BSc Geography & Environmental Science

(02133363)

Duration of study: minimum 3 years

Department of Geography, Geoinformatics and Meteorology www.up.ac.za/ggm



Faculty of Natural and Agricultural Sciences

Fakulteit Natuur- en Landbouwetenskappe Lefapha la Disaense tša Tlhago le Temo

Geography and environmental science encourages students to take a holistic view of the world. It fosters an understanding of the environment as a dynamic interactive entity comprising physical, social and built environments, their human impact and the ways in which these can be made more sustainable for the future.





Afrikaans or English				Mathematics								
NSC/IEB	HIGCSE	AS-Level	A-Level	NSC/IEB	HIGCSE	AS-Level	A-Level	NSC/IEB	HIGCSE	AS-Level	A-Level	APS
5	3	С	С	5	3	С	С	5	3	С	С	34

Candidates who do not comply with the minimum requirements can apply for the BSc Extended programme for the Physical Sciences (APS 28).

Core Modules

First Year

Biometry (statistics) Cartography Environmental science Human geography Mathematics Physical geography City structure, environment and society Environmental science Geographic data analysis Geographic information systems Process geomorphology Remote sensing

Second Year

Third Year

Environmental geomorphology Geographic information systems Human environmental interactions Theories and applications of human geography

Elective modules are recommended in the following streams:

1) Geoinformatics, 2) Plant Science, 3) Soil Science, 4) Ecology, 5) Meteorology, 6) Anthropology, and 7) Heritage & Cultural Tourism

Elective modules are available in the following departments:

Geography, Geoinformatics and Meteorology, Plant and Soil Science, Anthropology and Archaeology, Informatics, Historical and Heritage Studies, Zoology and Entomology, Biochemistry, Genetics and Microbiology.

Undergraduate enquiries: Mr Michal Loubser, michael.loubser@up.ac.za

BSc Geoinformatics

(02133393)

Duration of study: minimum 3 years

Department of Geography, Geoinformatics and Meteorology www.up.ac.za/ggm



Faculty of Natural and Agricultural Sciences

Fakulteit Natuur- en Landbouwetenskappe Lefapha la Disaense tša Tlhago le Temo

Geoinformatics is relates to the nature of geographic information and the use of geospatial technologies to collect, store, maintain, analyse, present & disseminate geographic information.

Potential Employment Opportunities*



This program is accredited by the <u>SAGC</u> (South African Geomatics Council) and successful graduates can register as *Candidate GISc Technologists* upon the completion of the degree.

Minimum Requirements

Achievement Level												
Afrikaans or English				Mathematics				Physical Science				
NSC/IEB	HIGCSE	AS-Level	A-Level	NSC/IEB	HIGCSE	AS-Level	A-Level	NSC/IEB	HIGCSE	AS-Level	A-Level	APS
5	3	С	С	5	3	С	С	5	3	С	С	34

Candidates who do not comply with the minimum requirements can apply for the BSc Extended programme for the Physical Sciences (APS 28).

Core Modules

First Year

Environmental sciences Human geography Physical geography Cartography Informatics Business management Mathematics Linear algebra Calculus Business law Introduction to moral and political philosophy Introductory geographic information systems Geographic data analysis Remote sensing Informatics Statistics Surveying

Second Year

Third Year

Geographic information systems Geoinformatics Spatial analysis Remote sensing Geometrical and space geodesy Geoinformatics project

There are no electives for this degree.

Undergraduate enquiries: Dr Christel Hansen, christel.hansen@up.ac.za

BSc Meteorology

(02133313)

Duration of study: minimum 3 years

Department of Geography, Geoinformatics and Meteorology www.up.ac.za/ggm



Faculty of Natural and Agricultural Sciences

Fakulteit Natuur- en Landbouwetenskappe Lefapha la Disaense tša Tlhago le Temo

Meteorology is the study of the physics, chemistry, and dynamics of the earth's atmosphere, in order to develop a complete understanding and accurate

prediction of atmospheric phenomena.

Potential Employment Opportunities*

*These are only a few examples of possible employment opportunities



Students who successfully complete the BSc Meteorology and BSc (Hons) Meteorology programs conform to all the requirements for a meteorologist according to the definition of the World Meteorological Organization (WMO) Technical Regulations. The Department also has a strong collaboration with the <u>South African</u> <u>Weather Service</u> (SAWS).

Minimum Requirements

Achievement Level												
Afrikaans or English				Mathematics								
NSC/IEB	HIGCSE	AS-Level	A-Level	NSC/IEB	HIGCSE	AS-Level	A-Level	NSC/IEB	HIGCSE	AS-Level	A-Level	APS
5	3	С	С	5	3	С	С	5	3	С	С	34

Candidates who do not comply with the minimum requirements can apply for the BSc Extended programme for the Physical Sciences (APS 28)

Core Modules

First Year

Second Year

Third Year

Atmospheric structure and processes Biometry (statistics) Calculus Cartography

> Mathematics Physics

Environmental science Introduction to dynamic meteorology Physical meteorology Programming in meteorology Satellite meteorology Mid -atitude and polar meteorology Quasi-geostrophic analysis Synoptic-scale circulation dynamics and vorticity in mid-latitudes Tropical meteorology

Elective modules are recommended in the following streams:

1) Applied mathematics, 2) Geography & environmental science, 3) Geoinformatics, 4) Statistics, 5) Geology

Elective modules are available in the departments of:

Geography, Geoinformatics, and Meteorology, Mathematics, Statistics, Plant and Soil Sciences, and Physics.

Undergraduate enquiries: Dr Thando Ndarana, thando.ndarana@up.ac.za

BA (Humanities) specialising in Geographical Sciences

Duration of study: 1 year

Department of Geography, Geoinformatics and Meteorology www.up.ac.za/ggm



Faculty of Humanities

Fakulteit Geesteswetenskappe Lefapha la Bomotho

Geography encourages students to take a holistic view of the world. It is a planning and management science aimed at improving the quality of life of all people. It also fosters an understanding of the environment as a dynamic interactive entity comprising physical, social and built environments, their human impact and the ways in which these can be made more sustainable for the future.



First year: You must choose 4 disciplines (subjects) and do two semester modules (4 quarter modules) of each. One of these 4 disciplines must be geography. Second year: You must choose 3 of the disciplines (subjects) you chose on first year level and do two semester modules (4 quarter modules) of each. One of these 3 disciplines must be geography.

Third year: You must choose 2 disciplines (subjects) you chose on second year level and do two semester modules (4 quarter modules) of each. One of these 2 disciplines must be geography.

Undergraduate enquiries: Dr Nerhene Davis, nerhene.davis@up.ac.za