University of Pretoria Yearbook 2019

BScHons Geography and Environmental Science (02240415)

Minimum duration of study	1 year
Total credits	135

Programme information

Renewal of registration

i. Subject to exceptions approved by the Dean, on the recommendation of the relevant head of department, and in the case of distance education where the Dean formulates the stipulations that will apply, a student may not sit for an examination for the honours degree more than twice in the same module.
ii. A student for an honours degree must complete his or her study, in the case of full-time students, within two years and, in the case of after-hours students, within three years of first registering for the degree and, in the case of distance education students, within the period stipulated by the Dean. Under special circumstances, the Dean, on the recommendation of the relevant head of department, may give approval for a limited extension of this period.

In calculating marks, General Regulation G.12.2 applies.

Apart from the prescribed coursework, a research project is an integral part of the study.

Admission requirements

An appropriate bachelor's degree, with an overall average of 60% for 300- and 400-level modules. Prospective students may be required to do additional modules to enable them to reach the desired level of study. Selection takes place before admission.

Pass with distinction

The BScHons degree is awarded with distinction to a candidate who obtains a weighted average of at least 75% in all the prescribed modules and a minimum of 65% in any one module.

Curriculum: Final year

Minimum credits: 135

Minimum credits: 135
Fundamental credit: 25
Core credits: 35
Elective credits: 75

Other programme-specific information:

Please note that the curriculum may change each year at the discretion of the head of department or the honours coordinator in the Department of Geography, Geoinformatics and Meteorology.

Appropriate modules, other than approved by the honours coordinator or head of department, may be taken. However, a minimum of 45 elective module credits should come from the Department of Geography, Geoinformatics and Meteorology.

Fundamental modules

Geographical and environmental principles 710 (GGY 710)

Module credits	25.00
Prerequisites	No prerequisites.
Contact time	1 lecture per week
Language of tuition	Module is presented in English
Department	Geography Geoinformatics and Meteorology
Period of presentation	Semester 2

Module content

The module provides a critical review of the structures and paradigms in which the geographical and environmental sciences are practised. Particular reference is made to the development and impact of paradigms and the interdependence of systems within space and time.

Core modules

Research project 702 (GGY 702)

Module credits	35.00
Prerequisites	No prerequisites.
Language of tuition	Module is presented in English
Department	Geography Geoinformatics and Meteorology
Period of presentation	Year

Module content

An approved individual research project, carried out under the guidance of a lecturer. The project culminates in a research report in the format of a research paper and presentation. The student is expected to obtain the respective skills (theoretical and practical research techniques, data analysis, communication and computer skills) necessary for the research topic.

Elective modules

Statistics for biological sciences 780 (BME 780)

Module credits	15.00
Service modules	Faculty of Natural and Agricultural Sciences
Prerequisites	No prerequisites.
Contact time	2 Block weeks
Language of tuition	Module is presented in English
Department	Statistics
Period of presentation	Semester 1

Module content

The principles of experimental design as required for the selection of an appropriate research design. Identification of the design limitations and the impact thereof on the research hypotheses and the statistical methods. Identification and application of the appropriate statistical methods needed. Interpreting of statistical results and translating these results to the biological context.

Natural woodland and forests: Ecology and management 700 (BOT 700)

Module credits	15.00
Prerequisites	No prerequisites.
Language of tuition	Module is presented in English
Department	Department of Plant and Soil Sciences
Period of presentation	Semester 2

Module content

Definitions of woodlands and forests and vegetation and forest resources in southern Africa; Classification of forest and woodland in southern Africa; Woodland dynamics including disturbance, recruitment, growth and mortality, recovery after disturbance; Ecosystem services (microclimate and nutrient cycling, carbon sequestration etc); Sustainable forest resource management (resource assessment, socio-economic assessment e.g. wood and non-forest products, participatory resource management processes); Forest health; Monitoring of resource-use impacts and adaptive management; Development of a framework for sustainable conservation and use of non-timber forest products; Climate change and resilience. Forest disease and pathology.

Basis in environmental health 772 (EHM 772)

Module credits	5.00

Prerequisites	No prerequisites.
Language of tuition	Module is presented in English
Department	School of Health System and Public Health
Period of presentation	Year

Environmental assessments 785 (ENV 785)

Module credits	15.00
Service modules	Faculty of Health Sciences
Prerequisites	No prerequisites.
Language of tuition	Module is presented in English
Department	Geography Geoinformatics and Meteorology
Period of presentation	Semester 1

Module content

The aim of this module is to understand the principles and processes behind environmental assessments. The module will give an overview of the history of assessments, compare assessment processes internationally, evaluate the strengths and weaknesses of different approaches, provide an overview of the South African regulatory context and the environmental authorisation process.

Introduction to environmental and occupational health 775 (EOH 775)

Module credits	10.00
Prerequisites	No prerequisites.
Language of tuition	Module is presented in English
Department	School of Health System and Public Health
Period of presentation	Year

Selected theme 701 (GGY 701)

Module credits	15.00
Prerequisites	No prerequisites.
Contact time	1 web-based period per week, 1 discussion class per week
Language of tuition	Module is presented in English
Department	Geography Geoinformatics and Meteorology
Period of presentation	Year

Module content

A self-study module on an aspect or aspects of geographical or environmental science selected in consultation with the head of the department from: (a) themes not covered in existing options; or (b) educational subjects.

Applied geomorphology 718 (GGY 718)

Module credits	15.00
Prerequisites	No prerequisites.
Contact time	1 lecture per week
Language of tuition	Module is presented in English
Department	Geography Geoinformatics and Meteorology
Period of presentation	Semester 2

Module content

This module focuses on processes and applications of geomorphology. Topics that may be studied include: soil erosion and conservation, weathering, geomorphic response to environmental change, slope processes and geomorphological hazards. The module includes practical fieldwork and field assessments.

Urban geography 780 (GGY 780)

Module credits	15.00
Prerequisites	No prerequisites.
Contact time	1 discussion class per week
Language of tuition	Module is presented in English
Department	Geography Geoinformatics and Meteorology
Period of presentation	Year

Module content

The main themes of the module include: overview of global urbanisation theories and processes; urban morphology and change; the administrative structure and functions of African cities and; the quality of urban life in the developing world.

Environmental change 789 (GGY 789)

Module credits	15.00
Service modules	Faculty of Health Sciences
Prerequisites	No prerequisites.
Contact time	1 lecture per week, 2 discussion classes per week
Language of tuition	Module is presented in English
Department	Geography Geoinformatics and Meteorology
Period of presentation	Year

Module content

Study themes include past environmental change, causes and consequences of human-induced environmental change and South Africa and climate change.

Aspects of land reform and the environment 793 (GGY 793)

Module credits	15.00
Prerequisites	No prerequisites.
Contact time	1 lecture per week
Language of tuition	Module is presented in English
Department	Geography Geoinformatics and Meteorology
Period of presentation	Year

Module content

The module aims to provide students with an understanding and knowledge of contemporary land reform issues against the background of international land reform experiences. The module also touches on other rural development strategies and ultimately aims to enhance the student's ability to conceptualise and analyse policy in the context of broader environmental issues.

Advanced remote sensing 705 (GMA 705)

Module credits	15.00
Prerequisites	GMA 320 or equivalent
Contact time	28 contact hours per semester
Language of tuition	Module is presented in English
Department	Geography Geoinformatics and Meteorology
Period of presentation	Semester 1 or Semester 2

Module content

The aim of the module is to provide knowledge and understanding of image analysis and information extraction methods in remote sensing. The emphasis is on equipping students with knowledge and skills necessary to process imagery to extract diverse biophysical and geospatial information. The course gives insight into the possibilities and limitations of the application of modern remote sensing/image acquisition systems for Earth and atmosphere research purposes at different levels of detail.

Environmental management and risk assessment 716 (GTX 716)

Module credits	15.00
Prerequisites	No prerequisites.
Contact time	2 practicals per week, 2 lectures per week
Language of tuition	Module is presented in English
Department	Geology
Period of presentation	Year

Module content

Principles of integrated environmental management; environmental impact assessment; environmental management systems (ISO 14000 series); water resource management; environmental legislation; site investigation guidelines; natural hazard risk assessment; seismicity; project management and professional business practice.Geological models and software.

Responsible ecotourism management 714 (TBE 714)

Module credits	20.00
Prerequisites	No prerequisites.
Contact time	1 other contact session per week, 1 lecture per week
Language of tuition	Module is presented in English
Department	Division of Tourism Management
Period of presentation	Semester 1

Module content

This module focuses on managing ecotourism (including the natural and cultural resource base) following eco-principles and guidelines in order to provide a framework for sustainable/responsible tourism development in response to community needs within the Southern African context. The concepts of ecotourism, alternative tourism, responsible tourism and geotourism are debated.The management of ecotourism is studied from a theoretical perspective addressing issues such as the planning, design and sustainable development of eco-facilities and spaces; co-creation and the experienced tourist; the greening of the environment; and managing sustainable events; against the backdrop of climate change using local, national and international case studies. The aim is to provide students with a holistic perspective of ecotourism and to hone their entrepreneurial view to issues within this arena in order to apply sustainable eco-principles to various situations, ranging from green architectural structures and spaces to sustainable community and pro-poor tourism projects.