MODULE DESCRIPTION FORM

DEPARTMENT OF Civil and Environmental Engineering

EV939 Environmental impact assessment

Module Registrar: Dr Elsa João, Senior Lecturer, Department of Civil and Environmental Engineering, level 5, James Weir Building, Tel.: 0141 548 4056; email: elsa.joao@strath.ac.uk.	**Taught To (Course): Cohorts for whom class is compulsory / optional / elective** MSc Sustainability & Environmental Studies MSc Environmental Engineering MSc Hydrogeology MSc Civil Engineering MSc Environmental Entrepreneurship MSc Sustainable Engineering (Faculty degree) MEng 5th Year MRes Geo-Environmental Engineering MRes Integrated Pollution Prevention & Control (IPPC) MRes Climate Change Adaptation Also available to other MSc programmes across the University and PhD students		
Other Lecturers Involved:	**Credit Weighting:** 10	**Semester:** 2	
Assumed Prerequisites: None	**Compulsory/ optional/ elective class** Compulsory to: MSc in Sustainability & Environmental Studies Optional for all the other degrees above	**Academic Level:** 5	**Compulsory/ optional/ elective class** Compulsory to: MSc in Sustainability & Environmental Studies Optional for all the other degrees above

Module Format and Delivery (HOURS i.e. 1 credit = 10hrs of study):

Lecture	Tutorial	Laboratory	Groupwork	External	Online	Project	Assignments	Private Study	**Total**
20							40	40	100

Educational Aim

Environmental impact assessment (EIA) relates to the process of identifying, evaluating, and mitigating the biophysical, social, economic, cultural and other relevant effects of development proposals prior to major decisions being taken and commitments made. This class provides an introduction to the methods used to predict environmental impacts, and evaluates how these may be used to integrate environmental factors into decisions. The class draws principally on the UK planning context of environmental impact assessment of individual projects (project EIA), but also takes account of EIA experience in other countries and international organisations. Participants evaluate the quality of Environmental Statements and of the EIA process using the Institute of Environmental Assessment and Management (IEMA) methodology. The class discusses how EIA can be used a pro-active design tool for projects and how it can contribute to the enhancement of environmental, social and health issues. Students are also introduced to key principles of Strategic Environmental Assessment (SEA) and biodiversity net gain (BNG). Class has the contribution of key practitioners in the field and includes different case studies such as onshore and offshore windfarms.

On completion of the module students should:

- be conversant with the regulatory requirements for statutory EIA;
- be familiar with some of the methodologies commonly used in preparing EIA;

- be competent in the evaluation of the quality of an Environmental Impact Statements;
- understand the requirements of the IEMA EIA Quality Mark;
- understand the relationship between EIA and development decisions;
- understand the ways in which EIA can contribute to sustainable development and project design, and its limitations in this regard;
- be familiar with key principles of Strategic Environmental Assessment (SEA),
- understand what is Social Impact Assessment (SIA) and Health Impact Assessment (HIA), and
- be familiar with issues regarding the links between EIA and SEA.

Learning Outcomes

On completion of the module the student is expected to be able to

LO1 Be able to be conversant with the regulatory requirements for statutory EIA and best practice principles. (group assignment and exam)

LO2 to be familiar with some of the methodologies commonly used in preparing EIA (group assignment and exam).

LO3 Be competent in the evaluation of the quality of an Environmental Impact Statements and understand the requirements of the IEMA EIA Quality Mark (group assignment)

LO4 Be able to understand the relationship between EIA and development decisions and understand the ways in which EIA can contribute to sustainable development and project design, and its limitations in this regard. (group assignment and exam)

Syllabus

The course will be taught using a combination of lectures, group discussions, seminars, case studies and presentations by practitioners.

The module requires the completion of the following parts (although some of the guest speakers may change every year):

- Week 1 - Intro to the course and to Environmental Impact Assessment (EIA). Brief explanation of all assignments. Carrying out an EIA – key stages. Key principles of Strategic Environmental Assessment (SEA) and how it relates to EIA,
- Week 2 - Key implementation problems of the EIA process. The quality of Environmental Impact Statements (EIS). IEMA EIA Quality Mark.
- Week 3 - Data for EIA. Carrying out an EIA – key methods. Use of GIS for EIA. Uncertainty and subjectivity issues. Consultation and public participation in EIA. The importance of scale issues in EIA and the case for scale guidelines.
- Week 4 - Mitigation, enhancement issues and the use of EIA as a design tool. Key principles of ecological impact assessment. What are Environmental Management Plans (EMPs), how EMPs link to EIA and the role of the Environmental Clerk of Works. Adaptive management.
- Week 5 - Consultation and public participation in EIA. Cumulative effects assessment. Follow-up. The value of EIA. Scenario simulation.
- Week 6 - Understanding the relationship between EIAs and development decisions – the case of a controversial development. Chris Ford (Researcher, University of Strathclyde).
- Week 7 - Social Impact Assessment – key principles and links to EIA.
- Week 8 – Neart na Gaoithe Offshore Wind Farm and onshore grid connection (buried cable and substation) - Ewan Walker, Environment Manager, Mainstream Renewable Power.
- Week 9 - EIA of onshore wind farm development (Kenny Taylor, Policy and Advice Officer - Renewable Energy; Scottish Natural Heritage (SNH)).
- Week 10 - Discussion about the material covered in the class, and on enhancement issues and the use of EIA as a design tool. What are Environmental Management Plans (EMPs), how EMPs link to EIA and the role of the Environmental Clerk of Works.

N.B. The class runs over 10 weeks.

Assessment of Learning Outcomes

Criteria

For each of the Module Learning Outcomes the following criteria will be used to make judgements on student learning:

LO1

C1 How students show a critical understanding of the regulatory requirements for statutory EIA and best practice principles. (group assignment and exam)

LO2
C1 How familiar students are with regards to methodologies commonly used in preparing EIA (group assignment and exam).

LO3
C1 How competent students are in the evaluation of the quality of an Environmental Impact Statements and understand the requirements of the IEMA EIA Quality Mark (group assignment).
C2 How well written and structured the report is (group assignment).

LO4
C1 How students shows a critical understanding of the relationship between EIA and development decisions and understand the ways in which EIA can contribute to sustainable development and project design, and its limitations in this regard (group assignment and exam).

The standards set for each criterion per Module Learning Outcome to achieve a pass grade are indicated on the assessment sheet for all assessment.

Principles of Assessment and Feedback
*(within Assessment and Feedback Policy at: https://www.strath.ac.uk/staff/policies/academic/*http://www.strath.ac.uk/learnteach/informationforstaff/staff/assessfeedback/12principles/ *)*

Please state briefly how these are incorporated in this module.

- Assignments are routine and evenly distributed throughout the class.
- Students will have ample opportunities (via multiple projects) to incorporate feedback and improve their performance. Including individual meetings with class tutor to provide feedback on drafts of reports produced by group work.
- Departmental policy: carry out mid-term class assessments and provide feedback to students.
- Establishment of MSc cohorts tend to foster the development of learning groups. They student interact closely with each other, and tend to be highly supportive.
- Encourage self-motivation and mutual respect in group projects.

Assessment Method(s) Including Percentage Breakdown and Duration of Exams

	Examinations				**Courseworks**		**Projects**	
	Number	Month(s)	Duration	***Weighting***	Number	***Weighting***	Number	***Weighting***
	1	April/May	1 hour	50	1	50		
L/Outcomes	LO1, LO2 and LO4				LO1, LO2, LO3 and LO4			

Indicate which learning outcomes (L01, L02 etc) are to be assessed by exam/coursework/project as required.

Coursework / Submissions deadlines (*academic weeks*):

(1) **Assignment - Group project on EIA as a design tool and evaluating the quality of an environmental statement** (worth 50% of the final mark) – students pick their own groups of 5 or 6 people each and must sign-up group members in Myplace. Each group needs to select a unique environmental statement. A detailed handout will be given in week 2 of the class. ***Submission deadline:*** check Myplace.

(2) Exam - A 1-hour multiple choice individual online class test done during exam diet (April/May) (worth 50% final mark). The online class test covers all talks, including the ones from guest speakers who were all asked to provide questions for this test.

Resit Assessment Procedures:

New assignment, different from the coursework done previously.

PLEASE NOTE:
Students must gain a summative mark of 50% to pass the module. Students who fail the module at the first attempt will be re-examined during the August diet. This re-examination will consist entirely of coursework. No marks from any previous attempts will be transferred to a new resit attempt.

Recommended Reading

*****Purchase recommended **Highly recommended reading *For reference**

Beattie, R. (1995), Everything you already know about EIA (but don't often admit). *Environmental Impact*

Assessment Review, 15: 109-114. **[Strathclyde 614.7 Serial]**
English Nature, RSPB, WWF-UK and BWEA (2001) Wind farm development and nature conservation: A guidance document for nature conservation organisations and developers when consulting over wind farm proposals in England. English Nature, RSPB, WWF-UK and BWEA **[http://www.bwea.com/pdf/wfd.pdf]**
(**) Glasson, J., Thérivel, R. and Chadwick, A. (2005) *Introduction to Environmental Impact Assessment,* 3rd Edition, London; New York : Routledge. **[Strathclyde D 333.7 GLA]**
IAIA (1999), *Principles of EIA best practice*. IAIA. **[http://www.iaia.org/]**
IEMA (2011) The state of EIA Practice in the UK. Institute of Environmental Management and Assessment (IEMA) (http://www.iema.net/eiareport)
João, E. (2002), How scale affects environmental impact assessment. *Environmental Impact Assessment Review*, 22 (4): 287-306. **[Strathclyde 614.7 Serial]**
João, E. (2005) Key principles of SEA. In: M. Schmidt, E. João and Albrecht, E. (eds.), *Implementing Strategic Environmental Assessment,* Springer-Verlag, pp.3-14**. [Strathclyde Library D 349.4089 IMP]**
João, E, F Vanclay and L den Broeder (2011), Emphasising enhancement in all forms of impact assessment: introduction to a special issue. *Impact Assessment & Project Appraisal*, September, 29(3): 170–180. **[Available online via Strathclyde registration]**
European Commission (2012), Proposal for amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment. COM(2012) 628 final, Brussels, 26.10.2012 http://ec.europa.eu/environment/eia/pdf/com_628/1_EN_ACT_part1_v7.pdf
Ortolano, L. and Shepherds, A. (1995), Environmental Impact Assessment. In: Vanclay, F. and Bronstein, D. (eds.), *Environmental and Social Impact Assessment*, pp. 3-30. John Wiley. **[Library D 333.7 BAR]**
Scottish Government (2011) Planning Circular 3 2011: Guidance on The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2011. Scottish Government **[http://www.scotland.gov.uk/Publications/2011/06/01084419/0]**
Steinemann, A. (2000) Rethinking human health impact assessment. *Environmental Impact Assessment Review*, 20 (6): 627-645. **[Strathclyde 614.7 Serial]**
Vanclay, F. (2006), Principles for social impact assessment: A critical comparison between the international and US documents. *Environmental Impact Assessment Review*, 26 (1): 3-14. **[Strathclyde 614.7 Serial]**
Wilkins, H. (2003), The need for subjectivity in EIA: discourse as a tool for sustainable development. *Environmental Impact Assessment Review*, 23: 401-414. **[Strathclyde 614.7 Serial]***report form*. London: Management Update

Additional Student Feedback
(Please specify details of when additional feedback will be provided)

Date	Time	Room No
Weeks 2-8	NA	Answer questions in class about group assignment and answer questions via email as well.
Week 10	NA	Overall feedback, valid for all students, given to students about the group assignment
Weeks 1-11	NA	Students can practice example question for the exam in Myplace, to experiment with type of questions,

Session:

On-demand office hours with class registrar.

Approved:

Course Director Signature: Elsa João

Date of Last Modifications: 19 August 2022

(Updated May 2018)

MODULE TIMETABLE

Module Code:	**EV939**	**Module Title:**	**Environmental impact assessment**

Brief Description of Assessment:

The class will be assessed as follows (more information can be found in Myplace):

a) **Assignment - Group project on EIA as a design tool and evaluating the quality of an environmental statement** (worth 50% of the final mark) – students pick their own groups of 5 or 6 people each and must sign-up group members in Myplace. Each group needs to select a unique environmental statement. A detailed handout will be given in week 2 of the class. ***Submission deadline:*** check Myplace.

b) **Exam - A 1-hour multiple choice individual online class test done during exam diet (April/May)** (worth 50% final mark). The online class test covers all talks, including the ones from guest speakers who were all asked to provide questions for this test.

Assessment Timing:-

Indicate on the table below the start/submission dates for each assignment/project and the timing of each exam/assessment using the dropdowns provided. Dropdowns can be left blank. Add extra notes below the dropdowns.

Please note: Timings can and will change, this should only be used as a guide.

Semester Two	C&D Wk	WK1	WK2	WK3	WK4	WK5	WK6	WK7	WK8	WK9	WK10	WK11	Exam Period
			Course work set							Course work submit			Exam