

Introduction to Environmental Science

Title Introduction to Environmental Science

Semester E2024

Master programme in Environmental Science

Type of activity Course

Teaching language English

Study regulation Read about the Master Programme and find the Study Regulations at ruc.dk

Læs mere om uddannelsen og find din studieordning på ruc.dk

REGISTRATION AND STUDY ADMINISTRATIVE

You register for activities through [stads selvbetjening](#) during the announced registration period, which you can see on the [Study administration homepage](#).

Registration When registering for courses, please be aware of the potential conflicts and overlaps between course and exam time and dates. The planning of course activities at Roskilde University is based on the recommended study programmes, which should not overlap. However, if you choose optional courses and/or study plans that goes beyond the recommended study programmes, an overlap of lectures or exam dates may occur depending on which courses you choose.

Number of participants

ECTS 5

Responsible for the activity Kristian Syberg (ksyberg@ruc.dk)

Head of study Per Meyer Jepsen (pmjepsen@ruc.dk)

Teachers

Study administration INM Registration & Exams (inm-exams@ruc.dk)

Exam code(s) U60090

ACADEMIC CONTENT

Overall objective This course will introduce students to the field of Environmental Science. The course contains lectures, exercises, class-room discussions and student presentations and is initiated by a presentation of the largest and most significant global environmental problems as identified by the concept of Planetary Boundaries and UN's Sustainable Development Goals. The course seeks to cut across the science/social sciences divide by using an inter-disciplinary framework to understand the causes, impacts and potential solutions of these environmental issues by focusing also on the link between societal actions and impact on the environment. This interdisciplinary approach allows students to analyse both environmental consequences of societal actions and potential solutions to the environmental degradation caused by these actions within the framework of Environmental Science using elements from both natural and social sciences.

Detailed description of content This course will introduce students to the field of Environmental Science. The course contains lectures, exercises, class-room discussions and student presentations and is initiated by a presentation of the largest and most significant global environmental problems as identified by the concept of Planetary Boundaries and UN's Sustainable Development Goals (SDGs). The course will further introduce the concept of Ecosystem services.

This interdisciplinary approach allows students to analyse both environmental consequences of societal actions and potential solutions to the environmental degradation caused by these actions within the framework of Environmental Science, using elements from both natural and social sciences.

Course material and Reading list The course will draw upon scientific literature, reports from authorities and publications from relevant stakeholders. Specific content will be made available over Moodle.

lectures: 40 hours The main part of the course will be lectures that address the different topics of the course

Preparation: 80 hours Students are expected to prepare approximately 2 hours for each 1 hour of lecture. This includes preparing presentations made in groups

Overall plan and expected work effort **Student presentations and exercises: 12 hours** The students will present cases related to the topics of the course

Final question time: 2 hours There will be a session of two hours after the course, where students can ask questions related to the course and the exam

Exam: 1 hour The exam is a 30 min oral exam, with 30 min preparation

Total: 135 hours

Format

The course includes formative evaluation based on dialogue between the students and the teacher(s).

Evaluation and feedback Students are expected to provide constructive critique, feedback and viewpoints during the course if it is needed for the course to have better quality. Every other year at the end of the course, there will also be an evaluation through a questionnaire in SurveyXact. The Study Board will handle all evaluations along with any comments from the course responsible teacher.

Furthermore, students can, in accordance with RUCs 'feel free to state your views' strategy through their representatives at the study board, send evaluations, comments or insights from the course to the study board during or after the course.

Programme The course will be based on subsequent introductions to the themes of the course (Planetary boundaries, SDGs and Ecosystem Services). Student presentations will integrate understandings of these themes in their presentations.

Specific program will be made available on Moodle

ASSESSMENT

After completing the course, the students will be able to:

- Overall learning outcomes
- demonstrate knowledge of the scientific basis of the most important environmental challenges, their cause(s), consequences and possible solution through scientific and social actions
 - analyse and evaluate how anthropogenic consumption, production and distribution of resources and goods impact the environment throughout value chains
 - demonstrate knowledge of how scientists have to interact with policy makers and the public at large in the formulation of environmental management policies needed in the interests of global sustainability
 - demonstrate how science is used to inform decision making through broadly accepted risk assessment principles and by setting thresholds etc
 - be able to access and evaluate environmental challenges from both a scientific and a production chain perspective
 - initiate and conduct interdisciplinary research into a specific environmental topic, thereby linking production and resource use with environmental impact.

Individual oral exam with time for preparation.

Time for preparation including time to pick a question by drawing lots: 30 minutes.

Form of examination Time allowed for exam including time used for assessment: 30 minutes.

Permitted support and preparation materials: All.

Assessment: 7-point grading scale.

Moderation: Internal co-assessor.

Form of Re-examination Samme som ordinær eksamen / same form as ordinary exam

Type of examination in special cases

The exam is an individual oral exam with time for preparation. Time for preparation including time to pick a question by drawing lots is 30 minutes, and time allowed for exam including time used for assessment is 30 minutes. The oral exam starts with a 5-minute presentation by the student on basis of the question drawn and is followed by discussion.

Assesment criteria:

Examination
and
assessment
criteria

- demonstrate knowledge of the scientific basis of the most important environmental challenges, their cause(s), consequences and possible solution through scientific and social actions
- analyse and evaluate how anthropogenic consumption, production and distribution of resources and goods impact the environment throughout value chains
- demonstrate knowledge of how scientists have to interact with policy makers and the public at large in the formulation of environmental management policies needed in the interests of global sustainability
- demonstrate how science is used to inform decision making through broadly accepted risk assessment principles and by setting thresholds etc
- clearly present and communicate the scientific content of the course
- engage in a scientific dialogue and discussion with the assessors

Exam code(s) Exam code(s) : U60090

Course days:

Hold: 1

Introduction to Environmental Science (ES)

time 04-09-2024 08:15 til
04-09-2024 10:00

location 12.1-073 - teorilokale i 12.1 (30)

Teacher Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science (ES)

time 05-09-2024 08:15 til
05-09-2024 12:00
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forberedelsesnorm D-VIP ikke valgt
location 27.1-089 - teorirum 27 (66)
Teacher Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science (ES)

time 06-09-2024 08:15 til
06-09-2024 10:00
location 28b.0-01 - store teorirum (30)
Teacher Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science (ES)

time 11-09-2024 08:15 til
11-09-2024 10:00
location 12.1-073 - teorilokale i 12.1 (30)
Teacher Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science (ES)

time 12-09-2024 08:15 til
12-09-2024 10:00
location 28b.0-01 - store teorirum (30)
Teacher Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science (ES)

time 13-09-2024 08:15 til
13-09-2024 12:00
location 12.1-073 - teorilokale i 12.1 (30)
Teacher Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science (ES)

time 16-09-2024 08:15 til
16-09-2024 10:00

location 12.1-073 - teorilokale i 12.1 (30)
Teacher Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science (ES)

time 18-09-2024 08:15 til
18-09-2024 10:00

location 12.1-073 - teorilokale i 12.1 (30)
Teacher Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science (ES)

time 19-09-2024 08:15 til
19-09-2024 10:00

location 12.1-073 - teorilokale i 12.1 (30)
Teacher Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science (ES)

time 20-09-2024 08:15 til
20-09-2024 10:00

location 12.1-073 - teorilokale i 12.1 (30)
Teacher Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science (ES)

time 23-09-2024 08:15 til
23-09-2024 10:00

location 12.1-073 - teorilokale i 12.1 (30)
Teacher Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science (ES)

time 25-09-2024 08:15 til
25-09-2024 10:00

location 12.1-073 - teorilokale i 12.1 (30)
Teacher Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science (ES)

time 26-09-2024 08:15 til
26-09-2024 10:00

location 12.1-073 - teorilokale i 12.1 (30)

Teacher Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science (ES)

time 27-09-2024 08:15 til
27-09-2024 10:00

location 12.1-073 - teorilokale i 12.1 (30)

Teacher Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science (ES)

time 30-09-2024 08:15 til
30-09-2024 10:00

location 12.1-073 - teorilokale i 12.1 (30)

Teacher Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science (ES)

time 02-10-2024 08:15 til
02-10-2024 10:00

location 12.1-073 - teorilokale i 12.1 (30)

Teacher Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science (ES)

time 03-10-2024 08:15 til
03-10-2024 10:00

location 12.1-073 - teorilokale i 12.1 (30)

Teacher Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science (ES)

time 04-10-2024 08:15 til
04-10-2024 10:00

location 12.1-073 - teorilokale i 12.1 (30)

Teacher Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science - Exam (ES)

time 10-10-2024 08:15 til
10-10-2024 16:00

Teacher Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science - Reexam (ES)

time 28-01-2025 08:15 til
28-01-2025 16:00

Teacher Kristian Syberg (ksyberg@ruc.dk)