

Climate Change Ecology

Title	Climate Change Ecology
Semester	E2022
Master programme in	Miljø biologi / Miljørisiko / 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	<p>Sign up for study activities at stads selvbetjening within the announced registration period, as you can see on the Studyadministration homepage.</p> <p>When signing up for study activities, please be aware of potential conflicts between study activities or exam dates.</p> <p>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.</p>
Number of participants	The Master Programme/Institute reserves the right to cancel the course if fewer than 8 studentes are registered for the course.
ECTS	5
Responsible for the activity	Gry Lyngsie (lyngsie@ruc.dk) Simon David Herzog (sherzog@ruc.dk)
Head of study	Per Meyer Jepsen (pmjepsen@ruc.dk)
Teachers	
Study administration	INM Studieadministration (inm-studieadministration@ruc.dk)
Exam code(s)	U60094

ACADEMIC CONTENT

Overall objective	This course will provide students with a fundamental knowledge of weather, climate processes, ongoing climate changes, the mutual interactions between ecosystem processes and climate and, the potential ecological consequences of past and recent climate changes. Examples include both natural and post-industrial perspective cases with a special focus on geographical systems. This is a theoretical course including lectures, class-room exercises and student presentations.
Detailed description of content	<p>This course will provide students with a fundamental knowledge of weather, climate processes, ongoing climate changes, the mutual interactions between ecosystem processes and climate and, the potential ecological consequences of past and recent climate changes.</p> <p>Examples include both natural and post-industrial perspective cases with a special focus on geographical systems. This is a theoretical course including lectures, class-room exercises and student presentations.</p>
Course material and Reading list	A combination of a textbook and scientific literature. More details will be announced on Moodle
Overall plan and expected work effort	<p>The course is a 5 ETCS credit course, corresponding to an expected student work load of ca. 135 hours.</p> <ul style="list-style-type: none"> • Lectures: 28 h • Field trip: 6 h • Hand in: ca 20 h • Preparation: ca 72 h • Exam preparation: ca 8 h • Exam: 1 h
Format	
Evaluation and feedback	<p>The course includes formative evaluation based on dialogue between the students and the teacher(s).</p> <p>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.</p> <p>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.</p>
Programme	<p>This course is divided into different sections, starting with an introduction into climate system and human induced climate change. In the second part the climate change effects on ecosystems will be discussed.</p> <p>The course includes a field trip will go Stevns klint, a prime example of a natural climate change induced mass extinction.</p>

ASSESSMENT

Overall learning outcomes

After completing the course, student will be able to:

- demonstrate knowledge of the basic theories underlying weather and climate
- identify causes and mechanisms behind climate change
- identify and evaluate the effects of climate change on ecosystems
- assess the consequences of climate change on regional weather conditions
- evaluate the impact of climate change and the resulting changes in ecological processes in various types of ecosystems
- distinguish between feedback mechanisms and their impact on climate and climate change
- propose and investigate mitigation actions for ecosystem consequences of climate change.

Form of examination

Individual oral exam with time for preparation.

Time for preparation including time to pick a question by drawing lots: 1 day.

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 oral exam starts with a student presentation followed by a dialog about the course content.

Students will be assessed by their ability to:

- demonstrate knowledge of the basic theories underlying weather and climate
- identify causes and mechanisms behind climate change
- identify and evaluate the effects of climate change on ecosystems
- assess the consequences of climate change on regional weather conditions
- evaluate the impact of climate change and the resulting changes in ecological processes in various types of ecosystems
- distinguish between feedback mechanisms and their impact on climate and climate change
- propose and investigate mitigation actions for ecosystem consequences of climate change.

The assessment of the oral exam is based on the student's ability to meet the criteria mentioned above and their ability to

- 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) : U60094

Course days:

Hold: 1

Climate Change Ecology (ES)

time 01-11-2022 10:15 til
 01-11-2022 12:00

location 12.1-073 - teorilokale i 12.1 (30)

Teacher Simon David Herzog (sherzog@ruc.dk)
 Gry Lyngsie (lyngsie@ruc.dk)

Climate Change Ecology (ES)

time 02-11-2022 14:15 til
 02-11-2022 16:00

location 12.1-073 - teorilokale i 12.1 (30)

Teacher Gry Lyngsie (lyngsie@ruc.dk)
 Simon David Herzog (sherzog@ruc.dk)

Climate Change Ecology (ES)

time 04-11-2022 10:15 til
 04-11-2022 12:00

location 12.1-073 - teorilokale i 12.1 (30)

Teacher Simon David Herzog (sherzog@ruc.dk)
 Gry Lyngsie (lyngsie@ruc.dk)

Climate Change Ecology (ES)

time 08-11-2022 10:15 til
 08-11-2022 12:00

location 12.1-073 - teorilokale i 12.1 (30)

Teacher Gry Lyngsie (lyngsie@ruc.dk)
Simon David Herzog (sherzog@ruc.dk)

Climate Change Ecology (ES)

time 09-11-2022 14:15 til
09-11-2022 16:00

location 12.1-073 - teorilokale i 12.1 (30)

Teacher Simon David Herzog (sherzog@ruc.dk)
Gry Lyngsie (lyngsie@ruc.dk)

Climate Change Ecology (ES)

time 11-11-2022 10:15 til
11-11-2022 12:00

location 12.1-073 - teorilokale i 12.1 (30)

Teacher Simon David Herzog (sherzog@ruc.dk)
Gry Lyngsie (lyngsie@ruc.dk)

Climate Change Ecology (ES)

time 15-11-2022 10:15 til
15-11-2022 12:00

location 12.1-073 - teorilokale i 12.1 (30)

Teacher Simon David Herzog (sherzog@ruc.dk)
Gry Lyngsie (lyngsie@ruc.dk)

Climate Change Ecology (ES)

time 16-11-2022 14:15 til
16-11-2022 16:00

location 12.1-073 - teorilokale i 12.1 (30)

Teacher Simon David Herzog (sherzog@ruc.dk)
Gry Lyngsie (lyngsie@ruc.dk)

Climate Change Ecology (ES)

time 18-11-2022 10:15 til
18-11-2022 12:00

location 12.1-073 - teorilokale i 12.1 (30)
Teacher Gry Lyngsie (lyngsie@ruc.dk)
Simon David Herzog (sherzog@ruc.dk)

Climate Change Ecology (ES)

time 22-11-2022 10:15 til
22-11-2022 12:00
location 12.1-073 - teorilokale i 12.1 (30)
Teacher Gry Lyngsie (lyngsie@ruc.dk)
Simon David Herzog (sherzog@ruc.dk)

Climate Change Ecology (ES)

time 23-11-2022 14:15 til
23-11-2022 16:00
location 12.1-073 - teorilokale i 12.1 (30)
Teacher Simon David Herzog (sherzog@ruc.dk)
Gry Lyngsie (lyngsie@ruc.dk)

Climate Change Ecology (ES)

time 25-11-2022 10:15 til
25-11-2022 12:00
location 12.1-073 - teorilokale i 12.1 (30)
Teacher Gry Lyngsie (lyngsie@ruc.dk)
Simon David Herzog (sherzog@ruc.dk)

Climate Change Ecology (ES)

time 29-11-2022 10:15 til
29-11-2022 12:00
location 12.1-073 - teorilokale i 12.1 (30)
Teacher Gry Lyngsie (lyngsie@ruc.dk)
Simon David Herzog (sherzog@ruc.dk)

Climate Change Ecology (ES)

time 30-11-2022 14:15 til
30-11-2022 16:00

location 12.1-073 - teorilokale i 12.1 (30)

Teacher Gry Lyngsie (lyngsie@ruc.dk)
Simon David Herzog (sherzog@ruc.dk)

Climate Change Ecology (ES)

time 02-12-2022 10:15 til
02-12-2022 12:00

location 12.1-073 - teorilokale i 12.1 (30)

Teacher Gry Lyngsie (lyngsie@ruc.dk)
Simon David Herzog (sherzog@ruc.dk)

Climate Change Ecology (ES)

time 06-12-2022 10:15 til
06-12-2022 12:00

location 12.1-073 - teorilokale i 12.1 (30)

Teacher Gry Lyngsie (lyngsie@ruc.dk)
Simon David Herzog (sherzog@ruc.dk)

Climate Change Ecology (ES)

time 07-12-2022 14:15 til
07-12-2022 16:00

location 12.1-073 - teorilokale i 12.1 (30)

Teacher Simon David Herzog (sherzog@ruc.dk)
Gry Lyngsie (lyngsie@ruc.dk)

Climate Change Ecology (ES)

time 09-12-2022 10:15 til
09-12-2022 12:00

location 12.1-073 - teorilokale i 12.1 (30)

Teacher Simon David Herzog (sherzog@ruc.dk)
Gry Lyngsie (lyngsie@ruc.dk)

Climate Change Ecology (ES)

time 13-12-2022 10:15 til
13-12-2022 12:00

location 12.1-073 - teorilokale i 12.1 (30)

Teacher Simon David Herzog (sherzog@ruc.dk)
Gry Lyngsie (lyngsie@ruc.dk)

Climate Change Ecology (ES)

time 14-12-2022 14:15 til
14-12-2022 16:00

location 12.1-073 - teorilokale i 12.1 (30)

Teacher Simon David Herzog (sherzog@ruc.dk)
Gry Lyngsie (lyngsie@ruc.dk)

Climate Change Ecology (ES)

time 16-12-2022 10:15 til
16-12-2022 12:00

location 12.1-073 - teorilokale i 12.1 (30)

Teacher Gry Lyngsie (lyngsie@ruc.dk)
Simon David Herzog (sherzog@ruc.dk)

Climate Change Ecology - Exam (ES)

time 24-01-2023 08:15 til
24-01-2023 16:00

forberedelsesnorm ikke valgt

forberedelsesnorm D-VIP ikke valgt

location 12.1-063 - grupperum (10) / 12.1-067 - grupperum (12)

Teacher Gry Lyngsie (lyngsie@ruc.dk)
Simon David Herzog (sherzog@ruc.dk)

Climate Change Ecology - Reexam (ES)

time 22-02-2023 08:15 til
22-02-2023 16:00

forberedelsesnorm ikke valgt

forberedelsesnorm D-VIP ikke valgt

location 12.1-067 - grupperum (12) / 12.1-063 - grupperum (10)

Teacher Gry Lyngsie (lyngsie@ruc.dk)
Simon David Herzog (sherzog@ruc.dk)