

ENVIRONMENT, DEVELOPMENT, AND SUSTAINABILITY

OBJECTIVES

Ref	19. Objectives of the curricular unit
O1	Understand land use and conservation of natural resources, and the control of hazards.
O2	Adopt holist approach when analysing environmental, social, and economics (including technology) problems by understanding the interrelationships among relevant factors.
O3	Assess environment and sustainability (integrating social, environmental and economic dimensions) on a quali-quantitative basis and plan engineering infrastructures in a sustainability context.

SYLLABUS

Ref	20. Syllabus	Contact hours
CT1	Holistic Approach to Environmental Factors: this topic aims to study environmental, economic and social factors, their interrelationship, and spatial data analysis (GIS, remote sensing).	
CT2	Environment and Society: evaluate environmental impact assessment methods, impacts implications on public health, economic and social development, and on the whole quality of life; understand the complexities of modern society.	
CT3	Natural and Technological Hazards: performing review of risk assessment methods via critical thinking and its applications, the effects of demophoric growth, including older technologies that have effects on society today, and review issues on climate change and related development policy.	
CT4	Land Planning and Management: performing comparative analysis of land planning policy in several countries, and discuss case studies.	
CT5	Sustainability Indicators: exploring the dynamic interactions of the dimensions of sustainability, and analyse quali-quantitative indicators.	
Total (hours)		
ECTS		

BIBLIOGRAPHY AND OTHER REFERENCES

21. Main bibliography
Colantonio A, Dixon T (2010) Urban Regeneration and Social Sustainability: Best Practice from European Cities. Wiley-Blackwell.
Cotton WR, Pielke RA (2007) Human Impacts on Weather and Climate. 2nd Edition, Cambridge University Press.
Dinep C, Schwab K (2010) Sustainable Site Design: Criteria, Process, and Case Studies for Integrating Site and Region in Landscape Design. Wiley.
Glasson J, Therivel R, Chadwick A (2005) Introduction to Environmental Impact Assessment, Taylor & Francis.
Laurence DP (2003) Environmental Impact Assessment: Pratical Solutions to Recurrent Problems. Wiley.

22. Other references
Perman R, Ma Y, McGilvray J (1996) Natural Resource and Environmental Economics, Addison Wesley Longman.
Kellert SR et al. (eds), (2008) Biophilic Design: The Theory, Science and Practice of Bringing Buildings to Life. Wiley.
Weng Q (2010) Remote Sensing and GIS Integration: Theories, Methods, and Applications. McGraw-Hill.
Wood, C. (2003) Environmental Impact Assessment: A Comparative Overview. Prentice Hall.