Course syllabus

Utformning och metoder för tillämpad tvärvetenskaplig forskning
Research Design and Methodology for Interdisciplinary Applied Research

IMEN69, 5 credits, A (Second Cycle)

Valid for:
Decided by: PLED W
Date of Decision: 2018-03-22

General Information

Main field: Enviromental Management and Policy. Depth of study relative to the degree requirements: Second cycle, has second-cycle course/s as entry requirements.
Compulsory for: XA_EMP2
Language of instruction: The course will be given in English

Aim

This course is designed to support students in the development of their own interdisciplinary and applied research project, which shall be presented in the form of a convincing research proposal for a M.Sc. thesis. Emphasis is placed on principles for good research design, the logic and explanation behind different methodological choices, and on the skills, as well as judgement and approach, that characterise a good researcher.
Upon completing the course students, should be familiar with the aims of applied interdisciplinary research, characteristics of the scientific inquiry, central concepts relating to research design and methodology, and with several commonly used research approaches in the broad field of interdisciplinary/sustainability science research. Students should also have developed an understanding of how choices related to research design and methodology relate to theory and conceptual definitions, as well as an understanding of ethical aspects related to research. They should be able to apply this knowledge to make informed decisions in the development of their own research projects and demonstrate the ability to evaluate the strengths and weaknesses of their own, and other, research designs with a particular emphasis on alignment between the research questions and/or hypotheses, scope, collected data, inference and warrant.

Learning outcomes

Knowledge and understanding
For a passing grade the student must

• Be able to define interdisciplinary and applied research and contrast this to other forms of research;
• Be able to describe key concepts and principles of good practice related to research design, methodology, and construct operationalization and integrate these in the development of their own thesis proposal;
• Demonstrate the ability to describe and contrast different approaches to research design, methodology, data collection and data analysis, as well as the ability to assess when different approaches are viable and meaningful;
• Be able to describe and apply criteria for the evaluation of a research proposal/research study focusing on the logical flow between problematisation, research aim, research questions/hypotheses, methodology,
inference and warrant;
• Be able to discuss ethical aspects of choices related to research design and the use of research findings;
• Be able to describe the differences between causality and correlation.

Competences and skills
For a passing grade the student must

• Be able to formulate researchable questions to be answered and/or hypotheses to be tested;
• Be able to write a convincing research proposal for a M.Sc. thesis project featuring an interdisciplinary and applied approach;
• Be able to present individual research proposal and explain one’s choices in relation to research design;
• Be able to evaluate the strength and weaknesses of their own and others’ research proposals, with a particular emphasis on the ability to critically evaluate the appropriateness of different methodologies to test alternative hypotheses/answer research questions and construct various arguments, supported with relevant evidence;
• Demonstrate an ability to plan and execute course assignments within given time limits, using relevant methods for completing the assignment.

Judgement and approach
For a passing grade the student must

• Demonstrate awareness of ethical aspects of research and development work and the ability to apply relevant ethical guidelines in one’s own work;
• Demonstrate insight into the possibilities and limitations of research, its role in society and the responsibility of the individual for how it is used;
• Demonstrate insight into the possibilities and limitations of research within different relevant academic disciplines, for analysing sustainability-related problems and solutions, the role of such research in society and the responsibility of the individual for how it is used;
• Demonstrate the ability to identify the personal need for further knowledge and take responsibility for his or her ongoing learning.

Contents
The course is comprised of a number of lectures and in class exercises that focus on key concepts, principles and elements of research design. This is followed by lectures and seminars that address different approaches to research design, where students will read about key categories of approaches to research design and discuss examples of the different approaches. In class, lectures and seminars will also cover topics such as the research process and ethics in research design.
In parallel, students will be given time to work on developing their own research ideas. This process will be supported by in-class workshops, peer feedback and small-scale seminars where students discuss their proposals with peers and teachers. At the end of the course, students will have developed their own written research proposal and presented and defended this in a final research proposal seminar.

Examination details

Grading scale: TH - (U,3,4,5) - (Fail, Three, Four, Five)
Assessment: Active participation in seminars and workshops is mandatory. The final grade will be based on the quality of submitted peer and self-evaluations (15%), an exam (30%) and the quality of the final written research proposal, as well as the quality of the proposal presentation and defence (55%).

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

Admission

Admission requirements:
Students should have been admitted to the MSc Programme in Environmental Management and Policy, and have completed a minimum of 52.5 credits of programme courses

The number of participants is limited to: No
The course overlaps following course/s: IMEN34

Reading list

- According to a literature list that will be available at the latest eight weeks before start of the course on the course web page.

Contact and other information

Course coordinator: Beatrice Kogg, beatrice.kogg@iiiee.lu.se
Course homepage: http://www.iiiee.lu.se/education/emp/curriculum