Module Code: CL957  
Module Title: Qualitative and Quantitative Research Methods

Module Registrar: Dr Elsa João, Senior Lecturer, Department of Civil Engineering, room 605, Level 6, Graham Hills Building; Tel.: 0141 548 4056; email: elsa.joao@strath.ac.uk.

Other Lecturers Involved: Athena Zitrou (Dept Management Science), Peter Booth, Girma Zawdie, Janey Andrews

Credit Weighting: 10  
Semester: 2

Compulsory/optimal/elective class:  
Compulsory to:  
- MSc Environmental Studies  
- MSc Environmental Entrepreneurship  

Academic Level: 5

Prerequisites: None

Module Format and Delivery (hours):

<table>
<thead>
<tr>
<th>Lectures</th>
<th>Tutorial</th>
<th>Assignments</th>
<th>Laboratories</th>
<th>Private Study</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>3</td>
<td>35</td>
<td>20</td>
<td>32</td>
<td>100</td>
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General Aims

This class aims to give students crucial background on research methods. In doing so, the module provides the necessary skills to carry out individual research projects (such as the MSc dissertation) and any field projects being done by the students. Students will also acquire familiarity with, and practice of, contemporary research techniques, and examine different ways of, and gain experience in, presenting research results.

The course examines the methodologies used in environmental research and evaluates their application to different kinds of research problems. The course includes a discussion on the key principles and practical exercises on both quantitative and qualitative research methods. This includes survey methods, interviewing techniques, use of census data, statistical methods, discourse analysis and policy analysis. The module also evaluates different participatory approaches and discusses ethical issues. Finally, there is also dissertation-related teaching on choosing a research question and a research method, and writing a research proposal.

Specific Learning Outcomes

Knowledge and Understanding

Upon successful completion of this module, the student will be able to:

- Answer research questions using a variety of different quantitative and qualitative methods.
- Evaluate the strengths and weaknesses of different research methods for answering a research question.
- Evaluate policy documents.
- Evaluate ethical issues related to a research project.
- Choose a research question and a research method.
- Write and present a research proposal.

Transferable skills

- Research skills and report writing
- Numeracy and data manipulation
- Communicate effectively (written, verbal and graphic)
- Time management and ability to work independently
- Team-working & building
- IT skills

**Syllabus**

The course will be taught using a combination of lectures, group discussions, seminars, and computer-based exercises.

The module requires the completion of the following parts – draft programme:

- Introduction to the course. Data sources: primary vs. secondary data sources. Finding gaps in research. Doing a (critical) literature review and placing research in context. The need for an argument and for a research question. Introduction to assignment 3.
- Qualitative Analysis and Survey Research Methods 1: Overview of these methods. Participant observation, focus groups, action research, grounded theory. Intro to the project on qualitative analysis (assignment 1).
- Qualitative Analysis and Survey Research Methods 2: Questionnaire design, and structured and semi-structured interviews.
- Qualitative Analysis and Survey Research Methods 3: Ethical issues. Validation issues and triangulation. How can the researcher affect the research. Qualitative techniques as a precursor for quantitative work.
- Dissertation ideas workshops - Each student to discuss dissertation ideas at four small group 2-hour workshops.
- Quantitative methods 1: Overview of quantitative methods and data sources. Basic statistics. Introduction to the project on quantitative analysis (assignment 2).
- Quantitative methods 2: Basic statistics.
- Quantitative methods 3: Modelling and validation.
- Individual meetings between students and staff to discuss draft dissertation proposal
- Public participation techniques and an analysis of different participatory approaches
- Planning, researching and writing the MSc dissertation: Structuring the dissertation. Preparing results for display. Tricks and tips for a good dissertation. Planning a research project.

**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.

**Criteria for assessment**

This is a 100% continual assessment class. Students will be assessed on the basis of three assignments:

**Assignment 1:** Coursework on **qualitative methods** (worth 25% of the final grade)

**Assignment 2:** Coursework on **quantitative methods** (worth 25% of the final grade)

**Assignment 3** – Write a 2,000 words **dissertation proposal** (worth 50% of the final grade) stating very clearly what you expect to achieve with your dissertation. The dissertation proposal is intended to form a broad introduction to your study topic rather than a definitive and final overview of your dissertation.

**Advice about dissertation proposal:** The dissertation proposal should be typed using double spacing and should consist of:

1. provisional title (written in the form of a question),
2. 200 word introduction stating the research aims (stating clearly what is the research question),
3. 1000 word literature review (including theoretical literature) supporting the relevance of the proposed study (i.e. justifying why is this research question relevant),
4. 800 word summary of the methodology to be employed (on how you are going to try answer the research question); any potential ethical or H&S issues need to be mentioned.
5. list of references cited in the proposal, and
6. timetable covering the work you plan to do for the dissertation.

N.B. The quality of the dissertation proposal is significant as only students who have a grade of 50% or above in the dissertation proposal will be allowed to proceed to the dissertation and therefore to attempt the MSc degree. Students that have less than 50% in the dissertation proposal will only be able to proceed to the diploma qualification. In addition, only students that have an average of 50% or above across all classes taken, will be able to proceed to MSc degree and undertake the dissertation. Therefore, a good mark in the dissertation proposal does not necessarily mean that you will be allowed to proceed to the MSc degree. This last aspect is determined at the Exam Board that takes place usually in the first week of June. Students however are strongly advised not to wait for June Examinations Board’s decision to proceed to the dissertation stage but to start working on the dissertation as soon as the topic is approved, i.e. after getting 50% or more on the dissertation proposal.

<table>
<thead>
<tr>
<th>Examination</th>
<th>Duration</th>
<th>Weighting %</th>
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</thead>
<tbody>
<tr>
<td>Coursework</td>
<td>No. of Assignments</td>
<td>3</td>
</tr>
</tbody>
</table>

(1) Coursework on qualitative methods; (2) Coursework on quantitative methods; (3) Dissertation proposal

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

Resit Examinations:
Students need to gain a summative mark of 40% / 50% (please delete as appropriate) 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 exam / coursework / viva (please delete as appropriate).

Recommended Reading

[Other references will be given during the course by the respective lecturers.]


DEFRA [Department of the Environment Food and Rural Affairs] (2004) *Taking it on*. Consultation document on the UK sustainable development strategy. Available online:


Oppenheim, A. N. (1992) *Questionnaire design, interviewing, and attitude measurement*. London; New York: Pinter Publishers. [Strathclyde Main Library D 300.72 OPP]


