


3.00 credits

20.0 h

Q2

This biannual learning is being organized in 2022-2023

Teacher(s)	Demanet Marc ;
Language :	French
Place of the course	Louvain-la-Neuve
Prerequisites	Good knowledge of soil mechanics and geotechnics as for example taught in the courses LGCIV 1031, LGCIV 1072, LGCIV 2071
Main themes	Materials properties, function, main design fields.
Learning outcomes	<p>At the end of this learning unit, the student is able to :</p> <p>Contribution to the acquisition and evaluation of the following learning outcomes of the programme in civil engineering: AA1.1, AA1.2, AA1.3, AA2.1, AA2.2, AA2.3, AA2.4, AA2.5, AA4.1, AA4.2, AA4.3, AA4.4, AA5.1, AA5.2, AA5.3, AA5.4, AA5.6, AA6.1, AA6.3, AA6.4</p> <p>¹ More specifically, at the end of the course, the student will be able to:</p> <ul style="list-style-type: none"> • choose the correct geosynthetic; • carry out a design in the main fields of application.
Content	<p>Description of the Syllabus : 2 parts</p> <p>Part A: Materials (properties), geosynthetics classification, function</p> <p>Chap. I: Introduction</p> <p>Chap. II: Geosynthetics classification and functions</p> <p>Chap. III: The geomembranes</p> <p>Chap. IV: The geotextiles</p> <p>Chap. V: The geogrids, geonets et geocomposites</p> <p>Part B: Introduction to the design methods of the geosynthetics</p> <p>Chap. VI: Designing with geomembranes</p> <p>Chap. VII: Designing with geosynthetics for filtration and drainage</p> <p>Chap. VIII: Designing methods for unpaved roads</p> <p>Chap. IX: Designing methods for soils stabilisation and reinforcement</p> <p>Chap. X: Designing methods for embankments over points bearing elements</p>
Bibliography	<p>Syllabus</p> <p>EUROCODES + NF-P-94-270 (juillet 2009) « Calcul géotechnique. Ouvrages de soutènement. Remblais renforcés et massifs en sol cloué » et BS 8006-1, BSI Standards Publication (2010): ' Code of practice for strengthened/ reinforced soils and other fills', BSI Groupe Headquarters, UK, London</p> <p>Ernst & Sohn, EGBEO (2010) : 'Empfehlungen für den Entwurf und die Brechnung von Erdkörpern mit Bewehrungen aus Goekunststoffen,' , Deutschland.</p> <p>Koerner R.M. (2005): 'Designing with geosynthetics', 5th ed (Pearson Prentice Hall, Pearson Education, Inc), USA</p>
Faculty or entity in charge	GC

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] in Civil Engineering	GCE2M	3		
Master [120] in Architecture and Engineering	ARCH2M	3		