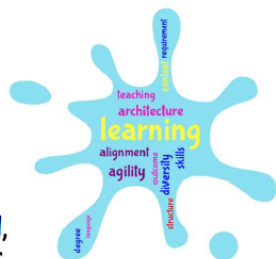




Agility,  
Resilience and  
Transformation  
in Curriculum Design



The DECART curriculum canvas, as a tool, permits higher education stakeholders to:

- share and confront ideas in curriculum design in a synthetic manner abstracting their details
- increase the quality and relevance of curriculum design activities
- foster collaboration & enhance capacity to operate jointly between programs
- boost interoperation of curriculums

With this curriculum canvas, you can:

- shape the broadlines of a new curriculum to design
- describe an existing or under development curriculum
- stimulate changes with cards and discuss component links
- confront a curriculum to an operational context
- pressure a curriculum with disruption & crisis cards

Once a curriculum designed in the canvas, curriculum resilience analysis & transformation are available via other DECART tools.

More infos:

[www.decartproject.eu](http://www.decartproject.eu) [decart-contact@imt-atlantique.fr](mailto:decart-contact@imt-atlantique.fr) #decartproject



The DECART project partners acknowledge the grant support received under the Erasmus+ Programme (number 22022-1-FR01-KA220-HED-000087657)



Co-funded by the  
Erasmus+ Programme  
of the European Union

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Logo



Institution

Reykjavik University, Iceland

Identifier

Version/date

July 2025

More Detail Links

<https://en.ru.is/ise>

Curriculum Title

Sustainable Energy Science MSc

### General Description

#### Addressing the prospective student:

**In this program**, you'll go beyond theories and data. You'll explore how energy systems work in the real world—examining their environmental, social, and economic impacts—and learn how to use science to drive meaningful change.

#### You Will:

- redefine what it means to be a scientist
- explore the science behind energy systems
- step into a global conversation
- practice innovation, not just learn about it
- find your place in a living energy laboratory

### Operational Context

**Reykjavik University (RU)** is one of three universities in Iceland, it is a young university (formed by merger in 2005 of two colleges dating from 1964 and 1988) and it is semiprivate institute, so students pay some tuition. All programs at RU are accredited by the Ministry of Education in Iceland.

**The program of Sustainable Energy Science** is operated within the Department of Engineering and conforms to its structure and quality standards.

**Permanent faculty and staff at RU** are 250.

**Registered students at RU** are 3600.

**RU offers programs** in Engineering, Business Administration, Computer Science, Law, Psychology and Sports Science.

**International students** are 8% of all students at RU.



## Goals Learning Outcomes



### Goal - addressing the student:

At the end of this journey, you won't just leave with a degree—you'll leave with the ability to lead. Because at the Iceland School of Energy, we don't just teach sustainable energy. We empower you to shape the future.

### Learning Outcomes.

The learning outcomes for the required courses are designed to be in line with and cover the overall learning outcomes for the program as a whole.

Note, that the program of Sustainable Energy Science does not provide a degree in engineering although it is operated within the Department of Engineering and conforms to its quality standards.

## Teaching & Learning



Reykjavik University places an emphasis on using **modern and diverse methods of teaching** and on providing students with support services that contribute to **student-centered learning** and academic progress.

**At the Iceland School of Energy**, learning is more than what happens in a classroom—it's about what you experience, discuss, and create.

## Assessments



- **Various methods** are employed, depending on the course.
- **At RU** the organisation of learning, teaching and assessment is based on each student taking responsibility for his/her own learning.
- **RU** sets the aims that assessment shall be carried out in an objective manner.

## Structure



The program is designed as **2 years of study, 120 ECTS**, and upon completion the student is awarded a MSc degree.

**Four pathway options** are provided in the program, along with the required and core courses that shape each one:

- 1) Geothermal Energy
- 2) Energy Technologies
- 3) Energy Management
- 4) Energy Policy and Economics

**Mandatory courses** for all pathways are five:

- Energy Field School (6 ECTS), • Energy Technology (6 ECTS),
- Energy Economics (6 ECTS), • Research Methodology (8 ECTS) and
- Thesis project (30 ECTS).

**Electives.** The rest of the degree can be built from electives that align with the goals or broaden the student's perspective.

### Structure and timeline for the program:

First year:			Second year:	
<b>Summer</b> 3 weeks One course	<b>Fall</b> 12 weeks 4-6 courses	<b>Spring</b> 12 weeks 4-6 courses	<b>Fall</b> Flexible, can be electives, thesis, study abroad, internship or research abroad.	<b>Spring</b> 17 weeks Final thesis project
	2 weeks Assessments	2 weeks Assessments		
	3 weeks One course	3 weeks One course		

## Transversal Skills



### Explicitly stated:

- interdisciplinary exploration is encouraged,
- ability to lead.
- empowerment to shape the future,
- students are encouraged to expand their horizons through global experiences (eg conferences and networks).
- interpersonal skills are trained.

## Entry Requirements



- Program is **open to students from diverse fields**: eg Natural Resources, Biological or Physical Sciences, Mathematics, Public Administration, Social Sciences, Business or Management.
- Applicants must have **completed calculus** to be ready for technical coursework.
- **Minimum GPA**: Icelandic Scale: 7.0/10 or US Scale: 2.80/4.00.

## Diversity & inclusion



- Various forms of inclusivity is accommodated at RU as much as feasible.
- International students are dominating in this program.
- For the last 5 years (2020-2025) 45% of all graduates, both from RU and from engineering, are females.
- Gender equality is and has been the norm in Iceland for years.

## Languages



**English** (both administration and instructions in courses). This applies to all courses at the MSc level in Dep. of Engineering.

## Locations



- Distance learning is not possible.
- Teaching and learning is mostly on campus, involving onsite classes, but also fieldwork and industry visits.
- Internship is possible.