



T-801-RESM

RESEARCH METHODS I

4 ECTS

Year of study: First year MSc.
Semester: Spring.
Level of course: 4. Graduate (Second cycle), introductory.
Type of course: Core for all MSc programs in engineering.
Prerequisites: No prerequisites.
Schedule: Runs for 12 weeks - a total of 30 teaching hours.
Supervisor: Jónas Þór Snæbjörnsson.
Lecturer: Juliet Newson and Jónas Þór Snæbjörnsson.

Learning outcome: On completion of the course the students should:

- Be aware of the expectations of an MSc thesis.
- Understand the foundations and distinctions of key research methods used in science.
- Understand how research papers and thesis are structured.
- Understand how to source, survey and select appropriate literature for formulating and resolving a problem.
- Know how to plan, prepare and manage a research project such as their MSc thesis.
- Be able to formulate a research question and research aim.
- Be able to write a literature review based on the research aim with a view to select appropriate methodologies for their MSc thesis.
- Be able to convey research information and demonstrate qualitative judgement through written and/or oral presentation.

Content:

Overview and approach:

The aim of the course is to prepare students for the challenges involved in engineering MSc thesis work. The focus will be on scientific writing and reporting, survey techniques and presentations. The goal is to prepare students for dealing with the information gathering, analysis and reporting skills that are required the all project work.

Key topics covered:

Research methods, search engines and other sources, surveying and reviewing literature, planning and managing a research project, scientific writing and presentation.

Reading material: To be announced in the learning management system (Canvas) at the beginning of the semester.

Teaching and learning activities: Lectures, discussions and several written assignments.

Assessment methods: To be announced in the learning management system (Canvas) at the beginning of the semester.

Language of instruction: English.

All course descriptions may be subject to change. Updated information on the course schedule, reading material, teaching and learning activities, and assessment methods will be introduced in the learning management system Canvas at the beginning of the semester.