Introduction to Environmental Science

Title	Introduction to Environmental Science
Semester	E2022
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

Registration	Sign up for study activities at stads selvbetjeningwithin the announced registration period, as you can see on the Studyadministration homepage. When signing up for study activities, please be aware of potential conflicts between study activities or exam dates. The planning of activities at Roskilde University is based on the recommended study programs which do not overlap. However, if you choose optional courses and/or study plans that goes beyond the recommended study programs, 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 Studieadministration (inm-studieadministration@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). Th course will further introduce the concept of Ecosystem services. 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.
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.
Overall plan and expected work effort	**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 **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	

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

Overall learning outcomes	After completing the course, the students will be able to: ● 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.
Form of examination	Individual oral exam with time for preparation. Time for preparation including time to pick a question by drawing lots: 30 minutes. 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	
Examination and assessment criteria	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: ● 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	08-09-2022 08:15 til 08-09-2022 10:00
forberedelsesnorm	ikke valgt
forberedelsesnorm D-VIP	ikke valgt
location	11.2-047 - gl. natfagsal (65)
Teacher	Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science (ES)

time	09-09-2022 08:15 til 09-09-2022 10:00
location	11.2-047 - gl. natfagsal (65)
Teacher	Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science (ES)

time	12-09-2022 10:15 til 12-09-2022 12:00
location	11.2-047 - gl. natfagsal (65)
Teacher	Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science (ES)

time	13-09-2022 14:15 til 13-09-2022 16:00
location	11.2-047 - gl. natfagsal (65)
Teacher	Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science (ES)

time	15-09-2022 08:15 til 15-09-2022 10:00
location	11.2-047 - gl. natfagsal (65)
Teacher	Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science (ES)

time	16-09-2022 08:15 til 16-09-2022 10:00
location	11.2-047 - gl. natfagsal (65)
Teacher	Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science (ES)

time	19-09-2022 10:15 til 19-09-2022 12:00
location	11.2-047 - gl. natfagsal (65)
Teacher	Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science (ES)

time	20-09-2022 14:15 til 20-09-2022 16:00
location	11.2-047 - gl. natfagsal (65)
Teacher	Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science (ES)

time	22-09-2022 08:15 til 22-09-2022 10:00
location	11.2-047 - gl. natfagsal (65)
Teacher	Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science (ES)

time	23-09-2022 08:15 til 23-09-2022 10:00
location	11.1-047 - studiesal (40)
Teacher	Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science (ES)

time	26-09-2022 10:15 til 26-09-2022 12:00
location	11.2-047 - gl. natfagsal (65)
Teacher	Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science (ES)

time	27-09-2022 14:15 til 27-09-2022 16:00
location	11.2-047 - gl. natfagsal (65)
Teacher	Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science (ES)

time	29-09-2022 08:15 til 29-09-2022 10:00
location	11.2-047 - gl. natfagsal (65)
Teacher	Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science (ES)

time	30-09-2022 08:15 til 30-09-2022 10:00
location	11.2-047 - gl. natfagsal (65)
Teacher	Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science (ES)

time	03-10-2022 10:15 til 03-10-2022 12:00
location	11.2-047 - gl. natfagsal (65)
Teacher	Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science (ES)

time	04-10-2022 14:15 til 04-10-2022 16:00
location	11.2-047 - gl. natfagsal (65)
Teacher	Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science (ES)

time	06-10-2022 08:15 til 06-10-2022 10:00
location	11.2-047 - gl. natfagsal (65)
Teacher	Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science (ES)

time	07-10-2022 08:15 til 07-10-2022 10:00
location	11.2-047 - gl. natfagsal (65)
Teacher	Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science - Exam (ES)

time	11-10-2022 12:15 til 11-10-2022 18:00
forberedelsesnorm	ikke valgt
forberedelsesnorm D-VIP	ikke valgt
location	12.1-063 - grupperum (10) / 12.1-067 - grupperum (12)
Teacher	Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science - Exam (ES)

time	13-10-2022 12:15 til 13-10-2022 18:00
forberedelsesnorm	ikke valgt
forberedelsesnorm D-VIP	ikke valgt
location	12.1-067 - grupperum (12) / 12.1-063 - grupperum (10)
Teacher	Kristian Syberg (ksyberg@ruc.dk)

Introduction to Environmental Science - Reexam (ES)

time	30-01-2023 08:15 til 30-01-2023 16:00
forberedelsesnorm	ikke valgt

forberedelsesnorm D-VIP	ikke valgt
location	12.1-063 - grupperum (10) / 12.1-067 - grupperum (12)
Teacher	Kristian Syberg (ksyberg@ruc.dk)