



# EXPLORING CAREER OPPORTUNITIES AT THE CSIR



science & innovation

Department:  
Science and Innovation  
REPUBLIC OF SOUTH AFRICA





# CAREERS AT THE CSIR

The Council for Scientific and Industrial Research (CSIR) is an **EPIC** African institution that solves African challenges and develops globally relevant capabilities. The CSIR pursues **E**xcellence, celebrates **P**eople, personifies **I**ntegrity and welcomes **C**ollaboration. We use science, technology, and innovation to respond to the triple challenge of unemployment, poverty and inequality in our country. To achieve these, highly skilled people are required – which is why we are always looking for bright, passionate people to embark on this journey with us.

The positioning statement of the CSIR, 'Touching lives through innovation', expresses the unshaken resolve of the CSIR to harness the power of science, engineering, technology and innovation for building a prosperous future for South Africa. However, this future can only materialise if more young people move into careers in science, engineering and technology. The CSIR contributes to this effort by providing opportunities for skills development and career progression through creating a vibrant research culture.




Choosing the right career is a critical step in your life. Your career choice will determine where you go, what you learn and who you meet. It will allow you to unleash your full potential and fulfil your passion. It is therefore important to make informed decisions. When choosing your career path, you have to ask yourself: What do I want from a career? What do I expect? What is it that I am looking for in an employer?




In this career booklet, we highlight some of the careers available at the CSIR, the academic institutions offering the relevant qualifications, as well as the required characteristics to ensure that the career you choose is a perfect fit.







# CAREER





CAREER	DESCRIPTION	CHARACTERISTICS	WHERE TO STUDY	RELATED CAREERS
<b>AERONAUTICAL ENGINEER</b> 	<p>Researches, designs and develops aircraft and spacecraft. They also perform fundamental research that relates to aerodynamics, aircraft structures and related materials. They are involved in the optimisation of aircraft components, such as wings, engine inlets, tail sections and fuselages.</p>	<p>Aeronautical engineers typically enjoy solving complicated problems. They have an aptitude for mathematics and science and are creative. The type of work brings a fair amount of challenges, so perseverance is key.</p>	<p>The University of the Witwatersrand is the only institution in South Africa that offers a full aeronautical engineering undergraduate degree. Other universities, such as the University of Pretoria, offer mechanical engineering with some aeronautical subjects included in an undergraduate degree.</p>	<p>Mechanical engineer and/or industrial engineer.</p>
<b>ANALYTICAL CHEMIST</b> 	<p>Performs tests and other procedures on compounds to discern their nature. They typically do this work in laboratories, where they operate and maintain instruments such as spectrometers and chromatography instruments.</p>	<p>To be an analytical chemist, one needs to have an inquisitive mind and be keen to explore and solve problems. You need to be organised and have an acute interest in technology.</p>	<p>The majority of South African tertiary education institutions offer qualifications in chemistry or analytical chemistry.</p>	<p>Quality assurance manager in the food industry and/or production line manager in the petrochemical industry.</p>
<b>BEHAVIOURAL SCIENTIST</b> 	<p>Studies, analyses and draws actionable conclusions about how people think, act and react to a wide variety of situations in various fields such as the military, police, business organisations and many more.</p>	<p>To work as a behavioural scientist one must get along well with people from diverse backgrounds and also have a lot of patience.</p>	<p>Most South African universities offer degrees in psychology, sociology and anthropology.</p>	<p>Human resource practitioner, corporate psychologist, sociologist and/or anthropologist.</p>

CAREER	DESCRIPTION	CHARACTERISTICS	WHERE TO STUDY	RELATED CAREERS
<b>BIOCHEMIST</b> 	<p>Explores the chemical processes within, and related to, living organisms. They work in laboratories to bring together biology and chemistry to solve problems in the biotechnology and related fields.</p>	<p>To qualify as a biochemist, one needs to obtain good grades in mathematics, as well as physical and life sciences in matric. For undergraduate studies, one needs to take at least one of the following subjects as a major: Biology, microbiology or biochemistry.</p>	<p>The majority of South African tertiary education institutions offer science degrees.</p>	<p>Structural biologist, biotechnologist, medical biochemist, protein biochemist, application specialist for equipment or consumable supplies and/or laboratory manager.</p>
<b>BIOENGINEER</b> 	<p>Applies the intersect of engineering, science, biotechnology, chemistry, nanotechnology and so forth, to design and manufacture products.</p>	<p>Strong abilities in mathematics and science are required. Subjects such as computer science and biology are also useful, but not essential.</p>	<p>Most South African universities offer a BEng degree in electronic engineering. It is important though to choose a university with a strong engineering faculty that allows for specialisation in bioengineering. Some examples are the University of Pretoria, University of Cape Town and Stellenbosch University.</p>	<p>Electronic engineer, biomedical scientist and/or medical doctor.</p>
<b>CHEMICAL ENGINEER</b> 	<p>Concern themselves with the practical design and operation of equipment used in making new products or chemicals, as well as streamlining existing production processes.</p>	<p>Chemical engineers should be extremely curious, coupled with a healthy interest in how processes work and products are developed. Excelling in mathematics, physics and chemistry is a must.</p>	<p>Chemical engineering is offered at most universities in the country, as well as some universities of technology.</p>	<p>Chemist, process designer and/or materials scientist.</p>



CAREER	DESCRIPTION	CHARACTERISTICS	WHERE TO STUDY	RELATED CAREERS
<b>CIVIL ENGINEER</b> 	Civil engineers design, construct and maintain the built environment infrastructure.	As a civil engineer, one needs to be innovative, be willing to work hard and continuously develop their skills.	Most South African universities and universities of technology offer civil engineering programmes.	Structural engineer.
<b>COASTAL ENGINEER</b> 	Studies the ongoing processes and construction within the coastal zone. The field involves aspects of nearshore oceanography, marine geology and civil engineering, often directed at combating erosion of coasts or providing navigational access.	One must have problem-solving skills, be a logical thinker and have strong abilities in subjects such as mathematics, applied mathematics and physical science. Most importantly, one should have a love for the sea and being outdoors.	The Stellenbosch University is the only university in South Africa offering specialisation in coastal engineering.	Marine engineer and/or oceanographer.
<b>COMPLIANCE MANAGER</b> 	A compliance manager's primary function is to ensure that the company operates in a legal and ethical manner, while meeting its business goals. A person in this role is responsible for developing compliance programmes aimed at helping the company to comply with the law, industry standards, rules and codes that are applicable to the business of the company. This also includes reviewing company policies and advising management on possible compliance risks.	Good knowledge of the law, strong legal interpretation and application skills. One should also possess strong oral and written communication skills, be highly analytical with strong attention to detail and a determination to find facts. It is important to be resilient and a good negotiator, as part of this role is convincing people to do things the right way, even if the right way may be time-consuming.	Several institutions in South Africa offer an undergraduate degree in law and risk management. A few postgraduate programmes specialising in compliance or risk are also available at these universities.	Risk management manager and/or ethics manager.



CAREER	DESCRIPTION	CHARACTERISTICS	WHERE TO STUDY	RELATED CAREERS
<b>COMPUTER SCIENTIST – HIGH PERFORMANCE COMPUTING</b>  	Helps researchers to understand complex data sets by using software to visualise them.	You should enjoy spending long hours behind a computer and be good at problem-solving and logical reasoning.	Most South African universities offer courses in computer science.	Software engineer, software developer and/or business analyst.
<b>DATA SCIENTIST</b>  	Uses their analytical skills to find and merge different data sources, analyse them and formulate them in such a way that people understand their results.	To become a good data scientist, one needs strong technical skills such as mathematical modelling and algorithm design. You also need to be curious and willing to continuously learn and change with society if you want to stay relevant.	Most South African universities offer degrees in computer science, with Honours and Masters' degrees in data science or related disciplines such as machine learning, data mining and artificial intelligence. The Sol Plaatje University in Kimberley in the Northern Cape offers an undergraduate programme in data science.	Risk analyst (banking and insurance), scientific informaticist (biological patterns, chemical structure modelling) and/or academic or researcher.
<b>ELECTROMECHANICAL ENGINEER</b>  	Electromechanical engineers bridge the gap between two disciplines (mechanical and electrical engineering) that often work together.	You must have an aptitude for mathematics and physics, love challenges and have a great deal of persistence.	Currently, the University of Cape Town is the only tertiary education institution to offer a degree course in electromechanical engineering in South Africa. However, mechatronics engineering is a very similar field and is widely offered at many South African universities.	Mechanical engineer and/or electronic engineer.









CAREER	DESCRIPTION	CHARACTERISTICS	WHERE TO STUDY	RELATED CAREERS
<b>ENVIRONMENTAL SCIENTIST</b> 	<p>Applies science to improve the understanding of the causes and drivers of air pollution, as well as the study and discovery of means to mitigate the negative effects of climate change. This generally involves collecting data on the sources of pollution emissions and quantifying the impacts on air quality and on people.</p>	<p>Environmental researchers need to have a keen interest in the environment, good communication skills and the ability to work well with others.</p>	<p>Degrees in environmental science are offered at most South African universities.</p>	<p>Environmental engineer, climate specialist and/or geoscientist.</p>
<b>ENZYMOLOGIST</b> 	<p>Studies and characterises properties of enzymes and how these function in biological systems, with an emphasis on translating these into products and solutions for research, industry and health.</p>	<p>To succeed as an enzymologist you need good technical acumen. You have to develop dynamic problem-solving skills to formulate solutions in response to a multitude of challenges.</p>	<p>Most universities in South Africa offer a BSc in biochemistry or biotechnology.</p>	<p>Molecular biologist, proteomicist and/or protein biochemist.</p>





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<b>FINANCE MANAGER</b> 	<p>A business partner supporting the organisation with financial information, analysis and advice for strategic decision-making, providing input into the strategy, identification of business opportunities, feasibility determination and impact of changes in strategy. Overall accountable for financial management, including monitoring and evaluation of all financial key performance indicators and the management and development of the Finance team. Responsibility to provide input to and implement initiatives by CSIR management teams.</p>	<p>Analytical thinking, problem-solving and advanced numerical skills, attention to detail and accuracy, organisational skills, ability to assess financial risks, recommend and implement appropriate control systems, analysis, interpretation and presentation of financial data, relationship management, excellent communication skills, ability to work in a team, and ethical behaviour.</p>	<p>BCom degrees are offered at most accredited universities in South Africa.</p> <p>Professional registration with the Chartered Institute of Management Accountants and the South African Institute of Chartered Accountants is beneficial to qualified accountants.</p>	<p>Management Accountant, audit professional at auditing firms, accounting or auditing lecturer, tax specialist, financial reporting framework specialists, Chief Financial Officer and/or Group Finance Manager.</p>
<b>GEOGRAPHIC INFORMATION SYSTEM (GIS) SPECIALIST</b> 	<p>GIS specialists visualise, analyse and interpret data to understand relationships, patterns and trends.</p>	<p>You need to have a good understanding of geography, mathematics, physics and statistics.</p>	<p>Learners can study at any university in South Africa. Some universities offer GIS as part of geography, surveying or environmental sciences.</p>	<p>A GIS specialist can work for government departments, local authorities, state-owned entities, private companies, mining houses and academia.</p>

CAREER	DESCRIPTION	CHARACTERISTICS	WHERE TO STUDY	RELATED CAREERS
<p><b>HUMAN CAPITAL MANAGER</b></p> 	<p>A human capital manager advises the management team how to strategically manage people as business resources. This includes recruiting and hiring employees with specific skill sets to meet the company's current and future goals, coordinating employee benefits and suggesting employee training and development strategies. Human capital advises managers on many issues related to employees and how they help the organisation achieve its goals, as well as advising and creating awareness of labour legislation among other things.</p>	<p>As a human capital manager, you need to be people and employee oriented, be a great communicator, be aware of ethical responsibilities, develop outstanding leadership and conflict management skills.</p>	<p>Learners can study towards a Bachelor of Commerce in Human Resource Management or related diploma or degree at any university in South Africa.</p>	<p>Human resources manager, employee relations manager, labour relations manager, payroll manager, recruitment specialist, talent manager and/or training and practitioner.</p>
<p><b>INFORMATION SECURITY ENGINEER</b></p> 	<p>An information security engineer develops, monitors, evaluates and maintains systems and procedures to protect identified networks and systems from unauthorised access.</p>	<p>You need to have a passion for the development of security measures and the patience to educate people on how to protect themselves against cyber criminals who employ tactics that have not previously been thought of.</p>	<p>Information security engineering can be studied at various South African universities, such as the universities of Pretoria, Johannesburg and Cape Town, as well as the Cape Peninsula University of Technology, Stellenbosch University and the Nelson Mandela Metropolitan University.</p>	<p>Security architect, incident responder, security consultant, security analyst, computer forensics expert, security specialist and malware analyst.</p>




CAREER	DESCRIPTION	CHARACTERISTICS	WHERE TO STUDY	RELATED CAREERS
<b>LASER PHYSICIST</b> 	<p>Designs innovative laser systems for a variety of applications in sectors ranging from industry, to medicine, defence and communications.</p>	<p>Physicists are curious about how things work and why they work in a specific way. To specialise in the area of laser beams, one needs a good understanding of photonics.</p>	<p>Stellenbosch University and the universities of the Witwatersrand and KwaZulu-Natal offer courses that specialise in lasers.</p>	<p>Computer programmer, astronomer and mathematical modeller.</p>
<b>MATERIALS ENGINEER</b> 	<p>Uses the huge fundamental base of knowledge on materials and materials processing to develop properties and new materials suited to specific applications, for example, using titanium powder to make industrial components such as valves.</p>	<p>An aptitude for mathematics, physics, chemistry, design and engineering is required. You need to be an analytical thinker and be system oriented.</p>	<p>Various South African universities offer degrees in metallurgy and materials engineering. Students can also follow a general science track by acquiring a BSc in Physics or Chemistry at any university and following this up with a specialisation in materials engineering at Stellenbosch University or the University of Cape Town.</p>	<p>Lecturer, materials consultant to industry and research manager.</p>
<b>METEOROLOGIST</b> 	<p>Collects and analyses atmospheric data on, for instance, wind, air pressure and humidity to predict weather patterns. These forecasts are needed by industries, farmers, event planners and the general public.</p>	<p>To work as a meteorologist in general, you need to love the natural environment, understand how it works and have an aptitude for working with large datasets. You also need to take mathematics and physics at university.</p>	<p>The University of Pretoria offers a degree in meteorology, while the University of Cape Town offers degrees in ocean and atmosphere sciences. The Universities of the Witwatersrand and Venda, as well as the North-West University offer postgraduate degrees that include meteorology-related topics.</p>	<p>Atmospheric modeller, weather forecaster.</p>

CAREER	DESCRIPTION	CHARACTERISTICS	WHERE TO STUDY	RELATED CAREERS
<b>MICROSCOPIST</b> 	<p>Microscopists support almost every field of science. In the healthcare industry, they may identify abnormal cells or disease-causing pathogens in tissue, while those who support environmental science may seek toxins or small organisms in water samples.</p>	<p>These professionals pay attention to detail and have a genuine curiosity for science and a strong commitment to customer satisfaction, collaboration and team work. They have good communication skills and the ability to work in a fast-paced environment.</p>	<p>A degree in natural sciences or engineering from universities and universities of technology can provide the basic background needed to become a microscopist.</p>	<p>Material scientist, physicist, chemical and metallurgical engineer, polymer technologist and biologist.</p>
<b>OCEANOGRAPHER</b> 	<p>A scientist who studies the ocean. The scope of the studies includes the geology of the sea floor and the physical properties within the ocean, the ecosystem dynamics, ocean currents and waves.</p>	<p>An individual should have a love for the ocean and be interested in science. A sense of curiosity about the Earth system and how the land and ocean interact is imperative - being able to swim is not.</p>	<p>The University of Cape Town and the Nelson Mandela Metropolitan University are some of the universities offering oceanography related qualifications in South Africa.</p>	<p>Marine biologist, chemical oceanographer, marine physicist and climatologist.</p>
<b>PHOTOCHEMICAL MODELLER</b> 	<p>Simulates how atmospheric pollutants interact through chemistry involving radiation from the sun, and how these are dispersed in space over time to affect air quality.</p>	<p>One needs to be able to grasp computer programming, because a lot of time is spent working with data and developing models.</p>	<p>BSc and MSc (Environmental Science) qualifications which can be obtained at most universities in South Africa.</p>	<p>Air quality modeller and atmospheric scientist.</p>

CAREER	DESCRIPTION	CHARACTERISTICS	WHERE TO STUDY	RELATED CAREERS
<b>PHYSICIST – QUANTUM OPTICS RESEARCH</b> 	<p>Uses their knowledge of the fundamental laws of nature to develop new technological innovations. This includes research into the quantum control of atoms and molecules, developing quantum control applications of trapped ions and ultrafast pulsed lasers.</p>	<p>Physicists must be driven by a curiosity about the forces of nature and how it works, believe in the spirit of exploration, and have patience, coupled with discipline.</p>	<p>Most universities in South Africa offer both undergraduate courses and postgraduate degrees in physics.</p>	<p>Astrophysicist, photonics researcher, nuclear engineer.</p>
<b>PLANT ECOLOGIST</b> 	<p>Studies the diversity of plants in an ecosystem.</p>	<p>A love of the outdoors and plants, and an interest in and understanding of agricultural requirements to cultivate indigenous species are essential.</p>	<p>Most universities in South Africa offer undergraduate and postgraduate courses in botany and ecology.</p>	<p>Agricultural specialist, conservationist.</p>








CAREER	DESCRIPTION	CHARACTERISTICS	WHERE TO STUDY	RELATED CAREERS
<p><b>PROCUREMENT PRACTITIONER</b></p> 	<p>Procurement practitioners establish and maintain day-to-day procurement activities on operational and transactional levels of the organisation. They also source goods and services; review and manage existing supplier relationships; document and assess internal stakeholders' business and sourcing objectives; collect macro- and micro-level market intelligence and analyse spend data; determine the total value of identified commodities and report accordingly to management; manage procurement transactional services, ensuring reduction in purchase order cycle times and tracking supplier performance against target; manage procurement activities throughout the purchasing and supply chain; and report relevant management information accurately and timeously.</p>	<p>Good report-writing and problem-solving skills, high degree of accuracy and attention to detail. Good interpersonal skills, excellent communication skills and strong customer service focus. Negotiation skills.</p>	<p>Most universities in South Africa offer a Bachelor's degree in supply chain management or equivalent qualification.</p>	<p>Procurement practitioner, supply chain officer and/or supplier registration officer.</p>

CAREER	DESCRIPTION	CHARACTERISTICS	WHERE TO STUDY	RELATED CAREERS
<b>ROBOTICS ENGINEER (ROBOTICIST)</b> 	Combines science, engineering and art to design and develop robots for industry and various sectors.	Engineers who work in the field of robotics constantly attempt to break new ground. They need to be resilient, with an ability to solve problems and a willingness to continuously improve the specialist skills needed for their focus area through reading and communicating with their peers.	If interested in robotics, start with a degree in mechanical engineering, which is offered by most South African universities. In your Honours year, choose your project topic in robotics and add as many computer programming and mathematical studies during your degree.	Computer scientist, mechanical engineer, electrical engineer, mechatronics engineer and computational neuroscientist.
<b>SAFETY, HEALTH, ENVIRONMENTAL AND QUALITY (SHEQ) OFFICER</b> 	The SHEQ officer is responsible for reviewing, evaluating and analysing work environments and designing programmes and procedures to control, eliminate and prevent disease or injury caused by chemical, physical and biological agents or ergonomic factors; and ensuring the outputs of a company's research is of a high quality.	To be a great SHEQ officer, the essential qualities and skills are comprehensive knowledge of health and safety rules and regulations, attention to detail to spot various hazards and complete investigations, strong writing skills for creating reports and policies, diplomacy and discretion, as well as robust negotiation and influencing and facilitation skills.	Various institutions offer qualifications in safety management. To gain membership with a professional body such as the South African Institute of Occupational Safety and Health, you will need an accredited certificate at National Qualifications Framework level 5 or equivalent, as well as some work experience under your belt.	Safety officer, SHEQ officer, safety and regulatory compliance officer and/or occupational hygienist.
<b>SOFTWARE ENGINEER</b> 	Applies engineering principles within a digital space. The work involves design, conceptualisation, creation, innovation and a strong focus on engineering development through coding.	To be a great software engineer, one needs to be passionate, patient, curious, innovative and a problem-solver.	The basic degrees are in electronic and computer engineering. These courses can be studied at many universities across South Africa.	Computer scientist, mathematician, physicist, programmer and/or systems engineer.



CAREER	DESCRIPTION	CHARACTERISTICS	WHERE TO STUDY	RELATED CAREERS
<p data-bbox="148 164 392 252"><b>SCIENCE COMMUNICATIONS PRACTITIONER</b></p> 	<p data-bbox="432 164 683 1441">A science communications practitioner develops marketing and promotional content for the organisation. As a science communications practitioner, one must consult with researchers and other organisational leaders to craft messaging, marketing strategies, communication plans and social media content and engage with media with the main objective of raising the company's profile and positively maintaining its reputation. Science communication practitioners often specialise in one area of communications: branding, marketing, public relations, social media, internal communications, corporate communications and so forth, but, in most cases, communication practitioners are generalists who provide overall communications support for an organisation's marketing and communication strategy.</p>	<p data-bbox="699 164 948 831">Science communication practitioners are very creative and innovative as they must package content for different communication channels. They are great at establishing and nurturing relationships as they deal with different stakeholders daily, and they also engage with media to pitch for content. They are strategic problem solvers as they must manage the reputation of the organisation when there is a crisis that is likely to impact on the image of the company.</p>	<p data-bbox="967 164 1211 509">All the universities in South Africa – one can choose any of the following qualifications: communications, journalism, marketing or public relations.</p> <p data-bbox="967 421 1211 509">Some private institutions also offer these qualifications.</p>	<p data-bbox="1233 164 1471 284">Public relations, media relations, corporate communication and/or internal communication.</p>

CAREER	DESCRIPTION	CHARACTERISTICS	WHERE TO STUDY	RELATED CAREERS
<b>STATISTICIAN</b> 	<p>Uses statistical methods to collect and analyse data to help solve real-world problems in business, engineering, healthcare and other fields. They decide what data are needed to answer specific questions or problems, determine methods for finding or collecting, as well as analysing and interpreting the data.</p>	<p>Statisticians should have strong analytical and mathematical skills to enable them to understand problems, identify possible solutions and gather the tools (materials and methods) required to get to those solutions.</p>	<p>At most South African universities, students will start with a BSc course, which includes linear algebra, calculus, experimental design, survey methodology, probability and the theory of statistical inference. Students then specialise in Statistics when doing their Honours, Master's and PhDs.</p>	<p>Lecturer in statistics, statistician in the banking and insurance industry and/or actuary.</p>
<b>STRUCTURAL BIOLOGIST</b> 	<p>Researches the molecular structure of biological macromolecules, especially proteins and nucleic acids, how they acquire the structures they have and how alterations in their structures affect their function. Structural biology is a branch of molecular biology, biochemistry and biophysics.</p>	<p>This career requires inquisitiveness and dedication. Moreover, you have to be nimble with your hands as high-throughput microarraying is somewhat of an art.</p>	<p>At most South African universities, students will start with a BSc degree and then specialise when doing their Honours, Master's and PhDs in various different fields to equip them to work as structural biologists. Many of these courses are offered by departments of biochemistry.</p>	<p>Molecular biologist, biologist and/or biochemist.</p>

CAREER	DESCRIPTION	CHARACTERISTICS	WHERE TO STUDY	RELATED CAREERS
<b>TRANSPORT ECONOMIST</b> 	Studies the movement of people and goods over space and time and how scarce resources are expedited and allocated in the transport sector to positively impact transport activities on society, the environment and the economy.	For this career, a strong background in statistics and econometrics is required. You should also have an analytical mind.	Transport studies can be done at local universities such as the Universities of South Africa, Johannesburg, Cape Town, Stellenbosch and North-West.	Public sector analyst, policy analyst, transport manager, public transport specialist, fleet controller, transport regulator, transport policy specialist, business logistics practitioner, as well as careers in the aviation, roads, maritime, pipeline and rail sector.
<b>URBAN AND REGIONAL PLANNER</b> 	Guides the development of neighbourhoods, towns, and regions by applying conceptual, analytical, communication and technological skills to achieve spatial outcomes such as more equitable, sustainable and productive cities or thriving rural regions.	An urban and regional planner needs to be able to grasp spatial inter-relations and implications of major development challenges, as well as the wide range of economic, engineering, social, legal and procedural, land development and environmental aspects at play within an area.	Accredited undergraduate or postgraduate qualifications are available at a range of universities throughout the country. These will qualify one for a professional registration with the South African Council for Planners.	Urban designer, public policy analyst, environmental scientist, civil engineer and/or property developer.
<b>WASTE MANAGEMENT RESEARCHER</b> 	Develops waste and pollution reduction solutions through directed research to support government, society and industry in decision-making.	An inquisitive mind, an eye for detail and a positive attitude are required.	Most South African universities offer degrees in environmental management. Once students develop key areas of interest in this broad field of study, they may opt to pursue specialisation.	Waste treatment scientist, environmental researcher and/or environmental economist.

# OPPORTUNITIES

The CSIR offers many opportunities to help you on your journey towards achieving your career aspirations. These opportunities are available for students who meet the requirements.

	CSIR BURSARIES	DSI/CSIR INTER-BURSARY SUPPORT PROGRAMME	CSIR INTERNSHIPS	CSIR STUDENTSHIPS
<b>Definition</b>	The CSIR bursary is funding awarded to full-time undergraduate and postgraduate students for the achievement of an undergraduate or postgraduate degree issued by an accredited or registered formal institution of learning. The CSIR does this with the view of ensuring that, when the studies are completed, the person will add value to the organisation.	The Inter-Bursary Support (IBS) programme is funded by the Department of Science and Innovation (DSI). The IBS is funding awarded to postgraduate students with the view of building high-end skills to support capacity development in key strategic areas identified by the DSI.	The CSIR internship programme is a work-based programme offered to graduates to achieve increased understanding of the job or work context or improved performance or skills related to their field of study.	The studentship programme enables Masters' and doctoral students to obtain their qualification based on the research work that is aligned to the CSIR research projects. The programme is aimed at increasing research output at the CSIR, while simultaneously providing students with the opportunity to obtain a Master's or doctoral degree.

	CSIR BURSARIES	DSI/CSIR INTER-BURSARY SUPPORT PROGRAMME	CSIR INTERNSHIPS	CSIR STUDENTSHIPS
<b>Who qualifies?</b>	<ul style="list-style-type: none"> <li>South African citizens;</li> <li>Students studying full-time towards a BSc, BEng, BSc Honours or BTech, MSc and PhD; and</li> <li>Current grade 12 pupils intending to enrol fulltime for a science, engineering or technology degree at a South African public university with English (Level 5), mathematics and physical science (Level 6).</li> </ul>	<ul style="list-style-type: none"> <li>Full-time students at any public university studying towards Honours/BTech, fourth year engineering Master's, and doctoral degrees.</li> <li>Thematic areas supported include Information and Communications Technology, modelling and digital sciences, photonics, microsystems, biotechnology, titanium, aerospace and composites.</li> </ul>	New graduates in science, engineering and technology fields interested in gaining work experience.	BSc Honours, BSc Eng, BEng, MSc, MSc Eng or MEng graduates studying fulltime at tertiary education institutions.
<b>What does it entail?</b>	<p><b>Financial support</b></p> <ul style="list-style-type: none"> <li>Registration fees;</li> <li>Tuition fees;</li> <li>Book allowance;</li> <li>Laptop allowance;</li> <li>Accommodation;</li> <li>Meal allowance; and</li> <li>Living allowance.</li> </ul> <p><b>Non-financial support</b></p> <ul style="list-style-type: none"> <li>Annual induction, vacation work and full wrap around support.</li> </ul>	<ul style="list-style-type: none"> <li>Bursary support as follows: Honours level: R100 000; Master's level: R120 000; and Doctoral level: R140 000.</li> </ul>	<p><b>Financial support</b></p> <ul style="list-style-type: none"> <li>Monthly stipend; and</li> <li>In-house short courses.</li> </ul> <p><b>Non-financial support</b></p> <ul style="list-style-type: none"> <li>Mentorship; and</li> <li>Working on projects that contribute to the improvement of the lives of South Africans.</li> </ul>	<p><b>Financial support</b></p> <ul style="list-style-type: none"> <li>Monthly salary;</li> <li>Registration and tuition fees for an MSc or PhD;</li> <li>In-house short-courses; and</li> <li>Opportunities to present your work on a national and international stage.</li> </ul> <p><b>Non-financial support</b></p> <ul style="list-style-type: none"> <li>Mentorship; and</li> <li>Working on projects that contribute to the improvement of the lives of South Africans.</li> </ul>



# HOW DO I APPLY?



Opportunities are advertised throughout the year on

**[www.csir.co.za](http://www.csir.co.za)**

in the vacancies section.

### **CONTACT DETAILS**

For more information on the CSIR Bursary, Internship and Studentship programmes, please contact us at **[enquiries@csir.co.za](mailto:enquiries@csir.co.za)** or on +27 841 2911.

For more information on the DSI/CSIR Inter-Bursary Support programme, please email **[HCD-INTERBURSARY@csir.co.za](mailto:HCD-INTERBURSARY@csir.co.za)**



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