**Wetlands (2023)**

**Name of course:** Wetlands (2023)

**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, lab and field trips, and assignments, as well as one week of preparatory reading
**Capacity limits:** 20

**Objectives of the course:**The course aims to provide participants with:

* Understand the relationship between wetlands and climate change,
* updated knowledge of wetland soil characterization and mapping,
* assessment of hydrological dynamics under wetland restoration and rewetting,
* monitoring greenhouse gases emission and biomass utilization,
* biogeochemical processes in natural, restored, and treatment wetlands,
* performance overview of wetlands for application in the agricultural catchment,
* overview of wetland ecosystems, their applicability, and their limitations,
* discussion on incentives and policy initiatives to restore wetlands/peatlands

**Learning outcomes and competencies:**

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

* have a better awareness of the ecological functionality of wetlands and their role in mitigating climate change
* have an overall of the current wetland mapping technology
* describe wetland soil and hydrology characteristics
* understand interactions of biogeochemical processes in wetlands,
* describe the impact of wetlands on nutrient cycling in agricultural catchments,
* understand different wetland systems, their applicability, and limitations,
* use different methods to measure greenhouse gas fluxes,
* discuss peatland trade-offs and controversies, and policy initiatives.

**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 emissions 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, Researcher, Department of Agroecology, Aarhus University. Responsible for different methods to measure greenhouse gas fluxes.
* Claudia Nielsen, Postdoc, Department of Agroecology, Aarhus University. Responsible for peatland trade-offs and controversies.
* A few international experts will be invited.

**Type of course/teaching methods:**Lectures, exercises, group work, lab and field trip, final assignment

**Course assessment:**

Classwork - satisfactory participation in the course; Group work and oral presentation. Prior to the course, each participant should prepare one slide PPT to introduce 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 600 Euro.

**Time:**

September 4-9 2023

**Place:**

Meeting room #2, AU, Campus Foulum, and the agricultural catchment wetlands of Denmark

**Registration:**

The deadline for registration is May 30, 2023. Admission information will be sent out no later than June 30, 2023.

**For registration:**

Use this link for registration and payment <https://events.au.dk/wetlands2023/signup>.

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