



# Exchange programme Vrije Universiteit Amsterdam

Vrije Universiteit Amsterdam - Exchange programme Vrije Universiteit Amsterdam - 2024-2025

## Exchange

Vrije Universiteit Amsterdam offers many English-taught courses in a variety of subjects, ranging from arts & culture and social sciences, neurosciences and computer science, to economics and business administration.

The International Office is responsible for course approval and course registration for exchange students. For details about course registration, requirements, credits, semesters and so on, please [visit the exchange programmes webpages](#).

# Sustainability and Environmental Change

Course Code	AB_1230
Credits	6
Period	P1
Course Level	300
Language Of Tuition	English
Faculty	Faculty of Science
Course Coordinator	dr. F. Riva
Examiner	dr. F. Riva
Teaching Staff	dr. F. Riva, dr. P. Scussolini
Teaching method(s)	Seminar, Lecture

## Course Objective

In this course students learn about the environment's pivotal role in achieving sustainable solutions for human development, mainly focused on global environmental problems. After this course, students:

1. can explain key concepts from the natural sciences relevant for sustainability studies;
2. can characterize key components of the environment, namely water, land and atmosphere, and can explain key processes affecting their characteristics;
3. can explain the role of the environment in socio-environmental systems;
4. can identify methods to quantify the state of the environment, and analyze environmental change;
5. are familiar with data and trends for relevant the environmental conditions for specific sustainability challenges.

## Course Content

The environment plays a crucial role in supporting societies, for example by providing materials, energy, food, clean air, and clean water. Environmental conditions change over space and time, influenced by both natural and human factors. In this course students learn about the environment's pivotal role in achieving sustainable solutions for human development. Starting from the key environmental components water, land and atmosphere, we characterize environmental change and how that leads to other environmental and societal changes. Methods to assess environmental change are addressed and students identify for their specific case studies what strengths, opportunities, weaknesses, and threats are associated to the 'planet dimension'. The course comprises interactive lectures and exercises and is evaluated through an assignment and a written exam.

## Additional Information Teaching Methods

The course is organized in thematic weeks, which provide students with an understanding of the specifics of the dimensions water, land and atmosphere, how these can be studied and how they interact. Each week has 1 to 2 lectures, in parallel to which students develop their assignment. Lectures and assignment are supported by in-class discussions, reading material, and exercises.

## Method of Assessment

The course will be evaluated through

1. A 3-minute speed talk (presentation) describing a sustainability challenge in quantitative terms (30% of final grade)
2. A closed-book written exam (70% of final grade).

Note:

- An overall minimum grade of 5.5 is required to pass the course.
- A minimum grade of 5.0 for the exam is required to pass the course.
- There is one resit opportunity for the exam (will be discussed, typically a few months after).
- Assignments with a grade lower than 5.5 can be improved once, after which the maximum grade that can be obtained for the assignment is 6.0.

## Literature

The course builds on a series of selected articles, relative to the lecture content. Required and recommended readings are listed at the learning environment. Moreover we make use of:

- Open data sources, educational software packages, websites, videos etc

## Additional Information Target Audience

The course is primarily aimed at students following the minor Sustainability: Global Challenges, Interdisciplinary Solutions, but is open to all 3rd year BSc students.

## Additional Information

The course is coordinated by Dr. Federico Riva

Core lecturers:

- Dr. Federico Riva
- Dr. Paolo Scussolini