



4 credits

20.0 h + 15.0 h

Q2

This biannual learning is being organized in 2018-2019

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| Teacher(s) | Demanet Marc ; |
| Language : | French |
| Place of the course | Louvain-la-Neuve |
| Main themes | Materials properties, function, main design fields. |
| Aims | <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. <p>-----</p> <p><i>The contribution of this Teaching Unit to the development and command of the skills and learning outcomes of the programme(s) can be accessed at the end of this sheet, in the section entitled "Programmes/courses offering this Teaching Unit".</i></p> |
| Evaluation methods | Oral exam (20 min preparation + 20 min question). |
| Teaching methods | Oral presentation with some examples of application. |
| Content | <p>Description of the Syllabus : 2 parts</p> <p>Part A: Materials (properties), geosynthetics classification, function</p> <ul style="list-style-type: none"> • Chap. I: Introduction • Chap. II: Geosynthetics classification and functions • Chap.III: The geomembranes • Chap.IV: The geotextiles • Chap. V: The geogrids, geonets et geocomposites <p>Part B: Introduction to the design methods of the geosynthetics</p> <ul style="list-style-type: none"> • Chap. VI: Designing with geomembranes • Chap. VII: Designing with geosynthetics for filtration and drainage • Chap.VIII: Designing methods for unpaved roads • Chap.IX: Designing methods for soils stabilisation and reinforcement • Chap. X: Designing methods for embankments over points bearing elements |
| Inline resources | Available on Moodle. |
| Bibliography | <ul style="list-style-type: none"> • Syllabus • 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 • Ernst & Sohn, EGBEO (2010) : " Empfehlungen für den Entwurf und die Brechnung von Erdkörpern mit Bewehrungen aus Goekunststoffen ", Deutschland. • Koerner R.M. (2005): " Designing with geosynthetics ", 5th ed (Pearson Prentice Hall, Pearson Education, Inc), USA |
| Other infos | Possible site visit. |
| Faculty or entity in charge | GC |

| Programmes containing this learning unit (UE) | | | | |
|------------------------------------------------------|---------|---------|--------------|-------------------------------------------------------------------------------------|
| Program title | Acronym | Credits | Prerequisite | Aims |
| Master [120] in Civil Engineering | GCE2M | 4 | |  |
| Master [120] in Architecture and Engineering | ARCH2M | 4 | |  |