

Wetlands (2022)

Name of course: Wetlands

ECTS credits: 5 ECTS (European Credit Transfer System)

Course parameters:

Language: English

Level of course: PhD (Masters and young researchers with strong interest are also welcomed)

No. of contact hours/hours in total incl. preparation, assignment(s) or the like: 120 hours in total, including lectures, exercises and assignments, as well as one week of preparatory reading

Capacity limits: unlimited

Objectives of the course:

The course aims to provide participants with:

- updated knowledge of wetland soil characterization and mapping,
- assessment of hydrological dynamics under wetland restoration and rewetting,
- monitoring greenhouse gases emission and biomass utilization,
- understanding of the biogeochemical processes in restored and constructed wetlands,
- performance overview of wetlands for application in the agricultural catchment,
- overview of wetland ecosystems, their applicability, and their limitations.

Learning outcomes and competencies:

At the end of the course, the participants will be able to:

- describe wetland soil characteristics
- characterize biogeochemical processes in wetlands,
- describe the impact of wetlands on nutrient cycling in agricultural catchments,
- understand different wetland systems, their applicability and limitations,
- assess hydraulics of restored wetland and constructed wetland systems,

Prerequisites:

General knowledge of natural wetlands, peatlands, soil, constructed wetlands, polluted water characteristics

Name of lecturers:

- Shubiao Wu, Associate Professor. Department of Agroecology, Aarhus University. Responsible for wetland biogeochemical processes

- Mogens H. Greve, Senior Scientist. Department of Agroecology, Aarhus University. Responsible for wetland soil characterization and digital mapping
- Bo V. Iversen, Associate Professor. Department of Agroecology, Aarhus University. Responsible for hydrology in wetlands
- Poul Erik Lærke, Senior Researcher, Department of Agroecology, Aarhus University. Responsible for wetland GHGs emission and biomass production
- Lorenzo Pugliese, Academic employee, Department of Agroecology, Aarhus University. Responsible for nutrient transport and modeling in wetland soil. He will also supervise lab tracer experiments and field trips
- Johannes W.M. (Jeroen) Pullens, Postdoc, Department of Agroecology, Aarhus University. Responsible for modelling the impacts of climate change on nutrient cycling in wetlands. He will also supervise measuring and analyzing the greenhouse gas fluxes in fields.

Type of course/teaching methods:

Lectures, Exercises, Group work, Field work, Final assignment

Course assessment:

Classwork - satisfactory participation in the course; Group work and oral presentation. Prior to the course, each participant should prepare a poster addressing their research.

Provider:

Department of Agroecology, Aarhus University, Blichers Allé 20, Postboks 50, DK-8830 Tjele

Special comments on this course:

The course fee is 500 Euro.

Time:

5 – 10 September 2022

Place:

AU, Campus Foulum, and the agricultural catchment wetlands of Denmark

Registration:

The deadline for registration is June 30, 2022. Admission information will be sent out no later than July 30, 2022

For registration:

Use this link for registration and payment: <https://events.au.dk/wetlands2022/signup>

If you have any questions, please contact Shubiao Wu, e-mail: wushubiao@agro.au.dk