CLASS DESCRIPTION FORM

CL972  SUSTAINABILITY & STRATEGIC ENVIRONMENTAL ASSESSMENT

Class Registrar: Dr Elsa João, Senior Lecturer, Department of Civil and Environmental Engineering, Room 605, Level 6, Graham Hills Building; Tel.: 0141 548 4056; email: elsajoao@strath.ac.uk.

Taught To (Course):
- MSc Sustainability & Environmental Studies
- MSc Environmental Engineering
- MSc Hydrogeology
- MSc Environmental Entrepreneurship
- MEng 5th Year
- MRes Geo-Environmental Engineering
- MRes Integrated Pollution Prevention & Control (IPPC)
- MRes Climate Change Adaptation

Other Lecturers Involved: Some contributions from external practitioners.

Credit Weighting: 20  Semester: 1

Assumed Prerequisites:
None

Compulsory/ optional/ elective class
- Compulsory to MSc in Sustainability & Environmental Studies
- Optional to: MSc Environmental Engineering
- MSc in Hydrogeology
- MSc Environmental Entrepreneurship
- MEng 5th Year
- MRes Geo-Environmental Engineering
- MRes Integrated Pollution Prevention & Control (IPPC)
- MRes Climate Change Adaptation

Academic Level: 5

Class Format and Delivery (hours):

<table>
<thead>
<tr>
<th>Lecture</th>
<th>Tutorial</th>
<th>Laboratory</th>
<th>Project</th>
<th>Assignments</th>
<th>Private Study</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>16</td>
<td>60</td>
<td>50</td>
<td>50</td>
<td>200</td>
<td></td>
</tr>
</tbody>
</table>

Educational Aim

Strategic Environmental Assessment (SEA) is a process for identifying and assessing the environmental impacts of policies, plans and programmes, such as a transportation policy or a local development plan. Knowledge of SEA has become particularly important following the approval of the European Union SEA directive in July 2001 that was implemented in the EU member countries on July 2004. In Scotland, the Environmental Assessment (Scotland) Act 2005 came into force on 20 February 2006.

The main objective of the European SEA Directive is:

“To provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development […]”

SEA is considered one of the main ways to achieve sustainability, and in England for example SEA is carried out via a sustainability appraisal. According to the new directive, before a plan or programme is approved or adopted, the public must be consulted and an Environmental Report must be prepared describing the likely significant effects of the plan or programme and of any reasonable alternatives to the proposal. The SEA directive applies to plans or programmes in 11 sectors: agriculture, forestry, fisheries, energy, industry, transport, waste, water, telecommunications, tourism and land use planning. In addition, in Scotland Section 5(4) of the Scottish Act broadens out the scope of the Directive to include all plans likely to have significant environmental effects. Importantly, SEA can play a significant role in enhancing the integration of environmental concerns in policy and planning processes, thereby helping to implement sustainable development. A more integrated system of
planning means that environmental and sustainability criteria are incorporated throughout the planning process, such as in the identification of suitable (and unsuitable) locations for development and in the assessment of policy alternatives.

This module starts by examining how the idea of sustainable development and sustainability have evolved and been conceptualized; including weak vs. strong sustainability. How SEA and sustainability appraisal have come about in order to try and achieve sustainability will then be the main focus of the module.

The module has a strong project component as students, working in groups, will be required to produce an SEA or Sustainability Appraisal for a Local Development Plan (LDP). The module has therefore been designed so students can develop both theoretical and applied understanding of both sustainability and Strategic Environmental Assessment.

**Learning Outcomes**

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

LO1 Demonstrate an understanding of the theoretical perspectives and appraisal techniques applying to sustainable development issues, and have a critical understanding of the key principles of strategic environmental assessment (SEA), know and how SEA integrates within the planning processes of Europe (particularly Scotland).

LO2 Be able to evaluate how environmental factors can be integrated into decision-making, including discussing the nature of environmental ethics, social justice and human rights and to examine their relationship with regard to sustainable development.

LO3 Be able to identify, evaluate and compare the key methods used in the pursuit of sustainability and to try predict environmental impacts at strategic level, and evaluate the quality of the products derived from the SEA or Sustainability Appraisal process.

LO4 Be able to carry out an SEA or Sustainability Appraisal report for a local development plan.

*(UK SPEC suggests no more than 4 learning outcomes per module. Statements must be broad and be syllabus free and link in with the intended learning outcomes on the programme specifications.)*

**Syllabus**

The course will have a strong group project component supported by individual group-tutorials, and will be taught using a combination of lectures, workshops, group discussions, case studies and presentations by practitioners.

The module requires the completion of the following parts (this is an outline programme and minor changes will be done each year):

- Intro to the course. Introduction to key principles of Sustainability and SEA. Links between SEA and sustainability. Public participation in SEA. Overview of assignments and exam (Lecture). Explanation of assignment 1.
- Key principles of sustainability and sustainable development. The key concepts of weak vs strong sustainability. Key historical milestones in sustainability. The forthcoming Bill on Sustainable Procurement. (Lecture)
- Different methods on how to evaluate sustainability. Introducing a new toolkit to measure sustainability. Workshop on using the toolkit to measure sustainability (Lecture and Workshop).
- Key SEA stages and key methods used to predict environmental impacts at SEA level. Case study: SEA of the Scottish Rural Development Programme and novel techniques being used.
- Workshop: Identifying credible and feasible alternatives, identifying SEA objectives, & using a matrix to evaluate impacts. Introduction and explanation of assignment 2, and group allocation.
- Practical tools for sustainability - community engagement and co-created design. (Guest speaker)
- Individual group meetings with member of staff for feedback about assignment 2. Each group must bring: a) overall goal of what the plan is trying to achieve, b) list of possible options of how goal might be achieved, and c) list of SEA objectives to be used to evaluate alternatives
- SEA quality – good and bad examples of SEA reports. Tackling cumulative impacts (lecture and workshop).
- Sustainable communities: what are they and how can we create them? (Lecture and sustainability game).
- Outcomes from the 2011 Scottish SEA Review. Brief discussion on the role of consultation
authorities in the implementation of SEA in Scotland. Links to sustainability. Scoping workshop. (Guest speaker from Scottish Environment Protection Agency (SEPA)).

- Individual group meetings with member of staff for feedback about assignment 2. Each group must bring the final draft of SEA report. The more complete the report, the better the feedback.
- Glasgow 2014 Commonwealth Games - sustainable events management (especially application of the new ISO within the Glasgow games) (Guest lecturer from Glasgow City Council).
- Summary of main points covered in the course. A research agenda for SEA – e.g. for potential dissertations (lecture and discussion).

Assessment of Learning Outcomes

Criteria

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

[Note: Criteria break the LO down into ‘teachable’ elements but do not become syllabus orientated i.e. no mention of CAD package names, components etc.]

LO1
C1 How student shows a critical understanding of the theoretical perspectives and appraisal techniques applying to sustainable development issues (assignment 1 and exam).
C2 How student knows how SEA integrates within the planning processes in Europe (exam).

LO2
C1 How analytical student is (exam) with regards to how environmental factors can be integrated into decision-making, including discussing the nature of environmental ethics, social justice and human rights and to examine their relationship with regard to sustainable development – using both academic literature and case studies from real practice (including material provided by guest speakers).

LO3
C1 How critical they have been of the methodology used in the SEA or Sustainability Appraisal report (assignment 2).

LO4
C1 How well written and structured the SEA or Sustainability Appraisal report (assignment 2) is.

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

12 Principles of Assessment and Feedback
(on Learning & Teaching web pages: www.strath.ac.uk/learnteach/teaching/staff/assessfeedback/12principles/)

Please state briefly how these are incorporated in this module.

2. Assignments are routine and evenly distributed throughout the class.
3. Assistance (via teaching/laboratory assistance and lecturer) will be available to student to provide timely feedback.
4. 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.
6. Group projects to create natural peer dialogue.
9. Departmental policy: carry out mid-term class assessments and provide feedback to students.
10. 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.
11. Encourage self-motivation and mutual respect in group projects.

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

<table>
<thead>
<tr>
<th>Examinations</th>
<th>Courseworks</th>
<th>Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>L/Outcomes</td>
<td>Number</td>
<td>Duration</td>
</tr>
<tr>
<td>LO1, LO2</td>
<td>1</td>
<td>2 hours</td>
</tr>
</tbody>
</table>

Indicate which learning outcomes (LO1, LO2 etc) are to be assessed by exam/coursework/project as required.
Coursework / Submissions deadlines:
Assignment 1 (Individual) – week 4 (Semester 1)
Assignment 2 (Group work) – week 11 (Semester 1)
Exam (Jan)

Resit Assessment Procedures:
Students who fail the module at the first attempt will be re-examined during the August diet. This re-examination will consist entirely of exam / coursework / viva (please delete as appropriate).

PLEASE NOTE:
Students need to gain a summative mark of 40% / 50% (please delete as appropriate) to pass the class. Students who fail the class at the first attempt will be re-examined during the August diet. This re-examination will consist entirely of exam / coursework / viva (please delete as appropriate).

Recommended Reading

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

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Room No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weeks 6, 7, 10</td>
<td>TBC</td>
<td>TBC</td>
</tr>
</tbody>
</table>

Session:

Approved:

Course Director Signature:

Date of Last Modifications: 19/09/2013

(Updated November 2010)
Class Code: CL972  
Class Title: Sustainability & Strategic Environmental Assessment

**Brief Description of Assessment:**
Assessment Method(s) Including Percentage Breakdown and Duration of Exams
The standards set for each criterion per Module Learning Outcome to achieve a pass grade are indicated on the assessment sheet for all assessment.

This 20 credit class will be assessed by two assignments and one exam:

- **Assignment 1** (contributes to 15% of the final mark) – *Individual* – short 1,500 words essay on sustainability. This short essay is to allow to provide early feedback on essay writing to the students.
- **Assignment 2** (contributes to 35% of the final mark) – *GROUP WORK* - Working in groups of four or five, students are required to prepare a scoping SEA or Sustainability Appraisal report for a Local Development Plan (LDP).
- **3 hour Exam** (contributes to 50% of the final mark)

**Assessment Timing:-**
Indicate on the table below the Start/Submission dates for each Assignment/Project and the timing of each Exam/Class Test(s).

<table>
<thead>
<tr>
<th>Semester One</th>
<th>WK1</th>
<th>WK2</th>
<th>WK3</th>
<th>WK4</th>
<th>WK5</th>
<th>WK6</th>
<th>WK7</th>
<th>WK8</th>
<th>WK9</th>
<th>WK10</th>
<th>WK11</th>
<th>WK12</th>
<th>Exam Period</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester Two</td>
<td>WK1</td>
<td>WK2</td>
<td>WK3</td>
<td>WK4</td>
<td>WK5</td>
<td>WK6</td>
<td>WK7</td>
<td>WK8</td>
<td>WK9</td>
<td>WK10</td>
<td>WK11</td>
<td>WK12</td>
<td>Exam Period</td>
</tr>
<tr>
<td>--------------</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>-------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>