



This biannual learning is being organized in 2022-2023

Teacher(s)	Vanacker Veerle ;
Language :	English
Place of the course	Louvain-la-Neuve
Main themes	<p>The analysis of landscape morphology results from the study of internal and external processes that govern the formation and the evolution of relief. In the course, concepts of the dynamics and evolution of the relief are discussed through the analysis of tectonic, climatic and anthropic processes that have an influence on material transfer at the Earth surface. This course presents recent advances in the field of earth surface processes and evolution, and reviews the fundamentals of the subject including geomorphic markers, geochronology, and landform evolution at the short and intermediate time scale. As an advanced course, it is intended for students who are familiar with basic geomorphologic concepts. On completion of this module, students should be able to: (i) understand the fundamentals of commonly used dating methods, (ii) interpret dates and rates of geomorphologic processes in terms of long-term landscape evolution, and (iii) read independently scientific literature on earth surface processes and evolution.</p>
Learning outcomes	<p>At the end of this learning unit, the student is able to :</p> <p>1 The main objective of this course is to acquire the key concepts in geomorphology as to understand dynamic landscape evolution. Geomorphic markers and several dating techniques will be discussed in detail, so that students get a thorough knowledge of quantitative geomorphology.</p>
Evaluation methods	<p>This course will be evaluated during the semester based on</p> <ul style="list-style-type: none"> • Open-book examen of material of Block 1 (25%) • Presentation of literature review (15%) • Presentation and report of research project (25%) • Report of fieldwork (10%) <p>The final examination (written exam with open questions) counts for 25% of your final grade. Active participation in the exercise sessions and fieldwork is mandatory. Your final report of the research project will be due on 23/12. One pdf containing all information has to be sent by email to the teacher before 12h.</p>
Teaching methods	<p>The course is based on</p> <ul style="list-style-type: none"> • Class lectures with active participation of the students • Practical sessions on the tectonic geomorphology of Belgium using GIS and high resolution topography • Field work with characterisation of the fluvio-morphology of a river in the Ardennes
Content	<p>This course includes three parts : (i) the presentation of geomorphologic concepts that govern the formation and evolution of the relief and the basics of dating techniques and morphologic markers (ii) the autonomous application of these geomorphologic concepts through the analysis of topographic and morphometric indices calculated from digital elevation models in a GIS software (iii) the analysis of the morphology of a landscape in the field through the application of concepts presented during lectures</p>
Inline resources	<p>https://moodleucl.uclouvain.be/course/view.php?id=7634</p>
Bibliography	<p>disponible en BST (version électronique et version papier): Burbank, D.W.; Anderson, R.S. 2011. Tectonic Geomorphology. Wiley-Blackwell; 2nd Edition.</p>
Other infos	<p>To follow this course, the student should have a basic knowledge of earth surface processes, geology and earth sciences such as taught in LGEO1251, LGEO1331 and LBIR1130. Active participation in the course is mandatory. The practical sessions and fieldwork are organised once per academic year, and cannot be repeated in the 2nd session.</p>
Faculty or entity in charge	GEOG

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] in Geography : Climatology	CLIM2M	5		
Master [60] in Geography : General	GEOG2M1	5		
Master [120] in Geography : General	GEOG2M	5		