

# BSc Geoinformatics

This degree programme focuses on the theoretical, methodological, and practical aspects of geographic information science, also known as GIScience or geospatial data science, and its associated technologies. Geoinformatics operates at the intersection of computer science, analytical cartography, remote sensing, and imagery science.

The BSc Geoinformatics degree is followed by the one-year BSc Hons Geoinformatics degree. This combined four-year programme allows graduates immediate registration as GIS Professional-in-Training (as stipulated by the South African Geomatics (SAGC) Profession Act).

## Major/s

Geographic Information Technology with Computer Science OR Socio-informatics

**NB:** Consult the Faculty of Science Yearbook for detailed information on subjects and modules.

## Do I qualify?

### Minimum admission requirements

- Average (excluding Life Orientation): **65%**
- English OR Afrikaans  
(Home Language or First Additional Language): **50%**
- Maths: **60%** Or **70%** (depending on focal area)
- Physical Sciences: **50%**



## Focal areas explained:

### Geographical Information Technology

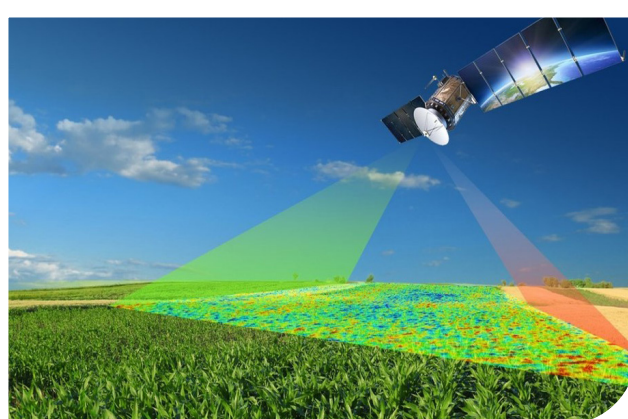
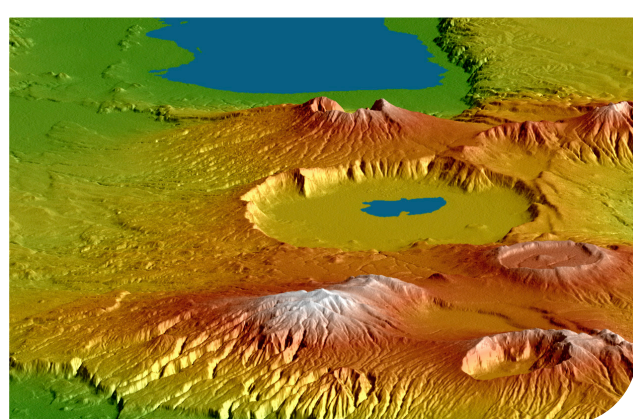
GIT is concerned with the use of geographical data to address problems with a spatial component. It involves collecting, manipulating, analysing, and presenting spatial data using algorithms and data structures in sciences and technologies such as geographical information systems (GIS), satellite earth observation (remote sensing), geodesy, global navigation satellite systems (GPS), aerial photogrammetry, spatial statistics, spatial analysis and modelling, big data, web mapping, and cartography.

### Socio-informatics

Socio-informatics pertains to the interplay between Information Technology and the organisational or societal contexts in which it is applied. It involves the design, development, adoption, use and effects of information and communication technologies in individual, organisational and societal contexts.

### Computer Science

Computer Science is the primary option for students who want to pursue a career in software development. Many disciplines now require some knowledge of how to write computer code and students learn to use particular software in many programmes.

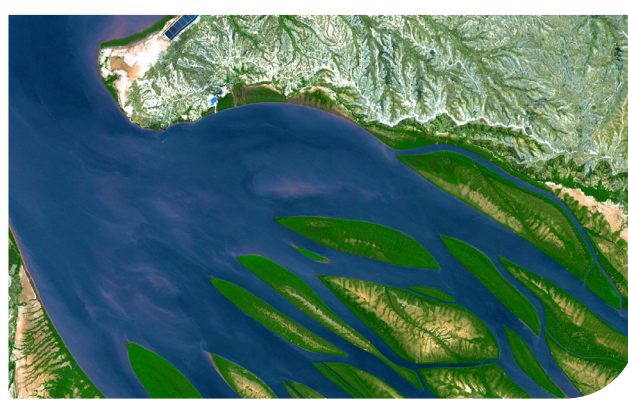


## Why study Geoinformatics?

- Geoinformatics stands in the cross-section between data science, mathematical modeling, and geography.
- Registered geomatics practitioners exercise skills and competencies in the science of measurement, the collection and assessment of geographic information and the application of that information in the efficient administration of land, the sea, and structures thereon or therein.
- Geographic Information Systems (GIS) provides a powerful platform for integrating, analysing, visualising, and making decisions based on geospatial information such as remotely sensed data.
- Remote sensing has a wide range of applications in many different fields which includes coastal applications, ocean applications, hazard assessment, natural resource management, land cover mapping, weather predictions, large forest fires mapping, cadastral and building information management.
- Many organisations use GIS to help make spatially linked decisions such as, for example, comparing population statistics to resources such as drinking water.

## Why study Geoinformatics at Stellenbosch University?

- The Department of Geography and Environmental Studies' vision is to be the recognised training and research centre for Africa in the field of spatial information to enable understanding and management of geographical phenomena and processes to the advantage of the Southern African community.
- We are also home to the Centre for Geographical Analysis (CGA), the Centre for Regional and Urban Innovation and Statistical Exploration (CRUISE), and the Small Town Research Unit (STRU).



## What can I do with a BSc Geoinformatics degree?

Earth Observation specialist  
Spatial Data analyst  
Geospatial scientist

GIS consultant  
GIS specialist  
Geospatial software developer

"Knowing where things are, and why, is essential to rational decision making"

– Jack Dangermond, Environmental Systems Research Institute (ESRI)

### Contact details

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### Contact our recruitment officer

**Qaqamba Mhlauli**  
[qmhlauli@sun.ac.za](mailto:qmhlauli@sun.ac.za) or [science@sun.ac.za](mailto:science@sun.ac.za)  
**Deadline for applications:** 31 July

**General selection and application criteria**

<https://www.sun.ac.za/english/maties>