



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](#).

Sustainable Energy: Biomass and Biofuels

Course Code	X_420540
Credits	3
Period	P5
Course Level	200
Language Of Tuition	English
Faculty	Faculty of Science
Course Coordinator	prof. dr. R. Croce
Examiner	prof. dr. R. Croce
Teaching Staff	prof. dr. R. Croce
Teaching method(s)	Lecture, Seminar

Course Objective

1. De student kan de biochemische conversie van biomassa naar hernieuwbare producten en biobrandstoffen beschrijven
2. De student kan de wetenschappelijke en technologische aspecten beschrijven van de omzetting van lichtenergie, CO₂ en water in biomassa tijdens het fotosyntheseproces (van fotonen naar biomassa) en van de omzetting van biomassa in hernieuwbare energie, met inbegrip van de omzetting van licht naar biomassa.

Course Content

The course begins with an introductory general lecture on sustainable and renewable

energy. Then we continue describing the photosynthetic process, including photosynthetic efficiency, bioenergetic aspects, photophysics of different pigments, assimilation of CO₂, and different regulatory

mechanisms. Then we will proceed to review current and future developments related to the conversion of biomass into different forms of sustainable biofuels. This course focuses on the physical and chemical aspects of the processes.

Additional Information Teaching Methods

The course consists of lectures and seminars.

Method of Assessment

The knowledge acquired will be tested through assignments and a written examination

Literature

Lecture notes and additional material are provided by the lecturer

Additional Information Target Audience

1 SBI