

Environmental Assessment

MODULE TITLE	Environmental Assessment
LECTURER(S)	Dr Katsiri and Dr Makropoulos
ECTS VALUE	8

PREREQUISITES

COREQUISITES

DURATION OF MODULE 15 weeks

TOTAL STUDENT STUDY TIME

Overall, the module is expected to involve students in approximately 200 hours of learning: 12 5-hour lectures; 58 hours assignments; 78 hours private study; 4-hour examination.

WEB LINK <http://www.water-msc.org/en/wrem402.htm>

AIMS

This module aims to provide:

1. A basic knowledge of Strategic Environmental Assessment for the practising engineer and environmentalist. The course outlines the widely used assessment techniques, as well as the current relevant regulatory and legal framework.
2. A basic knowledge of contemporary issues in environmental management. A comprehensive picture of different environmental problems and of the possibilities to manage them with an emphasis on environmental impact assessment approaches.

INTENDED LEARNING OUTCOMES

1. Subject Specific Knowledge, Understanding and Skills

By the end of this module, the students should:

- a) have acquired basic knowledge of SEA and EIA components, their characteristics and functioning of such systems;
- b) understand the SEA and EIA Directives, the regulatory framework and guidance;
- c) be able to assess the environmental impact from human activities and to make appropriate and critical use of appropriate techniques in different sectors and applications.

2. Core Academic Skills

By the end of this module, the students should:

- a) have a broad understanding of the conflict between environment and development
- b) be able to describe and evaluate an environmental problem;
- c) be able to propose appropriate management and mitigation measures for environmental problems;
- d) understand the challenges stemming from the implementation of SEA in the international and national policy, planning and decision making processes;
- e) have acquired some practical experience of using different SEA tools;

- f) form a sound opinion on how SEA can contribute to sustainable development;
- g) understand the differences, similarities and interactions between SEA and other environmental appraisals.

3. Personal and Key Skills

By the end of this module, the students should have:

- a) improved further the necessary skills for independent learning;
- b) enhanced report and presentation skills;
- c) improved some IT skills;
- d) enhanced project management and consultation skills.
- e) acquired an ability to function in multi-national teams

LEARNING/TEACHING METHODS

Lectures, problem sheets, tutorials.

ASSIGNMENTS

1 assignment on SEA issues and tools (20%, 3,000 equivalent words, including graphs and tables).

1 assignment on Environmental Impact issues (20%, 3,000 equivalent words, including graphs and tables).

ASSESSMENT

Examination paper (60%), Course work (40%)

3-hour examination, closed note and closed book.

2 assignments (40%, 3,000 + 3,000 equivalent words, including graphs and tables).

SYLLABUS PLAN

1. Environmental Impact Assessment - Introduction and concepts
2. The Urban Environment
3. Water pollution
4. Methods and Tools for EIA
5. Strategic Environmental Assessment: Key concepts
6. SEA Legislation and Process
7. Regulatory and Planning Framework of SEA and Implementation
8. SEA Tools and Techniques
9. SEA case studies. Basic examples from a wide spectrum of sectors
10. SEA case studies for Water
11. SEA case studies for Waste
12. Summary, Conclusions and Future Directions

INDICATIVE BASIC READING LIST

1. SEA Directive 2001/42/EC
2. Sheate, W.R. et al (2004) Implementing the SEA Directive. Sectoral Challenges and Opportunities for the UK and EU, European Environment, Vol 14 (2), 73-93
3. Freedman, B. (1995). Environmental Ecology: Ecological Effects of Pollution Disturbance and Other Stresses, 2nd Edition. Elsevier, ISBN 0122665422

4. Therivel, R. et al (1992) Strategic Environmental Assessment. Earthscan, London.
5. SEA and Integration of the Environment into Strategic Decision-Making: Report to EC (2001): http://ec.europa.eu/environment/eia/sea-studies-and-reports/sea_integration_main.pdf
6. A Practical Guide to the Strategic Environmental Assessment Directive (2005): http://www.communities.gov.uk/pub/290/APracticalGuidetotheStrategicEnvironmentalAssessmentDirective_id1143290.pdf

EXTENDED READING LIST

1. EIA Directive 85/337/EEC
2. Amended EIA Directive 97/11/EC
3. DETR (2000). Environmental Assessment: A Guide to the Procedures, Thomas Telford, ISBN 0727729608
4. IMPEL Project: Implementing Article 10 of the SEA Directive 2001/42/EC (2002): http://ec.europa.eu/environment/eia/pdf/impel_final_report.pdf
5. Department of Trade and Industry: SEA Process (2007) : http://www.offshore-sea.org.uk/site/scripts/documents_info.php?categoryID=39&documentID=5
6. Department of the Environment, Transport and the Regions: Review Technical Guidance on Environmental Appraisal, A Report by EFTEC (1999) <http://www.defra.gov.uk/environment/economics/rtgea/index.htm>

AUTHORS

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