

Name of the course: Soil Spectroscopy Journal Club**ECTS credits:** 1,5**Course parameters:***Language:* English*Level of course:* PhD course*Semester/quarter:* Q1 2018 to Q2 2018*Total work load app. 44 hours* (including preparatory reading, lectures and discussions during the course)*Capacity limits:* 10-15 participants**Objectives of the course:**

The objective of the journal club is to foster an interest in current scientific achievements in different types of soil spectroscopy (Near Infrared, mid Infrared and Laser Induced Breakdown Spectroscopy). With the growing number of students working within the field of soil spectroscopy in the Soil Section group at the Agroecology Department, the Journal Club will promote an environment that allows to discuss soil spectroscopy scientific data and to exchange ideas in a group setting. The journal club will help the students to stay updated with the most recent activities in this area and encourage the development of their own research ideas and interests. The students will learn how to critically analyse data and apply new concepts.

Moreover, depending on the need, some of the sessions will be dedicated to paper writing. The students will have a chance to interact and support each other in the process of writing manuscripts and data analysis.

The course is aimed towards PhD students and postdocs working with spectroscopy. However, MSc students and other colleagues within different research areas are also welcome.

Learning outcomes and competences**After completing the course the students should be able to:**

- Search for relevant literature and methodologies
- Describe and present research results of scientific papers
- Critically discuss research papers examining the limitations of the research method presented
- Formulate possible future approaches for method improvement
- Reflect on the possible application to their own research

Compulsory programme:

Readings of all the presented and discussed Journal papers, preparation of presentations and active participation.

Course contents:**Out-of-class preparation**

1. Searching for the most recent journal papers related to the student's research area.
2. Preparation for the paper presentation (of the students' choice: ppt, printouts, white board).
3. Reading of all the papers to be presented.

In-class activities

4. Brief paper presentation by one student.
5. Formulation of critical questions for the methodology used in the presented paper.
6. Active discussion by all members with suggestion on possible improvements.

Prerequisites:

Ph.D. students from Agroecology

Name of instructor:

Maria Knadel, Department of Agroecology, Science and Technology, Aarhus University.

Type of course/teaching methods:

Out-of-class reading, in-class presentations and discussions.

Literature:

The students choose the papers most relevant for their research.

Course homepage:**Course assessment:**

Pass or fail on the basis of active participation.

Provider:

Department of Agroecology

Special comments on this course:

none

Time:

12 sessions – once every 2 weeks.

Place: AU-Foulum

Registration:

For registration or questions: maria.knadel@agro.au.dk