

## Project Physical Geography (C003540)

Due to Covid 19, the education and evaluation methods may vary from the information displayed in the schedules and course details. Any changes will be communicated on Ufora.

<b>Course size</b>	<i>(nominal values; actual values may depend on programme)</i>			
<b>Credits</b> 5.0	<b>Study time</b> 150 h	<b>Contact hrs</b>	60.0 h	
<b>Course offerings and teaching methods in academic year 2020-2021</b>				
A (semester 1)	Dutch	Gent	seminar	50.0 h
			fieldwork	10.0 h
<b>Lecturers in academic year 2020-2021</b>				
Dondeyne, Stefaan			WE12	lecturer-in-charge
Nyssen, Jan			WE12	co-lecturer
<b>Offered in the following programmes in 2020-2021</b>			<b>crdts</b>	<b>offering</b>
<a href="#">Master of Science in Teaching in Science and Technology (main subject Geography)</a>			5	A
<a href="#">Master of Science in Geography</a>			5	A

### Teaching languages

Dutch

### Keywords

Survey techniques, map reading, positioning, aerial photo interpretation, augering, recording of profiles and cross sections, geomorphological mapping

### Position of the course

The course "Project physical geography" aims to make the students acquainted with various methods of geomorphological observation and modelling through "hands-on" activities.

Insight in methodologies and representations of geomorphological maps at various scales will allow to represent own results and interpretations on a geomorphological map.

This course contributes to the following learning outcomes of the programme of Masters in Geography and Geomatics: 1.1 – 1.2 – 1.3 – 1.4 – 1.5 – 1.6 – 1.7 – 1.10 – 1.17 – 1.18 – 1.19 – 1.25 – 2.1 – 2.2 – 2.3 – 2.4 – 2.5 – 2.6 – 3.1 – 3.2 – 4.1 – 4.2 – 4.3 – 5.2 – 5.3 – 6.1 – 6.2.

### Contents

Methodology of geomorphological maps. Legend structure and content.  
Geomorphological symbols. Discussion of geomorphological mapping systems.  
Geomorphological mapping. Sedimentological research (in laboratory). Soil Erosion Modelling.

The students shall select a relevant study topic in Belgium, carry out a brief literature search, elaborate a work plan, carry out interpretation of maps and aerial photographs, as well as field work, erosion modelling and present the results in a report, a geomorphological map, and an short oral presentation.

### Initial competences

Bachelor in Geography and Geomatics or equivalent; including courses Mathematics I, Mathematics II, Physics I, Introduction to Physical Geography and Geomorphology

### Final competences

1 To be able to independently apply advanced and specialised geomorphological methods (including analysis and interpretation of maps and aerial photographs,

- remote sensing, cartographic representation of results).
- 2 To have an integrated vision on geomorphological issues in society and environment.
  - 3 To have a critical overview of geomorphological mapping systems and their field of application.
  - 4 To know the recent developments in geomorphology.
  - 5 To be able to exploit geographical information systems for the purpose of manipulation, analysis and structuring of complex datasets (spatial, temporal, qualitative and quantitative) and data formats (analogous, digital, statistical and cartographic), and ultimately to represent these data in a geomorphological map.
  - 6 To be able to independently analyse and interpret complex geomorphological phenomena at varying temporal and spatial scales.
  - 7 To be able to creatively apply geomorphological knowledge and capacities in the field.
  - 8 To be able to integrate spatially distributed social processes in geomorphological studies.
  - 9 To be able to analyse and interpret the role of endogenous and exogenous forces in the formation and evolution of the physical landscape as well as the related development of human activities.
  - 10 To be able to recognise the influence of Quaternary climate changes in geomorphological research.
  - 11 To be apt to carry out geomorphological mapping in the field at various scales and geological environments, and to interpret these maps morphogenetically.
  - 12 To critically use data sources of various origins (written sources, maps, field data, secondary datasets, etc.).
  - 13 To be able to prepare reports of research results, in the usual formats of scientific writing and referencing, more precisely geomorphological mapping.

#### **Conditions for credit contract**

Access to this course unit via a credit contract is determined after successful competences assessment

#### **Conditions for exam contract**

This course unit cannot be taken via an exam contract

#### **Teaching methods**

Fieldwork, seminar

#### **Extra information on the teaching methods**

Seminar containing exercises on maps, aerial photo interpretation, excursions, field work; guided elaboration of a geomorphological project.

#### **Learning materials and price**

Gustavsson, M., Kolstrup, E., Seijmonsbergen, A., 2006. A new symbol-and-GIS based detailed geomorphological mapping system: Renewal of a scientific discipline for understanding landscape development. *Geomorphology*, 77: 90–111. Can be downloaded for free.

National and international geomorphologic maps of Europe and other continents, topographic maps, aerial photographs, soil maps and geological maps for consultation.

Excursion 7 euro

#### **References**

Published geomorphologic maps of various countries and regions; thematic field characteristic maps.

Scientific articles (as referenced for instance in Gustavsson et al., 2006).

#### **Course content-related study coaching**

Interactive support during field work and exercises; reporting through Ufora, Geoweb and consultation hours (in cooperation with graduate assistants).

#### **Evaluation methods**

continuous assessment

#### **Examination methods in case of periodic evaluation during the first examination period**

#### **Examination methods in case of periodic evaluation during the second examination period**

#### **Examination methods in case of permanent evaluation**

Oral examination, participation, assignment

**Possibilities of retake in case of permanent evaluation**

examination during the second examination period is possible

**Extra information on the examination methods**

Non-periodical evaluation : written and oral report of the exercises and of the various activities that are part of the project.

**Calculation of the examination mark**

Results of the non-periodical evaluation