

BIL 161 - Evolution and Biodiversity Laboratory - Spring 2022

<u>Week of:</u>	<u>Lab Topic:</u>
January 17	Observance of Dr. Martin Luther King Day – No labs this week
January 24 (Session 1)	Orientation and Introduction: <ul style="list-style-type: none"> • Lab Safety • The Scientific Method
January 31 (Session 2)	Natural Selection: A Simulation Quiz: 10 points Assignment due at end of lab: Natural Selection Analysis (20 points)
February 7 (Session 3)	Plant Form and Function: Introduction & Protocol Practice Quiz: 10 points Assignment: Literature search (due next week)
February 14 (Session 4)	Plant form and Function: Planning a Research Project Quiz: 10 points Assignment DUE: Literature search synopsis (20 points) Assignment DUE: Team Research Protocol (20 points)
February 21 (Session 5)	Plant Form and Function: Data Collection Assignment due at end of lab: Completed Data spreadsheet: 10 points
February 28 (Session 6)	Plant form and Function: Data Analysis and PPT Preparation Quiz: 10 points Assignment due at end of lab: Completed Data Analysis Worksheet (10 points) Assignment due at end of lab: Figure of summary data (15 points)
March 7 (Session 7)	Plant Form and Function: Research Symposium (PPT) (Presentation: 25 points), Peer PowerPoint Assessments (10 points)
March 14 - 18	SPRING BREAK: no lab meetings
March 21 (Session 8)	Biodiversity: Introduction Quiz: 10 points Assignment due next lab session: Literature Search (25 points)
March 28 (Session 9)	Systematics and Taxonomy Assignment DUE: Literature search synopsis (25 points) Quiz: 10 points Assignment due at end of lab: Taxonomic Key of Caminalcules (5 points) Assignment due at end of lab: Phylogenetic Tree of Caminalcules (5 points)
April 4 (Session 10)	Biodiversity: Tools and Techniques, Protocol Practice Quiz: 10 points Assignment due at end of lab: Research Protocol (25 points)
April 11 (Session 11)	Biodiversity: Data Collection Assignment due at end of lab: Completed Data spreadsheet: 15 points
April 18 (Session 12)	Biodiversity: Data Collection Assignment due at end of lab: Completed Data spreadsheet: 15 points
April 25 (Session 13)	Biodiversity: Data Analysis and Poster Preparation Quiz: 10 points Assignment due at end of lab: Graph of summary data (20 points)
May 4 - 11 (Session 14)	Biodiversity: Research Symposia (see schedule linked in the online course syllabus) Assignment: Poster Presentation (25 points) Assignment due at end of session: Peer Poster Assessments (10 points)

Course web site: www.bio.miami.edu/dana/161 has links to all course information

LABORATORY POLICIES

LAB MANUAL

Bring your electronic device of choice to lab each week for access to the **online lab manual** linked here:
www.bio.miami.edu/dana/161/manual.html

You are required to read the lab manual and all other assigned material before you come to lab. At least part of each week's quiz will cover what you are about to do in lab.

TEAM RESEARCH PROJECTS

Students will be assigned to teams of four and will perform two research projects during the semester. These will culminate in research symposia (Powerpoint or Poster; your instructor will provide details).

ATTENDANCE AND MAKE UPS

Because you will be working in teams, attendance is mandatory. **DO NOT MISS LABORATORY.**

If you must miss a lab due to medical, religious, emergency or other university-sanctioned reason, you must notify your instructor well in advance so that arrangements can be made for you to contribute appropriately to your team's project. Make up work must be arranged between you and your lab instructor, and will be assigned at the instructor's discretion.

NATURAL SELECTION SIMULATION	points	due:
Data Analysis	20	Session 2
PLANT FORM AND FUNCTION PROJECT	Points	due
Literature search/paper synopsis	20	Session 4
Team Research Protocol	20	Session 4
Data Spreadsheet (completed)	10	Session 5
Data Analysis Worksheet (completed)	10	Session 6
Summary data figure/graph	15	Session 6
Team Research Presentation (ppt)	25	Session 7
Peer PowerPoint Assessment	10	Session 7
Quizzes	40	10 pts/quiz
Lab participation	60	10 pts/week
Discretionary points	20	
TOTAL	250	
BIODIVERSITY PROJECT	points	
Literature search/paper synopsis	25	Session 9
Systematics Taxonomic Key	5	Session 9
Systematics Phylogenetic Tree	5	Session 9
Team Research Protocol	25	Session 10
Data Spreadsheet (completed)	15	Session 12
Summary data figure/graph	20	Session 12
Team Research Presentation (ppt)	25	Finals period
Peer PowerPoint Assessment	10	Finals period
Quizzes	40	10 pts/quiz
Lab participation	60	10 pts/week
Discretionary points	20	
TOTAL	250	

LABORATORY EQUIPMENT

The instructor(s) will be responsible for checking each lab station before any team members are allowed to leave the lab. If a lab station is left untidy, your Lab Instructor will dock points from each team member.

ACADEMIC ETHICS

Academic dishonesty (plagiarism, cheating, etc.) will not be tolerated. Any student suspected of academic/intellectual dishonesty will be reported to the University Honor Council. If found guilty, student will receive and "F" for BIL 161.

Course web site: www.bio.miami.edu/dana/161 has links to all course information