, determinants, linear systems, vector spaces, linear transformations, eigenvalues and eigenvectors. *Prerequisite: MTH 2503. Equivalent to TAG OMT008.*

**MTH 3002. Calculus III (II; 4)** Topics include the theory of infinite series, analytic geometry of space, vector in space, partial derivatives, and multiple integrals. *Prerequisite: MTH 2503.*

**MTH 3110. Differential Equations and Discrete Dynamical Systems (I; 4)** First and second order, linear, simultaneous equations with descriptions of solution methodology, Laplace transforms, applications, and solutions methodology for non-linear differential equations and nonlinear difference equations. *Prerequisite: MTH 2502 or permission of instructor.*

**MTH 3310. Numerical Methods (II; 3 – Odd Years)** Solutions of equations, successive approximations, Newton-Raphson Method, roots of polynomials, error analysis and process graphs; simultaneous linear and non-linear equations, factorization methods, iterative methods for solving linear systems; description and solution of eigenvector problems, interpolation methods with and without spline functions; numerical solutions for ordinary differential equations, numerical solutions for partial differential equations, and applications of Monte Carlo methods. *Prerequisites: MTH 3001.*

**MTH 3430. Operations Research (I;3-Odd Years)** Topics include stochastic processes, linear programming, transportation problems, inventory control, and network theory. *Prerequisites: MTH 3001*

**MTH 3520. Abstract Algebra (I, II; 3)** Topics include properties of integers, groups, subgroups, quotient groups, group actions, products, homomorphisms, isomorphisms, and finite abelian groups. *Prerequisite: MTH 2540.*

**MTH 3521. Abstract Algebra II (II; 3)** Topics include rings, ideals, integral domains, fields, Euclidean domains, principal ideal domains, vector spaces, polynomial rings, and field extensions. *Prerequisite: MTH 3520*

**MTH 3530. Mathematical Writing and Research (II; 2)** Topics include the mathematical research process, technical writing, and communication in mathematics. *Prerequisite: MTH 2540.*

**MTH 3610. Introduction to Discrete Structures (I; 3- Even years)** Topics include review of set algebra including mappings and relations, elements of the theory of directed and undirected graphs, symbolic logic, and applications of these structures to various areas of the computer. *Prerequisite: MTH 2540 or permission of instructor.*

**MTH 4030. History of Mathematics (I; 3)** The development of mathematics from ancient times to the twentieth century. *Prerequisite: Junior standing.*

**MTH 4120. Introduction to Real Analysis (I; 3)** Topics include the system of real numbers, functions, sequences, limits, the theory of continuity, differentiation, Riemann integration; sequences of functions, and infinite series. *Prerequisite: MTH 2540*

**MTH 4600. Capstone: Selected Topics in Mathematics (II; 3)** This course is designed to meet the needs of advanced students as a preparation for graduate study or employment in mathematics related fields. Possible topics include, but are not limited to, topology, group theory, projective geometry, real analysis: probability, mathematical statistics, combinatorial analysis and operations research. *Prerequisite: Permission of the instructor.*

**MTH 4730. Functions of a Complex Variable (II; 3-Even Years)** Topics include complex numbers, elementary functions, power series, analytic functions,

integrals, residues, Cauchy's theorem, and Moreara's theorem. *Prerequisites: MTH 4120 and permission of the instructor.*

**MTH 4897. Mathematics for Graduate Studies (I, II; 3)** Topics include calculus, linear algebra, complex variables, abstract algebra, and differential equations. *Prerequisites: MTH 4120 and MTH*

## MILITARY SCIENCE

**MIL 1511. Foundations of Officership with Leadership Laboratory (I; 3)** Students will increase confidence through team study and activities in basic drill, physical fitness, rappelling, leadership reaction course, first aid, oral presentations, and basic marksmanship; learn fundamental concepts of leadership in a profession in both classroom and outdoor laboratory environments; learn and practice basic skills; and build self-confidence and team-building leadership skills that can be applied throughout life. Physical fitness is optional for non-contracted cadets. Students will participate in and learn to lead a physical fitness program. Emphasis will be placed on the development of an individual fitness program and the role of exercise and fitness in one's life. The course is taught to meet the requirement for entry into the Advance ROTC Program. The course requires no military obligation and is open to all Central State University students.

**MIL 1512. Basic Foundations of Officership with Leadership Laboratory (II; 3)** Students will learn and apply the principles of effective leading; reinforce self-confidence through participation in physically and mentally challenging exercises with upper division ROTC students; develop communication skills to improve individual performance and group interaction; relate organizational ethical values to the effectiveness of a leader; learn and practice basic skills; and build self-confidence and team-building leadership skills that can be applied throughout life. Physical fitness is optional for non-contracted cadets. Students will participate in and learn to lead a physical fitness program. Emphasis will be placed on the development of an individual fitness program and the role of exercise and fitness in one's life. The course is taught to meet the requirement for entry into the Advance ROTC Program. The course requires no military obligation and is open to all Central State University students.

**MIL 2511. Individual Leadership Studies with Leadership Laboratory (I; 3)** Introduction to individual and team aspects of military tactics in small unit operations. Includes use of radio communication, making safety assessments, movement techniques, planning for team safety/security, and methods of pre-execution checks. Practical exercises with upper division ROTC students. Students will learn techniques for training others as an aspect of continued leadership development; learn and practice basic skills; and build self-confidence and team-building leadership skills that can be applied throughout life. Physical fitness is optional for non-contracted cadets. Students will participate in and learn to lead a physical fitness program. Emphasis will be placed on the development of an individual fitness program and the role of exercise and fitness in one's life. The course is taught to meet the requirement for entry into the Advance ROTC Program. The course requires no military obligation and is open to all Central State University students.

**MIL 2512. Leadership and Teamwork with Leadership Laboratory (II; 3)** See description for MIL 2511.

**MIL 2895. Leadership Training Course (III; 3)** A 28-day summer camp conducted at Fort Knox, Kentucky. The student receives pay, and the ROTC program defrays costs for travel, lodging, and most meals. Completion of MIL 2895 qualifies the student for entry into the Advanced Course. Spaces are limited. Candidates may apply for space at any time during the school year prior to the summer camp.

**MIL 3511. Leadership and Problem-Solving with Leadership Laboratory (I; 3)** A series of practical opportunities to lead small groups, receive personal assessments and encouragement, and lead again in situations of increasing complexity. Uses small unit defensive tactics and opportunities to plan and conduct training for lower division students both to develop such skills and as vehicles for practicing leading. FTX (Field Training Exercise) of 24-96 hours required. Involves leadership responsibilities for planning, coordination, execution, and evaluation of various training activities with Basic Course students and for the ROTC program as a whole. Students develop, practice, and refine leadership skills by serving and

being evaluated in a variety of responsible positions. Students will participate in and learn to plan and lead a physical fitness program that develops the physical fitness required of an officer in the Army. Emphasis will be placed on the development of an individual fitness program and the role of exercise and fitness in one's life.

**MIL 3512. Leadership and Ethics with Leadership Laboratory (II; 3)** Continues the methodology of MIL 3511. Students will analyze tasks; prepare written or oral guidance for team members to accomplish tasks; delegate tasks and supervise; plan for and adapt to the unexpected in organizations under stress; and examine the importance of ethical decision-making in setting a positive climate that enhances team performance. FTX (24-96 hours) required. The course involves leadership responsibilities for planning, coordination, execution, and evaluation of various training activities with Basic Course students and for the ROTC program as a whole. Students develop, practice, and refine leadership skills by serving and being evaluated in a variety of responsible positions. Students will participate in and learn to plan and lead a physical fitness program that develops the physical fitness required of an officer in the Army. Emphasis will be placed on the development of an individual fitness program and the role of exercise and fitness in one's life.

**MIL 3797. Military History (I, II; 3)** The course objective is to improve the student's understanding of the evolution of war, the evolution of professionalism in the U. S. military, and the place of the American military in society. The course requires no military obligation, and is open to all Central State University students. *Prerequisite: Permission from the Professor of Military Science.*

**MIL 3895. Leadership Development and Assessment Course (III; 3)** A 33-day camp conducted at Fort Knox, Kentucky. The student receives pay, and the ROTC program defrays the costs of travel, lodging, and most meals. The Leadership Development and Assessment Course environment is highly structured and demanding, stressing leadership at small unit levels under varying, challenging conditions. Individual leadership and basic skills performance are evaluated throughout the camp. The leadership and skills evaluations at the camp weighs heavily in the subsequent selection process that determines the type of commission and job opportunities given to the student upon graduation from ROTC and the University.

**MIL 4197. Independent Study of Military Leadership (I, II; 2)** The Independent Study of Military Leadership course is structured to allow a student to research and independently study a specific military topic agreed upon by the Professor of Military Science and the student. In agreement with the Professor of Military Science, the student will select a topic of historic significance to understand, apply, and appreciate the lessons learned from past experiences of military operations or programs and their impact upon the Army or the Nation. The course will entail detailed research, independent processing of thought, facts, and theory. The end result of the course will be a written product of the quality to be published in a military journal that meets or exceeds writing requirements for college level students. The course will be taught by the Professor of Military Science. Course may be repeated for credit for a total of 6 semester hours.

**MIL 4511. Leadership and Management with Leadership Laboratory (I; 3)** Students will plan, conduct, and evaluate activities of the ROTC cadet organization; articulate goals; put plans into action to attain goals; assess organizational cohesion and develop strategies to improve it; develop confidence in skills to lead people and manage resources; and learn and apply various policies and programs in this effort. FTX (24-96 hours) required. The course involves leadership responsibilities for planning, coordination, execution, and evaluation of various training activities with Basic Course students and for the ROTC program as a whole. Students develop, practice, and refine leadership skills by serving and being evaluated in a variety of responsible positions. Students will participate in and learn to plan and lead a physical fitness program that develops the physical fitness required of an officer in the Army. Emphasis will be placed on the development of an individual fitness program and the role of exercise and fitness in one's life.

**MIL 4512. Officership with Leadership Laboratory (II; 3)** Continues the methodology from MIL 4511. Students will identify and resolve ethical dilemmas; refine counseling and motivating techniques; examine aspects of tradition and law as they relate to leading as an officer in the United States Army; and prepare for a future

as a successful lieutenant. FTX (24-96 hours) required. The course involves leadership responsibilities for planning, coordination, execution, and evaluation of various training activities with Basic Course students and for the ROTC program as a whole. Students develop, practice, and refine leadership skills by serving and being evaluated in a variety of responsible positions. Students will participate in and learn to plan and lead a physical fitness program that develops the physical fitness required of an officer in the army. Emphasis will be placed on the development of an individual fitness program and the role of exercise and fitness in one's life.

## MUSIC

**MUS 1000. Student Recital (I, II; 0)** Music majors must attend this class and perform on their principal instrument once each semester. Students attend concerts, lectures, theater productions, art exhibitions, master classes, etc.

**MUS 1100. Principles of Theory (II; 5)** The objective of this course is to prepare students for MUS 1101. It includes the study of standard notation, triads, scales, intervals, rhythmic elements, sight-singing, and dictation in tonal music. Aural skills will focus on translation of notation into sound and sound into notation. This course is for students not passing the MUS 1101 placement exam. It must be passed to enter into MUS 1101. Open to non-music majors.

**MUS 1101. Music Theory I (I; 5)** The objective of this course sequence (MUS 1101 and 1102) is for students to become literate in the language of music (and perhaps one or two of its diverse dialects or styles). Students learn the basics of music theory (such as notation, intervals, scales, chords, time classifications, time signatures, etc.) and begin to develop aural organizational skills through sight singing, dictation, and improvisational exercises. The Western European compositional practice of the years 1600-1830 is studied through analysis of musical examples at the phrase level (cadences, phrase members, motives, period structure, etc.) and by writing melodies, voice leading exercises (including species counterpoint exercises adapted to this period), and other short compositions that explore and demonstrate an understanding of the contrapuntal and harmonic practice from that period. These skills and concepts are generalized and adapted to the study of related musical dialects of other cultures and time periods: i.e., "Dixieland" and other early jazz and improvisatory styles; and African, African-American, and European traditional and popular music styles of the twentieth century. *Equivalent to TAG OAH052.*

**MUS 1102. Music Theory II (II; 5)** The objective of this course sequence (MUS 1101 and 1102) is for students to become literate in the language of music (and perhaps one or two of its diverse dialects or styles). Students learn the basics of music theory (such as notation, intervals, scales, chords, time classifications, time signatures, etc.) and begin to develop aural organizational skills through sight singing, dictation, and improvisational exercises. The Western European compositional practice of the years 1600-1830 is studied through analysis of musical examples at the phrase level (cadences, phrase members, motives, period structure, etc.) and by writing melodies, voice leading exercises (including species counterpoint exercises adapted to this period), and other short compositions that explore and demonstrate an understanding of the contrapuntal and harmonic practice from that period. These skills and concepts are generalized and adapted to the study of related musical dialects of other cultures and time periods: i.e., "Dixieland" and other early jazz and improvisatory styles; and African, African-American, and European traditional and popular music styles of the twentieth century. *Prerequisite: MUS 1101. Equivalent to TAG OAH052.*

**MUS 1127. Marching Band (I; 1)** Preparation of band pageants for appearances at football games and in parades. Students not only perform, but also gain an appreciation for the rich marching band tradition at historically African-American colleges and universities. Music education majors are encouraged to arrange music and chart marching drills for the band. *Prerequisites: Audition and permission of instructor.*

**MUS 1128. Concert Band (II; 1)** An organization which studies and performs representative works from the concert band literature, including Western and non-Western music, with an emphasis on standard repertory, and an emphasis on African and African-American music. Open to all University students. Prerequisites: Audition and permission of the instructor. *Equivalent to TAG OAH022.*

**MUS 1129. Robeson Winds (I, II; 1)** An organization devoted to the study and performance of classical literature for small wind ensembles. *Prerequisites: Audition and permission of instructor.*

**MUS 1131. University Choir (I, II; 1)** An organization which studies and performs representative masterworks from Western and non-Western music (with emphasis on standard repertory and on African and African-American literature). Required of all music majors with a vocal emphasis. Open to all University students. *Prerequisites: Audition and permission of the instructor. Equivalent to TAG OAH022.*

**MUS 1140. Music Appreciation (I, II; 3)** An introduction to the elements of music; development of intelligent listening with emphasis on the popular music of today; a brief introduction to music styles of the past. Previous training in music not required.

**MUS 1151. Piano Class I (I; 1)** Elementary keyboard technique, five-finger patterns, basic chord patterns, major and minor scales, beginning Hanon and Bartok; fundamentals of notation, harmonization, transposition, sight reading, by ear tunes, triads and inversions; full chords and inversions; accompaniment patterns; repertory from each of the following: baroque, classical, romantic, contemporary. Three classes per week. *Equivalent to TAG OAH019 Course 1 of 2.*

**MUS 1152. Piano Class II (II; 1)** Continuation of elementary keyboard technique, five-finger patterns, basic chord patterns, major and minor scales, beginning Hanon and Bartok; fundamentals of notation, harmonization, transposition, sight reading, by-ear tunes, triads and inversions; full chords and inversions; accompaniment patterns; repertory from each of the following: baroque, classical, romantic, contemporary. Three classes per week. *Prerequisite: MUS 1151. Equivalent to TAG OAH019 Course 2 of 2.*

**MUS 1157. University Singers (I, II; 1)** Choral ensemble of 20 to 30 selected voices. Study and performance of significant literature from Renaissance through contemporary styles. Study and performance of selected works by Black composers. Prerequisites: Audition and permission of the instructor. *Equivalent to TAG OAH022.*

**MUS 1167. String Ensemble (On demand; 1)** An organization devoted to the study and performance of string ensemble literature of all periods and a number of cultures, including Western and non-Western music (with emphasis on standard repertory and on African and African-American music). Open to all University students. *Prerequisites: Audition and permission of the instructor.*

**MUS 1177. Woodwind Ensemble (I, II; 1)** An organization devoted to the study and performance of woodwind ensemble literature of all periods and a number of cultures, including Western and non-Western music (with emphasis on standard repertory and on African and African-American music). Open to all University students. *Prerequisites: Audition and permission of the instructor.*

**MUS 1178. Brass Ensemble (I, II; 1)** An organization devoted to the study and performance of brass ensemble literature of all periods and a number of cultures, including Western and non-Western music (with emphasis on standard repertory and on African and African-American music). *Prerequisites: Audition and permission of the instructor.*

**MUS 1179. Percussion Ensemble (I, II; 1)** An organization devoted to the study and performance of aural and written percussion ensemble literature of all periods and a number of cultures, including Western and non-Western music (with an emphasis on standard repertory and on African and African American music). *Prerequisites: Audition and permission of instructor.*

**MUS 1187. Jazz Ensemble (I, II; 1)** An organization devoted to the study and performance of jazz literature. Required of all jazz studies majors. *Prerequisites: Audition and permission of the instructor.*

**MUS 1501, 1502. Principal Applied - Voice (I, II; 2-4)** Development of vocal technique; proper command of posture, carriage, and breathing; improved ability in diction, resonance, and dynamics. Vocalizes by Baccar, Marzo, Concone and others; English song literature, folk songs, old Italian arias, simple oratorio. A German lieder and French art songs; simple operatic arias; art songs by Black composers, continued study of English songs. One-hour lesson per week and one hour laboratory period (Voice Studio Class) per week.

**MUS 1503, 1504. Secondary Applied - Voice (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 1521, 1522. Principal Applied - Piano (I, II; 2-4)** A one-hour lesson per week and practice as required. Major and minor scales and arpeggios for one octave; Pischna studies; Bach Little Preludes and Fugues, short works by Haydn, Mozart, Beethoven, Schumann, Bartok, or Prokofiev; pieces from advanced repertoire, if the student has the facility and background. *Prerequisite: Permission of instructor. Equivalent to TAG OAH020.*

**MUS 1523, 1524. Secondary Applied - Piano (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 1531, 1532. Principal Applied - Woodwinds (I, II; 2-4)** Studies in all major and minor keys, including Klose, Lazarus and other representative and appropriate repertoire. A one-hour lesson per week.

**MUS 1533, 1534. Secondary Applied - Woodwinds (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 1541, 1542. Principal Applied - Percussion (I, II; 2-4)** Scales, rudiments and studies of Harr, Schinstine, Yoder, Rothman, Cook, Stevens, and Stone; representative repertoire. A one-hour lesson per week.

**MUS 1543, 1544. Secondary Applied - Percussion (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 1551, 1552. Principal Applied - Guitar (I, II; 2-4)** Studies in fundamentals of guitar. Major scales in all positions. II, V, I progressions in major and minor keys. Repertoire from Ellington, Parker, and others. One one-hour lesson per week.

**MUS 1553, 1554. Secondary Applied - Guitar (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 1561, 1562. Principal Applied - Jazz Bass (I, II; 2-4)** A one-hour lesson per week. Fundamentals of bass playing, scales, technique, and standard jazz repertoire.

**MUS 1563, 1564. Secondary Applied - Jazz Bass (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 1571, 1572. Principal Applied - Trumpet (I, II; 2-4)** A one-hour lesson per week and practice as required. Studies in all major and minor keys- Arbans, Reinhardt, etc. Representative approach repertoire.

**MUS 1573, 1574. Secondary Applied - Trumpet (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 1581, 1582. Principal Applied - Trombone (I, II; 2-4)** Studies in all major and minor keys — Arbans, Reinhardt, etc. Representative approach repertoire. A one-hour lesson per week.

**MUS 1583, 1584. Secondary Applied - Trombone (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 1591, 1592. Principal Applied - Tuba (I, II; 2-4)** Studies in all major and minor keys — Arbans, Reinhardt, etc. Representative approach repertoire. A one-hour lesson per week.

**MUS 1593, 1594. Secondary Applied - Tuba (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 1601, 1602. Principal Applied - French Horn (I, II; 2-4)** Studies in all major and minor keys. Representative approach repertoire. A one-hour lesson per week.

**MUS 1603, 1604. Secondary Applied - French Horn (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors.

*Prerequisite: Permission of instructor.*

**MUS 1611, 1612. Principal Applied - Oboe (I, II; 2-4)** Studies in all major and minor keys. Representative approach repertoire. A one-hour lesson per week.

**MUS 1613, 1614. Secondary Applied - Oboe (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 1621, 1622. Principal Applied - Strings (I, II; 2-4)** Major and minor scales and arpeggios, technical studies of Sevick, Wohlfart, Kayser, Mazas or Donte, and selected works from the literature for violin. A one-hour lesson per week and practice as required.

**MUS 1623, 1624. Secondary Applied - Strings (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 2201. Music Theory III (I; 5)** The objective of this course sequence (MUS 2201 and 2202) is the further development of a student's musical literacy. Students continue the study of the basics of music theory to increase their skill, speed and mastery. Aural organizational skills are further developed through sight singing, dictation, and improvisational exercises that include chromaticism, chromatic harmony, modulation (to closely and distantly related keys), and atonality. The Western European compositional practices of the years 1800 through the early twentieth century are studied through the analysis (labeling of melodic and harmonic structures, modulations, etc.; and analysis of contrapuntal harmonic structures and forms) of representative compositions. Students write melodies, voice-leading exercises (including counterpoint), and other short compositions to explore and demonstrate an understanding of the contrapuntal and harmonic practice of the above-mentioned period. These skills and concepts are generalized and adapted to the study of related musical dialects from other cultures and time periods: i.e., jazz from 1940-1970, and African and African-American traditional and popular music traditions. *Prerequisite: MUS 1102. Equivalent to TAG OAH052.*

**MUS 2202. Music Theory IV (II; 5)** The objective of this course sequence (MUS 2201 and 2202) is the further development of a student's musical literacy. Students continue the study of the basics of music theory to increase their skill, speed, and mastery. Aural organizational skills are further developed through sight singing, dictation, and improvisational exercises that include chromaticism, chromatic harmony, modulation (to closely and distantly related keys), and atonality. The Western European compositional practices of the years 1800 through the early twentieth century are studied through the analysis (labeling of melodic and harmonic structures, modulations, etc.; and analysis of contrapuntal harmonic structures and forms) of representative compositions. Students write melodies, voice-leading exercises (including counterpoint), and other short compositions to explore and demonstrate an understanding of the contrapuntal and harmonic practice of the abovementioned period. These skills and concepts are generalized and adapted to the study of related musical dialects from other cultures and time periods: i.e., jazz from 1940-1970, and African and African-American traditional and popular music traditions. *Prerequisite: MUS 2201. Equivalent to TAG OAH052.*

**MUS 2210. Jazz Band Lab (I, II; 1)** An organization devoted to the study and performance of jazz literature. *Prerequisites: Audition and permission of the instructor.*

**MUS 2215. Music for Early Childhood Education (I; 2)** This course is designed to provide the early childhood teacher with an overview of the purposes and content of early childhood music programs. Topics include the nature of early musical responses, objectives, experience levels of the program, methods of teaching and materials. Observation of and participation in music teaching in early childhood centers are included in coursework. Not open to music majors for credit.

**MUS 2226. String Class (II; 2)** Techniques and fundamental problems in playing violin, viola, cello, and string bass: position, fingering and bowing. Four classes per week.

**MUS 2228. Brass Class (I; 2)** Techniques and fundamental problems in playing brass instruments. Principles of intonation, fingering, breathing, embouchure, and transposition.

**MUS 2229. Percussion Class (II; 2)** Techniques and fundamental problems in playing percussion instruments.

**MUS 2230. Voice Class (II; 2)** Study of fundamental voice elements, and development of elementary skills designed particularly for music education majors; problems of the unchanged, changing, and mature voice. *Prerequisite: Permission of the instructor (if student is not music major).*

**MUS 2231. Woodwind Class I (I; 2)** Techniques and fundamental problems in playing woodwind instruments. Principles of intonation, fingering, breathing, and embouchure are studied. Emphasis on clarinet and saxophone.

**MUS 2232. Woodwind Class II (II; 2)** Continuation of study from Woodwind Class I. Emphasis on flute and double reeds. *Prerequisite: MUS 2231.*

**MUS 2233. History of Jazz (I, II; 3)** This course follows the development of jazz from its roots to the present day. Includes study of ragtime, New Orleans jazz, Chicago jazz, swing, bebop, hard-bop, fusion, free jazz and current trends. Special emphasis on the music of Louis Armstrong, Duke Ellington, Charlie Parker, Miles Davis, and John Coltrane.

**MUS 2236. Computer Music Technology (II; 2)** The use of music computer software such as Finale for the production of music and music printing, basics of MIDI (musical instrument digital interface) and music sequencing programs will also be introduced.

**MUS 2251. Piano Class III (I; 1)** Elementary keyboard technique, five-finger patterns, basic chord patterns, major and minor scales, beginning Hanon and Bartok; fundamentals of notation and harmonization; transposition; sight-reading, by-ear tunes, triads, and inversions; full chords and inversions; accompaniment patterns; repertory from each of the following: baroque, classical, romantic, contemporary. Three classes per week. *Prerequisite: MUS 1151.*

**MUS 2252. Piano Class IV (II; 1)** Major and minor scales; tonic and dominant seventh arpeggios; basic cadential patterns; harmonization; improvisation; sight reading; vocal score reading; triads and inversions; full chords and inversions; accompaniment patterns; repertory from each of the following: baroque, classical, romantic, contemporary. Three classes per week. *Prerequisite: MUS 2251.*

**MUS 2262. Jazz Workshop (I, II; 1)** Emphasis on small group playing. Advanced improvisational problems and group dynamics. *Prerequisites: Audition and permission of the instructor.*

**MUS 2271. Jazz Keyboard Harmony I (I; 2)** Major modes, diatonic sevenths, chord extensions, and altered dominants as applied to the keyboard. Keyboard practice in shell voicing, II-V-I's, the blues progression, and turnarounds.

**MUS 2272. Jazz Keyboard Harmony II (II; 2)** Four and five-note voicing; tritone substitution; application of jazz keyboard techniques to standard repertoire.

**MUS 2280. Introduction to Music Education (I; 3)** This course covers music education at the pre-kindergarten through secondary levels. Topics include history and philosophy of music education; influences of philosophies of general education past and present; issues relevant to music education in pre-kindergarten through secondary education; the objective and structure of school music programs at various levels; and the relationship to school structures at the pre-kindergarten, elementary, and secondary levels. Directed classroom observations in pre-schools and elementary schools will be offered.

**MUS 2501, 2502. Principal Applied - Voice (I, II; 2-4)** Technical studies; improvement in dynamics and range; studies in coloratura; oratorio arias by J. S. Bach, Handel, and Haydn; songs by Mozart and Gluck; German lieder and French art songs; simple operatic arias; art songs by Black composers; and continued study of English songs. One-hour lesson per week and one hour laboratory period (Voice Studio Class) per week. *Prerequisite: MUS 1502. Equivalent to TAG OAH020.*

**MUS 2503, 2504. Secondary Applied - Voice (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 2521, 2522. Principal Applied - Piano (I, II; 2-4)** A one-hour lesson per week and practice as required. Major and minor scales; arpeggios in faster tempo; Bach French suites; three-part inventions; sonatas by

Scarlatti, Haydn, and Mozart; a Beethoven sonata movement; Brahms Intermezzo; impressionistic and modern works; and advanced works. *Prerequisite: MUS 1522. Equivalent to TAG OAH020.*

**MUS 2523, 2524. Secondary Applied - Piano (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 2531, 2532. Principal Applied - Woodwinds (I, II; 2-4)** Continued study of tone production, scales, and repertory. A one-hour lesson per week. *Prerequisite: MUS 1532.*

**MUS 2533, 2534. Secondary Applied - Woodwinds (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 2541, 2542. Principal Applied - Percussion (I, II; 2-4)** Continuation of MUS 1542. A one-hour lesson per week. *Prerequisite: MUS 1542.*

**MUS 2543, 2544. Secondary Applied - Percussion (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 2551, 2552. Principal Applied - Guitar (I, II; 2-4)** One-hour lesson per week. *Prerequisite: MUS 1552.*

**MUS 2553, 2554. Secondary Applied - Guitar (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 2561, 2562. Principal Applied - Jazz Bass (I, II; 2-4)** A one-hour lesson per week. *Prerequisite: MUS 1562.*

**MUS 2563, 2564. Secondary Applied - Jazz Bass (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 2571, 2572. Principal Applied - Trumpet (I, II; 2-4)** A one-hour lesson per week and practice as required. Technique from Arbans, Reinhardt, etc. Representative approach repertoire. Continued study of tone production, scales, tonguing with various articulations, and repertory. *Prerequisite: MUS 1572.*

**MUS 2573, 2574. Secondary Applied - Trumpet (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 2581, 2582. Principal Applied - Trombone (I, II; 2-4)** Continued study of tone production, scales, tonguing with various articulations, and repertory. A one-hour lesson per week. *Prerequisite: MUS 1582.*

**MUS 2583, 2584. Secondary Applied - Trombone (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 2591, 2592. Principal Applied - Tuba (I, II; 2-4)** Continued study of tone production, scales, tonguing with various articulations, and repertory. A one-hour lesson per week. *Prerequisite: MUS 1592.*

**MUS 2593, 2594. Secondary Applied - Tuba (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 2601, 2602. Principal Applied - French Horn (I, II; 2-4)** Continued study of tone production, scales, tonguing with various articulations, and repertory. A one-hour lesson per week. *Prerequisite: MUS 1602.*

**MUS 2603, 2604. Secondary Applied - French Horn (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 2611, 2612. Principal Applied - Oboe (I, II; 2-4)** Continued study of tone production, scales, and repertory. A one-hour lesson per week. *Prerequisite: MUS 1612.*

**MUS 2613, 2614. Secondary Applied - Oboe (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 2621, 2622. Principal Applied - Strings (I, II; 2-4)** Continued development of major and minor scales and arpeggios, technical studies of

Sevick, Wohlfart, Kayser, Mazas or Donte, and selected works from the literature for violin. A one-hour lesson per week and practice as required. *Prerequisite: MUS 1622.*

**MUS 2623, 2624. Secondary Applied - Strings (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 2701. Global Perspectives in the Performing Arts (On Demand; 2)** The objective of this course is for students to become knowledgeable in the musical customs and practices of a specified international region (or regions) through study, first-hand observation, and performance in the region. Students learn the basic music history of the region (such as composers, songs, operas, musical styles, socio-economic influences, etc.) to understand the region's traditions and contributions to global music. Through cultural exchanges with local musicians and organizations, students' knowledge of the region is enhanced through performances, workshops, and/or discussions. The students' final project is a performance of traditional American music coupled with the host region's music in a full concert or concerts. *Prerequisites: permission of the instructor.*

**MUS 3301. Diction for Singers (On demand; 3)** Study of phonetics as related to singing in Italian, French, and German.

**MUS 3303. Diction for Singers I (I; 2)** Study of phonetic alphabets and pronunciations as related to singing in Italian and German.

**MUS 3305. Diction for Singers II (I; 2)** Study of phonetic alphabets and pronunciations as related to singing in French and English.

**MUS 3311. Jazz Composition and Arranging I (I; 3)** Study of chord, scale, and voicing concepts in the jazz idiom with application to composing for the small jazz combo (1-4 horns). Composing in standard forms such as blues, AABA, and rhythm changes.

**MUS 3312. Jazz Composition and Arranging II (II; 3)** Analysis of modern compositions by Wayne Shorter, John Coltrane and others. Writing for the big band including close position, open position, shout choruses, and full ensemble.

**MUS 3340. African Ethnomusicology (II; 2)** Area studies from a socio-historical perspective. Students will examine African music in its cultural context, listen to and analyze various African musical styles in the global context, and do independent research and presentations. *Prerequisite: MUS 1140.*

**MUS 3341. Conducting Fundamentals and Practice (I; 2)** The introduction and study of score reading and of fundamental conducting techniques: basic beat patterns, baton techniques, cueing entrances, up beats, independence of the hands, instrument and voice ranges, clef reading, transpositions, etc. The student will develop a clear and concise conducting technique and will begin to study the communication of musical expression through eye contact and appropriate hand gestures, rehearsal, and score preparation skills and techniques. Wind ensemble, band, choral, and orchestral literature is studied, analyzed, and prepared for performance. Leadership skills appropriate for working with elementary, secondary; college and professional ensembles are discussed and developed. *Prerequisite: MUS 2202.*

**MUS 3342. Advanced Choral Conducting (I; 2)** Students develop and demonstrate advanced conducting, rehearsal, and score preparation skills and techniques. Choral literature is studied, analyzed, and prepared for performance. Students will have the opportunity to conduct one of the University's choirs. *Prerequisite: MUS 3341.*

**MUS 3343. Advanced Instrumental Conducting (II; 2)** Students develop and demonstrate advanced conducting, rehearsal, and score preparation skills and techniques. Wind ensemble, band, choral, and orchestral literature is studied, analyzed, and prepared for performance. Students will have the opportunity to conduct one of the University's ensembles. *Prerequisite: MUS 3341.*

**MUS 3374. Studies in Piano Literature (On-Demand: 2)** This course exposes students to the standard pieces of solo and chamber repertoire from all historic periods. It focuses on enhancing ability to aurally and visually identify repertoire through stylistic characteristics and common compositional devices. Topics will vary.

**MUS 3375. Band and Orchestra Literature and**

**Arranging (II; 4)** This course involves exposure to the graded performance literature appropriate for school instrumental groups of all sizes in grades 5 through 12; the various ensemble training materials available for school groups; and appropriate solo and training literature for teaching individual performers. Students learn to write, arrange, and score music for wind ensemble, concert band, and orchestra. Instrument ranges, characteristics, idiosyncrasies, and technical difficulties are studied. Articulations, bowings, tempo indications, dynamics and other appropriate descriptors of phrasing and expression are learned and applied in the production of musical scores. Piano scores are analyzed as to form, content, and expression; arrangements for large ensembles are produced that are musically and aesthetically faithful to the composer's original intentions. *Prerequisites: All instrument classes except Advanced Instrument Conducting.*

**MUS 3376. Instrumental Methods (II; 2)** This course involves methods and techniques of teaching instrumental music for grades 5 through 12, and methods and techniques for organizing, developing, and financing school instrumental groups for grades 5 through 12. Other topics include classroom management skills; interpersonal relationships; evaluation of students; and use of appropriate media with instrumental groups. Field-based/clinical activities will be offered. *Prerequisite: Pass Praxis I; All instrument classes or permission of instructor.*

**MUS 3381. Music History I (I; 3)** This course traces the beginnings of music in antiquity through the development of medieval monophony and polyphony, Burgundian and Renaissance techniques and composers, the influence of the reformation on Music, and the Baroque era (in both instrumental and vocal music). *Prerequisite: ENG 1102 and MUS 2202.*

**MUS 3382. Music History II (II; 3)** The course continues the study of the history of music, beginning with the rise of the classical era and composers of the first Viennese School, and continuing through Romanticism into the modern era (including twentieth century composers and techniques). *Prerequisites: MUS 2202; MUS 3381.*

**MUS 3386. Area Studies in Ethnomusicology (I; 2)** A socio-anthropological study of African-American music in the diaspora and the resulting genres, styles, and forms of musical expression that developed from the synthesis of African and Western musical traditions. The course begins with fundamental ethnomusicology theory and methodology as applied to the study of non-Western music. *Prerequisite: MUS 2251.*

**MUS 3391. Jazz Improvisation I (I; 2)** Study of chord and scale concepts used in the jazz idiom. Emphasis on modes of the major scale, diatonic seventh chords in major and minor, the blues progression and scale, development of II-V techniques, and dominant chord scales.

**MUS 3392. Jazz Improvisation II (II; 2)** Development of standard repertoire from the bebop era. Advanced improvisational techniques including use of pentatonic, scales in fourths, and melodic minor modes. Emphasis on post-bebop styles for the second part of the semester.

**MUS 3395. Chamber Music (On demand; 1)** Two one-hour studio sessions per week with chamber music coach. Each student will learn and perform in recital at least one selection from the standard chamber music repertoire. *Prerequisite: Permission of instructor.*

**MUS 3397. Junior Recital and Research (I, II, III; 3)** Required for B.M. in Performance degree only. *Prerequisite: Audition and permission of the instructor.*

**MUS 3482. Music Methods & Materials for Music Majors: Elementary (I; 3)** This course includes practical experience with various methods and materials at the pre-kindergarten and elementary levels; experiences with various instruments; multicultural-content; music classroom management skills, interpersonal skills, reading in the content area, evaluation of students, media and technology appropriate for teaching elementary music. Field-based/clinical experiences will be provided. *Prerequisites: MUS 2280; pass Praxis I; or permission of instructor.*

**MUS 3495. Junior Recital (On Demand; 0)** Public performance of junior level repertoire developed in the Principal Applied Sequence. Required for all B.M. degrees at CSU. *Prerequisite: Permission of instructor.*

**MUS 3501, 3502. Principal Applied - Voice (I, II; 2-4)** Stability and consistent quality in the upper and lower vocal registers. Continuation of advanced German lieder and French art songs; simple art songs by Black composers; operatic arias; contemporary songs; Russian songs to be sung in English. One-hour lesson per week and one hour laboratory period (Voice Studio Class) per week. *Prerequisite: MUS 2502.*

**MUS 3503, 3504. Secondary Applied - Voice (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 3521, 3522. Principal Applied - Piano (I, II, 2-4)** A one-hour lesson per week and practice as required. All major and white key (harmonic and melodic) scales, 3 octaves, metronome 108 in quarter, eighth, and triplet notes; all major and minor triad arpeggios and dominant and diminished seventh chord arpeggios, 3 octaves, metronome 108 in quarter, eights, and triplet notes; 3 pieces from the standard repertoire per semester. *Prerequisites: MUS 2522 and completion of Junior Recital.*

**MUS 3523, 3524. Secondary Applied - Piano (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 3531, 3532. Principal Applied - Woodwinds (I, II; 2-4)** Continued study of tone production, scales, repertory. A one-hour lesson per week. *Prerequisite: MUS 2532.*

**MUS 3533, 3534. Secondary Applied - Woodwinds (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 3541, 3542. Principal Applied - Percussion (I, II; 2-4)** Continuation of MUS 2542. A one-hour lesson per week. *Prerequisite: MUS 2522.*

**MUS 3543, 3544. Secondary Applied - Percussion (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 3551, 3552. Principal Applied - Guitar (I, II; 2-4)** A one-hour lesson per week. *Prerequisite: MUS 2552.*

**MUS 3553, 3554. Secondary Applied - Guitar (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 3561, 3562. Principal Applied - Jazz Bass (I, II; 2-4)** A one-hour lesson per week. *Prerequisite: MUS 2562.*

**MUS 3563, 3564. Secondary Applied - Jazz Bass (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 3571, 3572. Principal Applied - Trumpet (I, II; 2-4)** A one-hour lesson per week and practice as required. Technique from Arbans, Reinhardt, etc. Representative approach repertoire. Continued study of tone production, scales, tonguing with various articulations; repertory. *Prerequisite: MUS 2572.*

**MUS 3573, 3574. Secondary Applied - Trumpet (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 3581, 3582. Principal Applied - Trombone (I, II; 2-4)** Continued emphasis on legato study and breath control, more advanced technical studies, and scales — Williams, Arbans, etc. — or equivalent repertory. A one-hour lesson per week. *Prerequisite: MUS 2582.*

**MUS 3583, 3584. Secondary Applied - Trombone (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for nonmajors. *Prerequisite: Permission of instructor.*

**MUS 3591, 3592. Principal Applied - Tuba (I, II; 2-4)** Continued emphasis on legato study and breath control, more advanced technical studies, and scales — Williams, Arbans, etc. — or equivalent repertory. A one-hour lesson per week. *Prerequisite: MUS 2592.*

**MUS 3593, 3594. Secondary Applied - Tuba (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors.

*Prerequisite: Permission of instructor.*

**MUS 3601, 3602. Principal Applied - French Horn (I, II; 2-4)** Continued emphasis on legato study and breathe control, more advanced technical studies, scales, and repertory. A one-hour lesson per week. *Prerequisite: MUS 2602.*

**MUS 3603, 3604. Secondary Applied - French Horn (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 3611, 3612. Principal Applied - Oboe (I, II; 2-4)** Continued study of tone production, scales, repertory. A one-hour lesson per week. *Prerequisite: MUS 2612.*

**MUS 3613, 3614. Secondary Applied - Oboe (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 3621, 3622. Principal Applied - Strings (I, II; 2-4)** One-hour lesson per week. *Prerequisite: MUS 2622.*

**MUS 3623, 3624. Secondary Applied - Strings (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 3750. Opera Workshop (II; 1)** Solo and ensemble study of singer-actor techniques through performance of opera and musical theatre works. Primarily for junior and senior vocal music majors. Open to all University students, including those skilled in theatrical technology, design, operation, costuming, properties, make-up, visual media, and promotion. *Prerequisites: Audition and permission of the instructor.*

**MUS 4341. Form and Analysis (I; 2)** Students develop and demonstrate labeling and analytical techniques that are appropriate for the study of the disparate contrapuntal and harmonic structures found in four periods of Western music: baroque, classical, romantic, and twentieth century. The analytical techniques are adapted to the study of a representative sample of the music of other cultures, and of a representative sample of Western music before 1600. Students will write critical analyses of several extended compositions. *Prerequisite: MUS 2202.*

**MUS 4342. Counterpoint (II; 2)** The art of combining melodies in the style of 18th century tonal counterpoint using a specially adapted species of counterpoint pedagogy. *Prerequisite: MUS 2202.*

**MUS 4400. Studies in Pedagogy (On demand; 2)** An individualized study of the pedagogical materials and techniques used in a student's principal applied area. Topics include: textbook evaluations, current periodicals, group and private lessons, standard technique and repertoire, and the business aspects of music teaching as a profession.

**MUS 4427. Small Ensemble (I, II; 1)** Two one-hour studio classes per week with the chamber music coach. Each student will learn and perform a student recital of at least one piece from the standard chamber music repertoire. Pieces learned will depend on the instrument of those who register. *Prerequisites: Audition and permission of the instructor.*

**MUS 4428. Steel Band (I, II; 1)** An organization devoted to the study and performance of the music of the Caribbean Islands on the steel drums. *Prerequisites: Audition and permission of the instructor.*

**MUS 4430. Topics in Solo and Ensemble Literature (On Demand; 2)** This course will study the solo and ensemble literature of the instruments identified for the term (brass, woodwinds, percussion or strings.) the instrument(s) for the term will be chosen to support the needs of the BM in Performance. Differing sections will emphasize different instrumental families. By permission of instructor. *Prerequisites: Permission of the instructor.*

**MUS 4476. Choral Methods (I; 2)** The course involves in-depth learning methods and techniques in teaching secondary choral groups; organizing school choral groups; classroom management skills; interpersonal skills; and evaluating vocal performance (solo, ensemble, and choral). Field-based/clinical experiences will be provided. *Prerequisites: MUS 2230 and MUS 3342.*

**MUS 4477. Choral Literature and Arranging (II; 2)** The course involves the study of literature for individual voices, small ensembles, and large ensembles appropriate for secondary choral programs; study of appropriate training materials for secondary choral

groups; and basic arranging skills of music appropriate for secondary choral groups. *Prerequisites: MUS 2230 and MUS 3342.*

**MUS 4479. Music Methods and Materials: Secondary — Field-Based Experiences (II; 1)** The field-based/clinical experiences component of the secondary methods and materials class. Includes actual observations and hands-on experiences of the total contemporary music educational program in area public schools. FBEs enable students to develop and to gain a sense of the full range of teacher responsibilities that is consistent with NASM and NCATE standards. Co-requisite: MUS 4480; *Prerequisites: MUS 2280; Pass Praxis I.*

**MUS 4482. Music Methods and Materials for Music Majors: Secondary (II; 3)** This course involves the study of methods, materials and organization of secondary nonperforming music programs with a brief overview of choral programs. Other topics will include music classroom management techniques; interpersonal skills; evaluation of students; reading in the content area; and appropriate media for non-performing music classes. Field-based clinical experiences will be provided. *Prerequisites: MUS 2280; pass Praxis I or permission of instructor.*

**MUS 4490. Recording Studio Practicum (II; 3)** Seniors in the jazz studies major learn basic recording techniques to produce a jazz recording of their own performance. Along with Senior Recital, this is a capstone experience for jazz studies majors. *Prerequisite: Permission of the instructor.*

**MUS 4495. Senior Recital (I, II; 0)** Capstone experience for all Principal Applied sequences. Must pass full faculty hearing two weeks prior to performance date.

**MUS 4497. Senior Recital and Research (I, II; 3)** Required for capstone experience for B.M. in Performance degree only. *Prerequisite: Audition and permission of the instructor.*

**MUS 4501, 4502. Principal Applied - Voice (I, II; 2-4)** Stability and consistent quality in the upper and lower vocal registers. Continuation of advanced German lieder and French art songs; simple art songs by Black composers; operatic arms; contemporary songs; Russian songs to be sung in English. One-hour lesson per week and one hour laboratory period (Voice Studio Class) per week. *Prerequisites: MUS 3502 and completion of Junior Recital.*

**MUS 4503, 4504. Secondary Applied - Voice (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 4510. Vocal Literature (On Demand; 2)** This course exposes students to the standard repertoire of solo and chamber vocal music from all historical periods. It focuses on enhancing the ability to aurally and visually identify repertoire through stylistic characteristics and common compositional devices. The course also discusses performance practices for different styles. *Prerequisite: Permission of instructor.*

**MUS 4521, 4522. Principal Applied - Piano (I, II; 2-4)** A one-hour lesson per week and practice as required. Completion of Beethoven sonata; Bach well-tempered clavier, Vol. 1; Chopin etudes, polonaises, recital preparation. Note: Works of quality and grade of difficulty comparable to the titles listed may be substituted. *Prerequisites: MUS 3522 and completion of Junior Recital.*

**MUS 4523, 4524. Secondary Applied - Piano (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 4531, 4532. Principal Applied - Woodwinds (I, II; 2-4)** Studies in all major and minor keys — Klose, Lazarus and other representative appropriate repertoire. A one-hour lesson per week. *Prerequisites: MUS 3532 and completion of Junior Recital.*

**MUS 4533, 4534. Secondary Applied - Woodwinds (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 4541, 4542. Principal Applied - Percussion (I, II; 2-4)** Continuation of MUS 3542. A one-hour lesson per week. *Prerequisites: MUS 3542 and completion of Junior Recital.*

**MUS 4543, 4544. Secondary Applied - Percussion (I, II; 1)** One thirty-minute lesson per week and practice as required.

Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 4551, 4552. Principal Applied - Guitar (I, II; 2-4)** A one-hour lesson per week. *Prerequisites: MUS 3552 and completion of Junior Recital.*

**MUS 4553, 4554. Secondary Applied - Guitar (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 4561, 4562. Principal Applied - Jazz Bass (I, II; 2-4)** A one-hour lesson per week. *Prerequisites: MUS 3562 and completion of Junior Recital.*

**MUS 4563, 4564. Secondary Applied - Jazz Bass (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 4571, 4572. Principal Applied - Trumpet (I, II; 2-4)** A one-hour lesson per week and practice as required. Technique from Arbans, Reinhardt, etc. Representative approach repertoire. Continued study of tone production, scales, tonguing with various articulations; repertory. *Prerequisites: MUS 3572 and completion of Junior Recital.*

**MUS 4573, 4574. Secondary Applied - Trumpet (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 4581, 4582. Principal Applied - Trombone (I, II; 2-4)** A one-hour lesson per week and practice as required. Preparation of Senior Recital repertoire. *Prerequisites: MUS 3582 and completion of Junior Recital.*

**MUS 4583, 4584. Secondary Applied - Trombone (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 4591, 4592. Principal Applied - Tuba (I, II; 2-4)** A one-hour lesson per week and practice as required. Senior Recital preparation. *Prerequisites: MUS 3592 and completion of Junior Recital.*

**MUS 4593, 4594. Secondary Applied - Tuba (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 4601, 4602. Principal Applied - French Horn (I, II; 2-4)** A one-hour lesson per week. Continued development of technique and repertoire. Preparation of Senior Recital repertoire. *Prerequisites: MUS 3602 and completion of Junior Recital.*

**MUS 4603, 4604. Secondary Applied - French Horn (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 4611, 4612. Principal Applied - Oboe (I, II; 2-4)** Continued study of tone production, scales, repertory. A one-hour lesson per week. *Prerequisites: MUS 3612 and completion of Junior Recital.*

**MUS 4613, 4614. Secondary Applied - Oboe (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

**MUS 4621, 4622. Principal Applied - Strings (I, II; 2-4)** A one-hour lesson per week and practice as required. Preparation of Senior Recital repertoire. *Prerequisites: MUS 3622 and completion of Junior Recital.*

**MUS 4623, 4624. Secondary Applied - Strings (I, II; 1)** One thirty-minute lesson per week and practice as required. Technique and repertoire appropriate for non-majors. *Prerequisite: Permission of instructor.*

## NUCLEAR ENGINEERING

**NUE 2720. Introduction to Nuclear Engineering (I; 3)** Discussion of nuclear energy and nuclear radiation sources, methods of measurement and utilization of nuclear radiation, and projections for future engineering uses. Laboratory experiments and field trips. Laboratory experiments to be conducted at OSU Nuclear Reactor Laboratory. Field trips to Nuclear Power Plants. A Memorandum of Understanding to collaborate has been executed with OSU and Wilberforce University. *Prerequisites: MTH 2503 or permission of the instructor.*

**NUE 2850. Field Practicum in Nuclear Engineering (I, II; 3)** Industrial experiences will be provided during mandatory field trips on three weekends to three Nuclear Operating Companies of eight hour duration and during two weekday trips to The Ohio State University Nuclear Reactor Laboratory. The trips occur in the Fall and Spring semesters of the first year of the minor in Nuclear Engineering. Laboratory and hands-on experiences at the following facilities will be provided: (1) Perry Nuclear Power Plant, (2) the Dave Beese Nuclear Power Plant, (3) the Westinghouse Nuclear Training Center, and (4) The Ohio State University Nuclear Reactor Facility, a total of 45 hours.

**NUE 3555. Nuclear Safety Systems (II; 3)** Reactor safety concepts. Lecture/ discussion/ distance and traditional learning modalities. Sandia Lab NUREG/CR-6042 code utilized at the NRC would be utilized in the course. Example case study problems and solutions. *Prerequisite: NUE 2720 or permission of instructor.*

**NUE 3775. Power Plant Systems Operations (II; 3)** Power plant studies, regulatory requirements, and integrated plant operations; brief overview of thermal and mechanical design aspects and economics of nuclear power plants and processes. The thermodynamics of operating nuclear power plants (BWR and PWR) are discussed. Field trips to Nuclear Power Plants will be provided. *Prerequisite: NUE 2720 or permission of instructor.*

**NUE 3820. Reactor Core Neutronics (I; 3)** Reactor vessel subatomic particle dynamics for energy generation, containment and distribution. The focus is on methods for the design and analysis of nuclear reactor cores. Includes both time dependent and steady state analysis. *Prerequisites: NUE 2720 and NUE 3775 or permission of instructor.*

## PHILOSOPHY AND RELIGION

**PHI 2210. Survey of Global Philosophy (I, II; 3)** Students analyze some of the major problem areas of philosophy from a global perspective and in a range of time periods. Problems covered include freedom, religion, knowledge, and value.

**PHI 2230. Global Religion (II; 3)** Students consider the origins and development of religion on a global basis, with particular attention to the interrelations of beliefs, ritual practices, and values.

**PHI 2240. Critical Thinking (I, II; 3)** Students cover the basics of logic, argumentation, and problem solving with emphasis on applications of logic in reading and writing, including the recognition, evaluation, and construction of arguments.

**PHI 2250. Applied Ethics (I; 3)** Students apply ethical theory to a range of contemporary personal, social, and professional issues. The role of ethics in community life is explored and the sources of values, norms and principles are investigated.

**PHI 3300. Logic and Scientific Method (II; 3)** Students learn the basics of symbolic logic and investigate how logic is applied in the social and natural sciences.

**PHI 3310. Global Philosophy to 1500 (I; 3)** Students trace the development of philosophy from the ancient world until the beginning of the modern age from a global perspective.

**PHI 3311. Global Philosophy: 1500-Present (II; 3)** Students trace the development of philosophy from 1500 to the present from a global perspective.

**PHI 3315. African Philosophy (I; 3)** Students consider various accounts of the origins of African Philosophy in ancient Egypt as well as the more recent development of African Philosophy as an academic discipline since the 1960s.

**PHI 3320. Philosophy of Religion (II; 3)** Students investigate the nature and role of religion, including problems of religious knowledge and experience. Attention is paid to the impact of liberation theology on traditional religious thinking.

**PHI 3330. African and African American Religion (I;3)** Students examine religion in various African cultures prior to contact with Islam and Christianity, trace recent developments in African Religion and study the origins and history of religious institutions and traditions among African Americans.

**PHI 3350. African American Philosophy (II; 3)** Students engage in philosophical analysis of African American thought from colonial times through the present. Movements, tendencies and individual thinkers are covered. The concepts of oppression and liberation are central to the course.

**PHI 3360. Philosophy of Science (I; 3)** Students inquire into the concepts and methods of science and investigate the relationship of science to other aspects of human culture.

**PHI 3400. Topics in Philosophy and Religion (On demand; 3)** Students investigate some topic or interrelated set of topics in philosophy and/or religion. The course is intended primarily for philosophy minors.

**PHI 4895. Senior Thesis (On demand; 3)** Philosophy minors complete and defend undergraduate theses that demonstrate competency in the student's major field and in the relevant skills and knowledge of the general education program. Recommended for students considering graduate or professional school. *Prerequisites: Senior status and philosophy minor.*

## PHYSICS

**PHY 1110. Physical Science (I, II; 3)** A course designed to inform and interest students in the role of science in everyday life. The basic concepts of chemistry, physics and the philosophy of science are presented as an interrelated whole. Open to all students. May be used to satisfy the General Education requirements for Natural Sciences.

**PHY 1120. Physical Science (I, II; 3)** This course introduces the basic principles and concepts of chemistry and physics, and is designed to give the students an appreciation of science in a technological society. The course does not require any previous science background, but a working knowledge of high school mathematics is useful. Open to all students. May be used to satisfy the General Education requirements for Natural Sciences.

**PHY 1140. Experimental Science (I; 2)** A course intended to give students a free rein to their scientific curiosity in an open ended and flexible set of laboratory problem situations. Emphasis will be on tackling any problem in a spirit of inquiry but not on covering any prescribed subject matter. While this course is not an integral part of departmental or pre-professional curriculum or prerequisite to any other courses, it is intended for freshmen who expect to major in one of the natural sciences. One two-hour laboratory and one one-hour discussion session per week.

**PHY 1160. The Physics of Sound with Lab (II; 3)** An investigation of the physical phenomenon of sound. The treatment of sound waves is applied to musical instruments. This course is designed for music majors or other non-science majors. One two-hour laboratory and two one-hour lecture per week. May be used to satisfy the General Education requirements for Natural Sciences.

**PHY 1170. The Visual Image with Lab (I; 2)** A non-mathematical course that describes light, its behavior and applications. Emphasis is placed on image formation by optical instruments, the science of color, lasers, holography, and analysis of light from the elements, planets and stars. One two-hour laboratory and one one-hour discussion session per week.

**PHY 1181. Basic Physics I (I; 4)** This is the first of a two-semester course sequence, taught only in Fall. It will cover the following concepts: Newton's laws of motion; work, energy and power; conservation laws of energy, linear momentum and angular momentum; Archimedes's and Bernoulli Principles; specific heat and latent heats; wave motion and sound; Doppler Effect. The course will be taught using two two-hour inquiry-based laboratory instruction periods (hands-on), and two one hour of lecture/recitation per week. *Prerequisites: MTH 1750.*

**PHY 1182. Basic Physics II (II; 4)** This is a continuation of PHY 1181 and will be offered in spring. This course will cover the following concepts: electrical charges at rest and in motion; Ohm's law and its application to simple circuits; magnetic forces and fields; electromagnetic induction and its applications; electromagnetic spectrum; geometric optics; physical optics; and structures of the atom and the nucleus. The course will be taught using two two-hour periods of inquiry-based laboratory instruction (hands-on), and two hour of lecture/recitation per week. *Prerequisites: PHY 1181.*

**PHY 1183. Introductory Astronomy (I; 2)** A basic course in astronomy that covers the following concepts: major theories of the origin and structure of the universe; astronomical units; the solar system; characteristics of the sun and the source of its energy; eclipses; the earth's seasons; units of time as based on the earth's motion; space exploration and celestial navigation; and remote sensing.

**PHY 2411. University Physics I (I; 5)** This course begins with a two-semester sequence of introductory calculus-based physics courses. It covers the fundamentals of classical mechanics, gravitation, properties of solids and fluids, and thermodynamics. It is required for majors in biology, chemistry, environmental engineering, and manufacturing engineering. There are four one-hour lectures and one two-hour laboratory exercise per week. *Prerequistie: MTH 2503.*

**PHY 2412. University Physics II (II; 5)** This course completes a two-semester sequence of introductory calculus-based physics courses. It covers the fundamentals of wave motion, electrodynamics, optics, nuclear physics and modern physics. It is required for majors in biology, chemistry, environmental engineering, and manufacturing engineering. There are four one-hour lectures and one two-hour laboratory exercise per week. *Prerequisite: PHY 2411.*

**PHY 2611. College Physics I (I; 4)** This course begins a two-semester sequence of introductory algebra-based physics courses. It covers the fundamentals of classical mechanics, gravitation, properties of solids and fluids, thermodynamics, and wave motion. It is required for majors in water resources management, sustainable agriculture, and education. There are three one-hour lectures and one two-hour laboratory exercise per week. *Prerequisite: MTH 2501. Equivalent to TAG OSC 021 (Combination of OSC 014 and OSC 015).*

**PHY 2612. College Physics II (II; 4)** This course begins a two-semester sequence of introductory algebra-based physics courses. It covers the fundamentals of electrodynamics, optics, nuclear phyics, and modern physics. It is required for It is required for majors in water resources management, sustainable agriculture, and education. There are three one-hour lectures and one two-hour laboratory exercise per week. *Prerequisite: PHY 2611 Equivalent to TAG OSC 021 (Combination of OSC 014 and OSC 015).*

**PHY 3230. Electronics for Scientists (I; 2)** This course deals with modern electronics instrumentation in the laboratory. *Prerequisite: PHY 2411.*

**PHY 3320. Physical Optics (I; 3)** The course treats the fundamentals of physical optics including interference, dispersion, diffraction, double refraction, and polarization. *Prerequisite: PHY 2611.*

**PHY 3330. Introductory Solid State Physics (II; 4)** This course deals entirely with the ordered crystalline structures of the solid state and covers crystallography, lattice dynamics, energy bands, semiconductors, and superconductivity. *Prerequisite: PHY 2611.*

**PHY 4401. Electricity and Magnetism I (I; 3)** A course covering the fundamentals of electricity and magnetism. *Prerequisite: PHY 2611.*

**PHY 4402. Electricity and Magnetism II (II; 3)** Continuation of the fundamentals of electricity and magnetism. *Prerequisite: PHY 4401.*

**PHY 4421. Analytical Mechanics I (1; 3)** An introduction to the classical theory of statics and dynamics of particles and rigid bodies. *Prerequisite: PHY 2411.*

**PHY 4422. Analytical Mechanics II (II; 3)** A study of the Lagrange equations of motion and the Hamiltonian function. *Prerequisite: PHY 4421.*

**PHY 4431. Modern Physics (1; 3)** A course covering the modern concepts of atomic structure and radiation, nuclear structure, and radioactivity. *Prerequisite: PHY 2611.*

## POLITICAL SCIENCE

**PSC 1100. American National Government (I, II; 3)** A basic introductory course dealing with the Constitution, Congress, president, courts, political party system, civil rights, the relationships and obligations of citizenship, and the operation of government in the fields of foreign affairs, national defense, business and labor, agriculture and social welfare. *Equivalent to TAG OSS011.*

**PSC 1120. Introduction to Public Administration (I; 3)** An introduction to the environment of public administration through the study of organization, personnel administration, financial administration, administrative law and regulation, and administrative responsibility.

**PSC 1140. The Politics of Food & Farming in America (I; 3)** An introduction to the political environment of American food and farming with a focus on policymakers, interest groups,

consumers and the institutions within which they operate.

**PSC 2202. International Politics (I; 3)** This course is concerned with the behavior and proclivities of nation-states in the international community. Topics considered include development of the state system, physical characteristics of states, rights and duties of states, sovereignty of states, the doctrine of recognition, large and small states, power politics, and the balance of power mechanism. *Equivalent to TAG OSS012.*

**PSC 2205. Introduction to Africa (I, II; 3)** This course provides students with an interdisciplinary survey of Africa, its people and cultures from the traditional era through European colonization to the present. Students will be briefly introduced to ancient and medieval African societies; to the traditional African experience; to the forces of colonization and modernization which have brought about swift changes in societies and individuals; and to the reemergence of independent African nations since 1945.

**CRJ/PSC/PSY/SWK/SOC 2206.Statistics for Social and Behavioral Sciences (I, II; 4)** This course provides students with an introduction to basic statistical techniques used by researchers in the social and behavioral sciences. Major topics include frequency distributions, measures of central tendency and variation, regression and correlation, and hypothesis testing. A computer lab is required with this course. *Prerequisite: MTH 1750 or MTH 1550, grade "D" or better.*

P**SC 2223. Introduction to Political Science (II; 3)** This course acquaints students with political science as a discipline. Subfields will be introduced, and students will become familiar with terms and concepts, such as democracy and justice, fundamental to the study of politics, with principal methods of study, and with the basic scientific method as it applies to political science.

**PSC 2405. Introduction to Comparative Politics (I, II; 3)** This course is an examination of select democratic, post-communist and developing world political systems. Political systems in Africa, Asia, Europe and Latin American will be considered. *Equivalent to TAG OSS013.*

**PSC 3304. American State and Local Government (I - Even Years; 3)** Study of the development, structure, and functions of problem-solving governments in an evolving federal system. *Prerequisites: PSC 1100 and PSC 2223, or permission of the instructor. Equivalent to TAG OSS014.*

**PSC 3310. Public Policy Analysis (II - Odd Years; 3)** The current research literature in policy analysis is reviewed. The applications of policy analysis are illustrated by use of specific cases, methodological procedures in policy analysis are analyzed and critiqued, and opportunity is afforded for research design.

**PSC 3311. International Relations of African States (II; 3)** A consideration of inter-state relations among postcolonial African states, and the relations between them and the world's core states. The course will include undergraduate level theories of core/periphery relationships in the field of international relations.

**PSC 3343.The Politics of Food & Farming in Urban Communities (II; 3)** Study of the political institutions, actors, interests, and processes that characterize urban governments, with a focus on farming and food. *Prerequisites: PSC 1100, PSC 1120, or PSC 1140, or permission of instructor.*

**PSC 3351. The American Presidency (I - Even Years; 3)** A study of the institution and office of the presidency, with special emphasis on the interpretation of the office given to it by various presidents.

**PSC 3353. American Political Theory (I; 3)** An examination of leading American political beliefs and their adaptation in American political, social, and economic settings.

**PSC 3361. African American Politics (I; 3)** A course emphasizing the special problems of the African American politician and the special techniques and strategies of African American politics. The course will also emphasize the potential of African American politics.

**PSC 3362. Political and Social Theory (II - Odd Years; 3)** A systematic attempt to correlate the development of political, social, and economic thought from Plato to the 20th century. The contributions of individual writers are evaluated on the basis of selected readings.

**PSC 3365. Modern Political Ideologies (II; 3)** An examination of contemporary political beliefs and their development. Marxism and racism are considered as well as

the development of Third World political philosophies in the pre- and post-independence periods.

**PSC 3371. United States Foreign Policy (I; 3)** This course begins with a consideration of the constitutional provisions regarding the making of foreign policy and explores the sources, makers, and content of United States foreign policy, with special emphasis on the role of domestic policies in its formation and execution.

**PSC 3381. Constitutional Law (I - Even Years; 3)** A study of the Constitution in operation, emphasizing the role of the Supreme Court in the evolution of constitutional theory and practice.

**PSC 3390. Public Budgeting (I; 3)** An examination of the political and administrative processes of public budgeting as practiced by local, state, and national governments. Emphasis will be directed toward budgetary procedures, and the political variables impacting budgetary decisions in the public sector.

**PSC 3391. The American Legislature (I;3)** This course is an overview of the American national legislature. It will focus on the Congress as an institution, covering (1) its constitutional foundations, (2) its evolution and the role of important actors/interests since the founding, (3) the interaction of the executive, legislature and judicial branches and the larger political environment, and (4) legislative policy output.

**PSC 4450. Special Problems in Political Science (I, II; 3)** An opportunity for advanced students to work independently on research projects. *Prerequisite: Approval by department faculty.*

**PSC 4493. Legal or Public Administration Internship (I, II; 5)** This is a course for students planning a career in law or public administration, and who have not participated in the University Co-op program. It is designed to give students a realistic look into law or public administration as a career by participating in varied actual experiences offered by an attorney or an agency to which each student is assigned. In addition to on-site work, students meet with the instructor for a one-hour seminar each week. Enrollment is limited to seven students per semester.

**PSC 4503. Human Resource Management in the Public Sector (II; 3)** Studies staffing, career development, wages and salary administration, motivation and productivity, separation, personnel organization, and how workforce management contributes to organizational success in government agencies.

**PSC 4895. Senior Capstone Seminar (II; 3)** The senior capstone seminar provides political science majors with a comprehensive examination of the history, evolution and current state of political science as a social science discipline. In this process, students will consider the various subfields of political science. Students will design individual research projects within the structure of a seminar in which topic selection and appropriate research methods will be discussed. Required for all political science majors. *Prerequisites: PSC 3381 and Senior standing.*

## PSYCHOLOGY

**PSY 1100. Freshman Seminar in Psychology (I, II; 1)** General orientation to college and psychology as a profession. Emphasis is placed upon how psychologists answer questions, degree requirements, exposure to career and educational opportunities, and issues which need to be considered in psychology-related fields.

**PSY 1200. Introduction to Psychology (I, II; 3)** This course presents an introduction to the science of psychology and human behavior. The course aim is to explore the science based approach to psychology, applied theories such as learning and memory; sensation and perception; cognition; statistical analysis of behavior; social behaviors, emotions, and attitudes; personality; and abnormal behaviors. Psychology majors and minors are required to take this course as a prerequisite for all advanced courses in psychology. This course is open for non-majors and meets all general education requirements. *Equivalent to TAG OSS015.*

**CRJ/PSC/PSY/SWK/SOC 2206.Statistics for Social and Behavioral Sciences (I, II; 4)** This course provides students with an introduction to basic statistical techniques used by researchers in the social and behavioral sciences. Major topics include frequency distributions, measures of central tendency and variation, regression and correlation, and hypothesis testing. A computer lab is required with this course. *Prerequisite: MTH 1750 or MTH 1550, grade "D" or better.*

**PSY 2220. Human Growth and Development (I, II; 3)** Developmental processes from

conception through older adulthood. Analysis of the development of the individual from conception in physical, lingual, social, intellectual, and emotional areas. Emphasis is placed on behavioral changes taking place at various stages of the life cycle as functions of heredity and development. *Prerequisite: PSY 1200. Equivalent to TAG OSS048.*

**PSY 2310. Psychology of Exceptional Children (I; 3)** An analysis of the physical, mental and social factors which condition exceptional behavior in children as deviations from the normal patterns. An overview of current programs for the education of exceptional children is provided. *Prerequisites: PSY 1200 and PSY 2220.*

**PSY 2320. Abnormal Psychology (I; 3)** Study of the types, causes, diagnostic characteristics and treatments of mental disorders. Consideration will be given to minor and serious types of disorders and mental disturbances, as illustrated by case methods. *Prerequisite: PSY 1200. Equivalent to TAG OSS017.*

**PSY 2330. Psychology of Personality (II; 3)** A study of the fundamental factors underlying personality development and adjustment, especially among African Americans. Intensive analysis of the dynamics of adjustment will also be covered. *Prerequisite: PSY 1200. Equivalent to TAG OSS018.*

**PSY 2655. Drugs and Human Behavior (II; 3)** This course provides a multifactor perspective on the use and abuse of legal and illegal drugs, and their impact on an individual's physical, psychological, social behavior and family system. Additionally, this course will explore the historical antecedents, theories, research and treatment approaches to chemical dependency in the United States. *Prerequisite: PSY 1200.*

**PSY 3334. Psychological Measurement (II; 3)** An analysis of theoretical principles and assumptions basic to the measurement of human characteristics and behavior. Offers training in the selection and use of psychological tests, and practice in both group and individual testing. Prerequisites: PSY 1200 and SOC 2206 or an equivalent statistics course.

**PSY 3335. Principles of Learning (I; 3)** This course studies the basic principles of learning and the application of these principles to areas of human behavior. *Prerequisite: PSY 1200.*

**PSY 3380. Introduction to Counseling (I; 3)** This course is designed to provide junior psychology students with basic counseling techniques used particularly by transactional analysis, client-centered theory, existential counseling, rational emotion therapy and others. Emphasis will be placed on the philosophical approach and techniques basic to individual as well as group counseling techniques and conditions. *Prerequisites: PSY 1200 and junior or senior standing.*

**PSY 3385. The Psychology of Aging (II; 3)** This course focuses on the psychological aspect of aging, with an emphasis on the interaction of psychological, socio-cultural and biological aspects of the aging process. Special attention is given to the physical, emotional, intellectual and social aspects of late adulthood. *Prerequisite: PSY 1200 and 2220.*

**PSY 3410. Sensation and Perception (II; 3)** A review of the human sensory systems and an integration of sense processes with the principles of perception. Perception is viewed as an active process based on both innate and learned factors. Some attention is given to understanding illusions and the controversy of extrasensory perception. *Prerequisites: PSY 1200.*

**PSY 3420. Social Psychology (II; 3)** A study of the psychological dynamics involved in social attitudes and group relationships as they influence the behavior of the individual. *Prerequisites: PSY 1200. Equivalent to TAG OSS016.*

**PSY 3450. Research Methods (I; 4)** This course provides an introduction to psychological research techniques and methodology. Basic principles and procedures in the design, analysis, and write-up of research are covered. The student will write a research proposal using the most current APA style. *Prerequisites: PSY 1200 and SOC 2206.*

**PSY 3496. Field Experience I (I; 3)** This course provides opportunity for the student to enhance classroom education with observation of psychological activity in an organization serving social, mental health, educational, biological, developmental, or industrial/organizational psychology interests. Open only to junior and senior psychology majors. Must have departmental approval and faculty and agency

supervision. *Prerequisites: Junior standing in the psychology major, and a 2.5 or above GPA.*

**PSY 3497. Field Experience II (II; 3)** This course is a continuation of PSY 3496. The aim of the course is to offer students the opportunity to apply what they learned in the classroom to their field placements in the area of clinical psychology. Emphasis will be placed on the counseling approaches and techniques. *Prerequisite: PSY 3496.*

**PSY 4420. Physiological Psychology (II; 3)** A study of the relationship between physiological mechanisms and behavior. Major emphasis is given to the basic structure of the relationship of the nervous system and its interaction with various biochemical mechanisms affecting behavior. Topics include sensory processes, motor processes, and the bearing of biochemical and neuropsychological processes upon motivation, emotion, learning, and behavioral disorders. *Prerequisite: PSY 1200.*

**PSY 4450. Special Problems in Psychology (I, II; 3)** This course provides an opportunity for advanced students in psychology to work independently on a special problem(s) selected by the faculty member teaching the class. *Prerequisite: Junior or senior standing in the psychology major.*

**PSY 4495. Independent Study (I, II; 1-3)** This course is an in-depth independent study of an approved topic in psychology under the supervision of a psychology faculty member in the Department of Social and Behavioral Sciences. The topic selection is made by the student with written approval of the supervising faculty member. Periodic meetings, written and/or oral reports, and a final paper are required. *Prerequisites: Junior or senior standing and permission of the instructor prior to registration. Psychology majors only.*

**PSY 4895. Senior Capstone Seminar (II; 3)** This capstone course is designed to assess psychology majors' readiness for employment and/or graduate training. Emphasis is on the integration of learned knowledge acquired from psychology courses. Assignments include the completion of a written senior thesis and oral defense of the same, a senior project, or a psychology comprehensive examination. *Prerequisites: PSY 3450, SOC 2206 and senior standing in the psychology major.*

## SCIENCE

**SCI 3250. Scientific Writing (II, III; 3)** The course offers a focused writing experience in scientific writing practices, specifically those central to the production of lab reports and manuscripts in scientific fields. Production of figures and tables are included as is literature searching, citation methods, literature reviews, and poster development. This course meets the requirements for a 3250 writing intensive course. *Prerequisite: ENG 1102*

## SOCIAL WORK

**SWK 1100. Introduction to Social Work (I, II; 3)** The course introduces students to social work as a profession; practice settings for social workers are explored, and various practice roles are examined.

**SWK 2200. Introduction to Social Welfare (I, II; 3)** Examines the history and organization of social welfare in the United States; the historical and cultural foundations of how societies have developed social welfare services; and contemporary issues that may have some impact on social welfare services.

**CRJ/PSC/PSY/SWK/SOC 2206. Statistics for Social and Behavioral Sciences (I, II; 4)** This course provides students with an introduction to basic statistical techniques used by researchers in the social and behavioral sciences. Major topics include frequency distributions, measures of central tendency and variation, regression and correlation, and hypothesis testing. A computer lab is required with this course. *Prerequisite: MTH 1750 or MTH 1550, grade "D" or better*

**SWK 2310. Introduction to Social Work Research (On Demand; 3)** This Course will introduce students to the concepts and principles of social work research methodology. In this course students will explore scientific, analytic approach to building empirically based knowledge for social work practice. Students will learn both quantitative and qualitative research designs and methods to obtain diverse types of knowledge, including evidence-based interventions; Students will also become informed of researching, evaluating, and informing, social work policy and practice.

**SWK 2340. Cultural and Social Sensitivity (On**

**Demand; 3)** This course will give students a foundation in the awareness, knowledge, understanding, and skills needed to effectively carry out multicultural social work practice with culturally diverse populations. This course will explore the differences in communication styles and relevant experiences such as racism, classism, sexism, homophobia, heterosexism, ethnocentrism, gender and power, ableism, and ageism. Students will critically analyze social work practice and social welfare organizations in the framework of diversity, power, oppression, and inequalities. Students will demonstrate an understanding of the impact of diversity and equality on human systems, social policy, and social justice.

**SWK 3011. Human Behavior and the Social Environment I (I; 3)** Examines human development and social functioning from infancy through adolescence. Major theories on human development are presented; specialized content on cultural diversity and special populations is presented; and students are provided information on how the family, social networks, groups, and communications may influence human development and social functioning.

**SWK 3012. Human Behavior and the Social Environment II (II; 3)** Examines human development and social functioning from adolescence through adulthood. Major theories on human development are presented; specialized content on cultural diversity and special populations is presented; and students are provided information on how the family, social networks, groups and communities may influence human development and social functioning at each stage of development. *Prerequisite: SWK 3011.*

**SWK 3320. Social Services and Issues for Older Adults (I; 3)** Critically examines the social, psychological, and physiological aspects of aging; focuses on special problems of aging with a developmental disability and other disabilities that may occur with the aging process; identifies social services for the aged and the service delivery role of practitioners.

**SWK 3330. Social Work in Health Care Services (I, II; 3)** Examines current policies in service delivery; considers issues of interdisciplinary collaboration in health care, the impact of illness on family functioning, the availability of physical and mental health care services, and the ethical dilemmas of social workers in health care systems.

**SWK 3406. Social Welfare Policy and Services (II; 3)** Examines societal value orientations and influences on the formation of policies and programs, and the use of scientific knowledge and skill in policy analysis. Specific policies and programs are critically examined.

**SWK 4201. Generalist Practice I (I; 3)** This first course in the generalist practice is designed to help students develop and apply basic knowledge and skills in problem solving, communication techniques, individual and family needs assessments, planning implementation, evaluation, and termination of services intervention in practice with individuals and families. *Prerequisites: SWK 3011 and 3012, and must be an accepted Social Work major.*

**SWK 4202. Generalist Practice II (I; 3)** This is the second course in the generalist practice sequence. The course is designed to provide theory and skill development in group dynamics for generalists social work practice. Content focuses on group formation, communication, member roles, group functions and theories for understanding human behavior and the process of small group dynamics in the helping process. *Prerequisites: SWK 1100, 2200, 3011, 3012, and must be an accepted Social Work major.*

**SWK 4203. Generalist Practice III (II; 3)** This is the third course in the generalist practice sequence. This course introduces students to generalist practice intervention with organizations and communities. Students are exposed to various concepts and dynamics of intervention with these systems. Special attention is given to providing content that reflects treatment of ethnic minorities, women, and other disadvantage groups. *Prerequisites: SWK 4201, 4202, and must be an accepted Social Work major.*

**SWK 4420. Child and Family Services (II; 3)** Examines historical and current basis for policies, programs, and practices in child and family services. Considers the relationship among federal, state, and local laws which influence policy, and the impact on clients, social workers and responding social service systems.

**SWK 4595. Comprehensive Social Work Seminar (On Demand; 2)** This capstone course is taken in conjunction

with SWK 4596. The course is designed to provide an opportunity for field students to convene and discuss their field experiences, and includes the critical integration and demonstration of knowledge and skill acquired during their social work education. *Prerequisites: SWK 4496, and major in Social Work and/or with permission of instructor. Must be taken concurrently with SWK 4596 and can be taken concurrently with SWK 4012.*

**SWK 4596. Field Practicum (On Demand; 12)** This course is taken with SWK 4595. Students will have a weekly supervised field experience in an agency or social service organization approved by the Social Work Program. The field education experience provides opportunity for the student to learn and to apply acquired knowledge. Students are in the field four days a week and must participate in a concurrent weekly seminar. *Prerequisites: SWK 4201, 4202, 4203 and major in Social Work and/or with permission of the instructor.*

## SOCIOLOGY

**SOC 1105. Introductory Sociology (I, II; 3)** A study of fundamental principles of sociology. Basic concepts of social structure, processes, and interactions and an overview of the major theoretical perspectives and research methodologies used in analyzing social institutions. *Equivalent to TAG OSS021.*

**SOC 1111. Cultural Anthropology (II; 3)** This course focuses on theories and methods of cultural anthropology with examples from a worldwide sample of societies, including our own. It will include a survey of various institutions such as politics, religion, kinship, language, and art in various cultural contexts. *Prerequisite: SOC 1105. Equivalent to TAG OSS001.*

**SOC 1125. Social Problems (I, II; 3)** A critical analysis of selected contemporary social problems such as crime, population and environmental issues, mental and physical illness, minority relations, substance abuse, teenage pregnancy, family violence, and old age and retirement. A global approach will be used in exploring the scope and causes of, and solutions to, these problems. *Equivalent to TAG OSS025.*

**CRJ/PSC/PSY/SWK/SOC 2206. Statistics for Social and Behavioral Sciences (I, II; 4)** This course provides students with an introduction to basic statistical techniques used by researchers in the social and behavioral sciences. Major topics include frequency distributions, measures of central tendency and variation, regression and correlation, and hypothesis testing. A computer lab is required with this course. *Prerequisite: MTH 1750 or MTH 1550, grade "D" or better.*

**SOC 2230. Introduction to Gerontology (I; 3)** A comprehensive introduction to human aging with emphasis on its social and social psychological aspects. A review of current literature and research findings on aging. *Prerequisite: SOC 1105 or SOC 1125.*

**SOC 2800. Methods of Social Research (II; 4)** This course covers the major techniques social scientists use to answer empirical research questions. Major topics include conceptualization and measurement, sampling, research designs (i.e. surveys, experiments, single subject and qualitative), evaluation, and ethical issues in research. Students will design and conduct research using SPSS to organize and analyze data. A computer lab is required. *Prerequisite: SOC 2206 with a grade of "C" or better, and junior or senior standing.*

**SOC 3325. Race and Ethnic Relations (II; 3)** A systematic and critical analysis of racial and ethnic relations in contemporary societies. Major emphasis on the impact of cultural, historical, political, and economic forces on interaction among racial and ethnic groups in the United States. *Prerequisite: SOC 1105 or SOC 1125. Equivalent to TAG OSS024.*

**SOC 3333. Criminology (I; 3)** A study of the causative factors of criminal behavior, organized and professional crime, and crime repression. *Prerequisite: Six semester hours of sociology or permission of the instructor. Equivalent to TAG OSS034.*

**SOC 3343. Social Stratification (I; 3)** This course provides a systematic study of stratification systems in contemporary societies, with particular emphasis on the class system in the United States. It explores the various theories and perspectives on stratification systems, the distribution of wealth and income, and the patterns and processes of social mobility in the United States. *Prerequisites: SOC 1105 or SOC 1125, and junior standing or above.*

**SOC 3345. Sociology of Marriage and the Family (II; 3)** A systematic analysis of the

changing family in the United States and other societies. Topics will include courtship and marriage, marital gender roles, child rearing, marital dissolution, family diversity, and other issues associated with family relations in modern and postmodern societies. In addition, emphasis will be placed on the family's relationship to economic structures, political institutions, and belief systems. *Prerequisites: SOC 1105 or SOC 1125. Equivalent to TAG OSS023.*

**SOC 3370. The Family and the Aging Process (II; 3)** An exploration of the structural-functional and institutional framework of aging families. Topics will include the interaction of older parents and their children, family disorganization, health, widowhood, sexuality, and kinship ties in later life. *Prerequisites: SOC 2230.*

**SOC 3380. Minority Aging (I; 3) (Odd Years)** A study of the demographic, psychological, and socio-cultural aspects of aging in African American, Hispanic, and Native American populations in the United States. Focus on health and health care issues, retirement, income, formal and informal support, and other problems faced by these groups. *Prerequisite: SOC 2230.*

**SOC 3415. Juvenile Delinquency (I; 3)** This course will be overview of juvenile delinquency from a primarily sociological perspective. The course will address the nature and extent of delinquency, including definitions, history, distribution and measurement of juvenile delinquency. In addition, various theories of juvenile delinquency, issues of gender, and programs associated with the prevention and control of delinquency will be discussed. *Prerequisite: SOC 1105 or SOC 1125.*

**SOC 3510. Sociology of Deviance (II; 3)** This course will examine deviance and social control from a sociological perspective. Attention will be given to provide students with a clear and concise description and analysis of deviance as well as to interpret past and current social events/behavior using theories of deviance. The course will further investigate the interrelations between culture, race, power, identity information and social change as they influence who is defined as deviant and what actions/behaviors are labeled as deviant. *Prerequisites: SOC 1105 or SOC 1125.*

**SOC 3800. Sociological Theory (I; 3)** This course provides a critical exposition of the development of sociological thought from the eighteenth century to the present time. It covers all of the major schools of theory, including Marxism, functionalism, conflict theory, symbolic interactionism, critical theory, post-structuralism, and post-modern social theories. *Prerequisite: Junior standing or above.*

**SOC 4551. Sociology of Health and Illness (I; 3)** A critical analysis of the social organization of health care delivery systems and the social causes and distribution of health and illness in the United States. Alternative construction of health and illness and models of health care delivery systems will be explored. *Prerequisite: Junior standing.*

**SOC 4596. Internship in Sociology and Gerontology (I, II; 2-4)** Application of sociological and gerontological knowledge in various private and public social human services agencies, including aging agencies, government offices, and juvenile and criminal justice agencies. Internships are not permitted during the summer. *Prerequisites: Junior standing or above and permission of advisor.*

**SOC 4895. Senior Capstone Seminar (II; 3)** This is the required capstone for the sociology major. The course will review the major areas covered in the sociology curriculum. It will emphasize major topics in sociology including sociological theory, research, statistics, social stratification, race and ethnic relations, and family. Students will develop and complete a project that demonstrates their grasp of essential sociological principles and practices. *Prerequisite: SOC 2800, 3800, and senior standing.*

**SOC 4897. Independent Study (I, II; 1-2)** An in-depth study of an approved topic in sociology, criminal justice, or gerontology under the supervision of a faculty member in the Department of Social and Behavioral Sciences. The topic selection is made by the student with written approval of the supervising faculty member. Periodic written and/or oral reports and a final paper are required. Also open to criminal justice and gerontology minors. *Prerequisite: Senior standing.*

**UNIVERSITY SUCCESS SEMINAR**

**USS 1000. Undergraduate Success Seminar (I, II; 1)** This is a two-credit hour, hybrid format course that provides opportunities for students to learn and apply practical knowledge and skills required for success at the college-level. Topics include CSU resources, policies, and processes; utilization of technology; health and wellness; financial and information literacy, and the history of HBCU's, and CSU in particular, within their cultural and historical context. The course consists of a once per week 50-minute live seminar, completion of online coursework, and participation in qualifying campus events. This course is a General Education requirement for all first-year students.

## WATER RESOURCES MANAGEMENT

**WRM 2200. Introduction to Water Resources Management (I, II, III; 3)** Introductory course in water resources management designed to give students an interdisciplinary view of the nature of water as a resource. Topics include: Hydrologic Cycle, soil ecology, hydrogeology, irrigation and crop water requirements, water pollution and economics of water policy.

**WRM/AGR 2450. Soil Science (I, II, III; 4)** This course introduces students to soils; their formation, classification and survey. It covers physical, chemical, and biological characteristics; soil management and its role in crop production. Lab is required as part of the four hour course credit. Students are to register for both course and laboratory. Three hours lecture and two lab contact hours. *Prerequisite: CHM 1202, PHY 2612, and BIO 1500 or permission of the instructor.*

**WRM 3302. Water Resources Policy (II; 3)** An examination of major issues in water management and the development of policies at various levels of government that attempt to deal with those issues. Emphasis on the political aspects of policy development. Consideration of land use policy as it relates to water management issues. *Prerequisite: WRM 2200.*

**WRM 3306. Socio-Economic Issues in Water Management (I; 3)** A review of social, economic and other factors which influence the development of water management programs and the implementation of water management technologies. Problem solving in the selection and application of appropriate technologies given certain social and economic constraints. *Prerequisite: WRM 2200 or permission of the instructor.*

**WRM/AGR 3308. Environmental Law (II; 3)** A case by case study of state and federal legislation relative to water use. Federal laws relating to water and environment; Land use legislation as it impacts the management of water resources and environment is also considered. *Prerequisites: WRM 2200 or AGR 1150 or permission of the instructor.*

**WRM 3310. Streams and Lakes (II; 3)** Introduction to the physical, chemical and biological ecology of streams and lakes. Emphasis on the structure and functions of natural ecosystems and man's impact on his natural environment. Field laboratory experience includes the use of nets, seines, traps and chemical and electronic monitoring equipment and the analysis of ecological data. Three one hour lectures/one two hour lab. *Prerequisites: BI0 1500 and WRM 2200.*

**WRM 3311. Water Resources Economics (I; 3)** Principles of economics as applied to water supply and the regulation of water quality including cost-benefit analysis, pricing, discounting spillover effects, economic incentives, etc. *Prerequisites: ECO 2210 and WRM 2200.*

**WRM 3312. World Water Resources (II; 3)** A survey of world water resources by geographical area. An examination of the relationship of the availability of water resources to the political and economic stability of regions and nations. *Prerequisite: WRM 2200.*

**WRM/AGR 3330. Soil and Water Conservation (II; 4)** Hydrological processes in agricultural fields - rainfall, infiltration, evaporation, evapotranspiration and runoff; Ground Water Processes; Water conservation practices; Soil erosion due to rainfall, its effect on agricultural productivity and water quality-estimating soil loss from agricultural lands using Agriculture Research Service (ARS-USDA) models - Universal Soil Loss Equation (USLE) and its revisions; Practices to mitigate soil erosion; Design of grassed waterways, terraces and conservation structures; Wind erosion -estimation using ARS-USDA models and its mitigation; An examination of the federal, state and local organizations which carry out soil and water conservation

programs. Field experience includes on-site observation of soil and water conservation practices. Three hour lecture and one hour lab/field work. *Prerequisites: MTH 1750 and WRM 2200 or AGR 1150.*

**WRM/AGR 3335. Irrigation and Drainage (I; 3)** A first course in the study of irrigation and drainage and practices. Soil structure, soil moisture processes and infiltration; evapotranspiration processes and their applications in irrigation and drainage; Models for evapotranspiration and introduction to irrigation scheduling; Irrigation and drainage practices in different parts of the world; Introduction to on farm and main systems in large scale irrigation projects. Water control and distribution in large scale systems. Sprinkler irrigation for non-agricultural purposes and the on-site observation of irrigation and drainage systems in the area. *Prerequisites: MTH 1750 and WRM 2200 or AGR 1150.*

**WRM 3340. Hydrometry (II; 2)** Techniques for the measurement of water in the atmosphere, and surface and sub-surface media; Soil moisture estimation, humidity measurement; rainfall measurement using recording gages and remote sensing techniques; Discharge measurement in constructed systems - weirs and flumes; Stream flow measurement using current meters, electro-magnetic and acoustic instrumentation; Aquifer parameters estimation using drawdown tests; Accuracy of and errors in measurement; Assurance and control of quality of water data. One hour lecture/one two hour lab. *Prerequisites: WRM 3330.*

**WRM /GEO 3370. Introduction to Geographic Information System (I; 3)** Topics of instruction will include analyses of selected, spatially distributed information of natural resources and other societal parameters. Nature, characteristics, specification, types, acquisition, processing, organization, and management of spatial or geographic data. Application of the basic functional and analytical capabilities of GI systems using raster methods and vector methods. The course will include practical instruction on commonly used geographic information software (GIS). *Prerequisites: BUS 1500 or CPS 1110. Equivalent to OSS026 or permission of the instructor.*

**WRM 4402. Urban Water Problems (II; 4)** An examination of water problems faced by urban America and solutions to those problems. Urban Hydrology, Wastewater treatment, the supply of quality drinking water, storm water management, flood protection, water for recreation, urban fishing, economic development and infrastructure requirements as pertaining to urban areas and the integrated management. Water infrastructure rehabilitation assessment; Causative water and environmental factors on health. *Prerequisites: MTH 1750 and WRM 2200.*

**WRM 4403. Water Transportation Systems (II; 3)** A survey of water transportation principles and projects including deep and shallow draft ports, small boat harbors, locks and dams, and river control structures. The economic, physical and political aspects of transportation systems are emphasized. *Prerequisites: WRM 3306 and 3330.*

**WRM 4404. Water Resources for Recreation (II; 3)** A study of the use of water for recreational purposes. Concepts of leisure play and recreation are defined and related to recreation behaviors which are dependent upon water. Social, political, economic and environmental policies affecting the recreational use of water are reviewed and discussed. *Prerequisite: WRM 3306.*

**WRM/AGR 4406. Agricultural Development (I; 3)** The role of agriculture in the economic development in the world. The course examines theories of agricultural growth and agriculture policy issues, with extensive use of case studies. Emphasis will be placed on the use of economic theory and its application to specific problems in the field of agriculture. *Prerequisite: WRM 2200 or AGR 1150 or permission of the instructor .*

**WRM/AGR 4420. Irrigation Systems Design (II; 4)** An applied course in the design, of on-farm irrigation systems. Advanced evapotranspiration modeling and irrigation scheduling; Design and operational principles of surface, sprinkler and drip irrigation systems; Water losses in irrigation systems and the definitions of various efficiencies associated with on-farm and main irrigation systems. Hydraulic structures associated with distribution of water systems. On-farm application equipment selection and maintenance. Irrigation system performance and irrigation water management impacts on design; Introduction to irrigation water quality. Field

visits to sprinkler irrigation systems in the area. *Prerequisites: WRM/AGR 3335 or permission of the instructor*.

**WRM/AGR 4425. Agricultural Drainage Systems Design (II; 4)** An applied course in the design, construction and maintenance of drainage systems for agricultural fields. Surface drainage systems layout and design. Design of hydraulic structures associated with surface drainage systems - chutes, drops, outlet structures and culverts. Surface drainage systems in irrigated areas. Sub-surface system design principles. Steady state and unsteady state theories of tile drainage. Introduction to analysis of oxygen transport in root zone and the effect of submergence. Salt balance and water quality issues in subsurface drainage. System layout, construction materials and methods. Design of structures associated with subsurface drainage systems. Cost recovery of drainage systems and maintenance issues. Field visits to drainage systems in the area. *Prerequisite: WRM/AGR 3335or permission of the instructor*.

**WRM 4435. Soil and Water Pollution Control (II; 4)** An advanced course that deals with physical and chemical characteristics of pollutants in soil and water and their fate and transport; thermodynamic properties of organic and inorganic pollutants in soil and water; equilibrium partitioning of pollutants in the environment; air to water partitioning using Henry's Law; vapor pure liquid partitioning using Raoult's Law; soil-water partitioning using Freundlich, Langmuir and BET sorption isotherms; modeling fate and transport of pollutants in soil and water, non-aqueous phase liquids. Use of 1-D groundwater models such as CXTFIT; Groundwater contamination using CHEMFLO and MODFLOW; Overview of remedial technologies discussion on engineering controls such as pump and treat and soil washing, biological treatments such as bioremediation and phytoremediation; case study on non-point source pollution. *Prerequisites: ENE 3309 and ENE 3325.*

**WRM/GEO/GEL 4470. Applied Remote Sensing (II; 3)** Students will learn about different instrument systems attached to aircraft and satellites that collect environment data. Practical instruction on how the remotely acquired data sets are processed and interpreted using appropriate software will be given. Interpretation of multi-spectral scanners, RADAR and thermal imagery data; Data analysis for detection of changes; image interpretation; study of spectral characteristics of vegetation, soils, water, minerals, and other materials. Case studies will be presented for the different types of application. *Prerequisite: MTH 2501*.

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