SE-806-EI1 **ENVIRONMENTAL IMPACT** **6 ECTS**

Year of study: First year MSc.
Semester: Fall.
Level of course: 4.-5. Second cycle, introductory-intermediate.
Type of course: ***Taught in the Iceland School of Energy.*** Elective for all MSc programs in engineering.
Prerequisites: None.
Schedule: Taught during the 3-week teaching period at the end of the semester. Schedule will be introduced in the learning management system Canvas.
Supervisor: Juliet Newson.
Lecturer: David Christian Finger.

Learning outcome:
Knowledge:

- Upon completion of this course students will be familiar with the most common forms of environmental impact due to anthropogenic activities, estimation of their severity and understand possible mitigation techniques. A special focus will be laid on the energy sector.

Skills:

- Apply methods from environmental engineering and environmental sciences to analyze issues in environmental impact
- Be able to apply the EIA method to energy related projects
- Estimating severity and impact of potential environmental impacts
- Understand and apply environmental mitigation techniques to complex environmental issues

Competence:

- Apply scientific method to estimate and analyze environmental impacts
- Applying standard environmental engineering methodologies to a range of environmental impact questions
- Interpret and apply innovative methodologies to new issues in environmental impact

Content:
Environmental Impact Assessment (EIA) is the process by which the anticipated effects on the environment of a proposed development or project are measured. In this course the process of an EIA will be discussed and students will get the opportunity to develop their own EIA on a topic they select. The students will have the opportunity to get in contact with relevant stakeholders and acquire first-hand experience in the field of environmental impact assessments. The course is structured in three parts: i) lecturing of theoretical and field methods frequently used within the EIA process, ii) interaction with local businesses to acquire first-hand experience and iii) hands on training by writing an EI statement on a selected topic. The students should develop an environmental system understanding, enhance their awareness for environmental problems and get the opportunity to developed potential solutions to mitigate, compensate and reverse persistent environmental challenges.

Reading material: Provided in class.
Teaching and learning activities: Daily lectures, daily group-work, invited talks from experts in specific areas, an excursion to a representative field site in Iceland, project report writing, presentation of project results.
Assessment methods: Will be introduced in the learning management system Canvas at the beginning of the semester.
Language of instruction: English.