Last update: 03-07-2019

330414 - ET - Earth Engineering

Coordinating unit: 330 - EPSEM - Manresa School of Engineering
Teaching unit: 750 - EMIT - Department of Mining, Industrial and ICT Engineering
Academic year: 2019
Degree: BACHELOR'S DEGREE IN MINING ENGINEERING (Syllabus 2016). (Teaching unit Compulsory)
ECTS credits: 6 Teaching languages: Catalan, Spanish

Teaching staff

Coordinator: Parcerisa Duocastella, David

Degree competences to which the subject contributes

Specific:

1. (ENG) Coneixement de geotècnia i mecànica de sòls i roques.

Transversal:

2. EFFECTIVE USE OF INFORMATI0N RESOURCES - Level 2. Designing and executing a good strategy for advanced searches using specialized information resources, once the various parts of an academic document have been identified and bibliographical references provided. Choosing suitable information based on its relevance and quality.
3. TEAMWORK - Level 2. Contributing to the consolidation of a team by planning targets and working efficiently to favor communication, task assignment and cohesion.
4. SELF-DIRECTED LEARNING - Level 2: Completing set tasks based on the guidelines set by lecturers. Devoting the time needed to complete each task, including personal contributions and expanding on the recommended information sources.
5. THIRD LANGUAGE. Learning a third language, preferably English, to a degree of oral and written fluency that fits in with the future needs of the graduates of each course.

Learning objectives of the subject

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Study load

Total learning time: 150h	Hours large group:	0h	0.00%
	Hours medium group:	60h	40.00%
	Hours small group:	0h	0.00%
	Guided activities:	0h	0.00%
	Self study:	90h	60.00%

Last update: 03-07-2019

330414 - ET - Earth Engineering

Content

title english	Learning time: 7h Practical classes: 2h Self study : 5h
Description: content english	

title english	Learning time: 45h Practical classes: 10h Laboratory classes: 10h Self study : 25h
Description: content english	

title english	Learning time: 45h Practical classes: 10h Laboratory classes: 10h Self study : 25h
Description: content english	

title english	Learning time: 23h Practical classes: 2h Laboratory classes: 6h Self study : 15h
Description: content english	

title english	Learning time: 7h Laboratory classes: 2h Self study : 5h
Description: content english	

Last update: 03-07-2019

330414 - ET - Earth Engineering

title english	Learning time: 23h Practical classes: 6h Laboratory classes: 2h Self study : 15h
Description: content english	

Planning of activities

name english	Hours: 12h Laboratory classes: 6h Self study: 6h
name english	Hours: 10h Self study: 4h Laboratory classes: 6h
name english	Hours: 7h Laboratory classes: 2h Self study: 5h
name english	Hours: 10h Self study: 4h Laboratory classes: 6h
name english	Hours: 18h Self study: 8h Laboratory classes: 10h
name english	Hours: 15h Practical classes: 3h Self study: 12h

Last update: 03-07-2019

330414 - ET - Earth Engineering

Bibliography

Basic:

Crespo Villalaz, C. Mecánica de suelos y cimentaciones. 6ª ed. México: Limusa, 2007. ISBN 9789681869632.

Eurocódigo 7: Proyecto geotécnico. UNE-ENV 1997-1:1999. Madrid: AENOR, 1998-.

Fang, HSai-Yang; Daniels, John L. Introductory geotechnical engineering: an environmental perspective. London: Taylor & Francis, 2006. ISBN 9780415304023.

González de Vallejo, Luís I., dir. Manual de campo para la descripción y caracterización de macizos rocosos en afloramientos. 2ª ed. Madrid: Instituto Geológico y Minero de España, 2007. ISBN 8478407081.

González de Vallejo, Luis I., i altres. Ingeniería geológica [on line]. Madrid: Prentice Hall, 2002 [Consultation: 02/07/2019]. Available on: <https://discovery.upc.edu/iii/encore/record/C__Rb1510174?lang=cat>. ISBN 8420531049.

Jiménez Salas, J. A.; de Justo, J. L. Geotecnia y cimientos. Vol. 1, Propiedades de los suelos y de las rocas. Madrid: Rueda, 1971-1980. ISBN 8472070085.

Jiménez Salas, J. A.; de Justo, J. L.; Serrano, A. A. Geotecnia y cimientos. Vol. 2, Mecánica del suelo y de las rocas. Madrid: Rueda, 1971-1980. ISBN 8472070212.

López Gimeno, Carlos, ed. Ingeniería del terreno: ingeoter. Madrid: U.D. Proyectos, E.T.S.I. Minas, U.P.M, 2002-2010. ISBN 8496140121.

López Marinas, J. M.; Losmoschitz Mora-Figueroa, A. Geología aplicada a la ingeniería civil. 4ª ed. Madrid: Ed Ediciones, 2014. ISBN 9788494185908.

Terzaghi, K.; Peck, R. B. Mecánica de suelos en la ingeniería práctica. 2ª ed. Barcelona: El Ateneo, 1958. ISBN 8470210203.

Complementary:

Bell, F. G. Engineering properties of soils and rocks. 3rd ed. Oxford: Butterworth-Heinemann, 1992. ISBN 0750604891.

Bieniawski, Z. T. Engineering rock mass classifications: a complete manual for engineers and geologists in mining, civil, and petroleum engineering. New York: Willey, 1989. ISBN 9780471601722.

French, S. E. Introduction to soil mechanics and shallow foundations design. Englewood Cliffs, New Jersey: Prentice Hall, cop. 1989. ISBN 0134974549.

Goodman, R. E. Karl Terzaghi: the engineer as artist. Reston: American Society of Civil Engineers, 1999. ISBN 0784403643.

Lisle, R. J.; Leyshon, P. R. Stereographic projection techniques for geologists and civil engineers. 2nd ed. Cambridge: Cambridge University Press, 2004. ISBN 0521828902.

Muir Wood, D. Soil mechanics: a one-dimensional introduction. Cambridge: Cambridge University Press, 2009. ISBN 9780521517737.

Terzaghi, K.; Peck, R. B.; Mesri, G. Soil mechanics in engineering practice. 3rd ed. New York: John Wiley & Sons, 1995. ISBN 0471086584.

Verruijt, A. Soil mechanics [on line]. Delft: Delf University of Technology, 2012 [Consultation: 02/07/2019]. Available on: <https://ocw.tudelft.nl/wp-content/uploads/SoilMechBook.pdf>. ISBN 9065620583.

Others resources: