FoSW PhD courses & activities - vs. 2 November 2023. Feel free to contact the organizer for more information.
For details on PhD courses, please search with course code here: https://www.slu.se/en/education/programmes-courses/doctoral-studies/search-doctoral-courses/

Annually	course code	when?	course coordinator	aims & contents
Multivariate methods for ecologists	PNS0190 & PNS0074	annually HT	Ulf Grandin	Application of a number of multivariate methods on ecological data. After the course, the students should be able to analyse multivariate ecological data using R.
Understanding & coding R	PNG0101	annually	Matt Low	Basic introduction into R
Communicate Science	POG0086	annually HT	Galia Zamaratskaia & Lotta Jäderlund	Learn how to communicate your science to a wider audience. Online course.
How to become a Postdoc	Workshop	annually VT	RS Ecology	
Careers outside university	Workshop	annually HT	Eveline Krab	
Thesis summary writing	Workshop	annually HT	Philip Jacobson	

2022				
Aquatic systems through the lens of OM stability	PNS0234	VT2022	Magda Bieroza	Explore the controls of OM stability and fate in a range of aquatic systems. Lectures combined with a coordinated distributed experiment (CDE) at a SITES station, collaborative writing & publishing of the results.
Carbon cycling: from molecular to global processes	PNS0182	HT2022	Björn Lindahl	Overview of the research frontiers in the area of organic matter dynamics in terrestrial and aquatic ecosystems. From molecular chemistry, via the interplay between organisms and organic matter, to biogeochemical cycling of carbon at the global scale. Literature reviews combined with a 1-week seminar with invited scientists.
Watershed ecology and biogeochemistry	PFS0100	HT2022	Hjalmar Laudon	Concepts and challenges of watershed science, including forest management aspects and its impact on watershed biogeochemistry in boreal lands. Collaboration with the Dept of Forest Ecology and Management and RS SILVA. Literature & practical part at field station.
FoSW biannual member meeting	Member meeting	2022	Maria Kahlert & Eveline Krab	practical workshop followed by dinner & social activities for all FoSW members
Soil classification	Workshop	2022	Maria Kahlert & Eveline Krab	learn how to classify soils
Data management	Seminar	2022	SLU Data Management Support	Data management: what is it and why should I be doing it? Data management plan, publishing research data, FAIR

2023

Course	Code	Term	Instructor	Description
GIS and mapping	P000020	VT 2023	Anders Larsolle	GIS introduction: GIS-software, download and import geodata, using SLU's GIS resources.
Soil systems: Analytical methods	PNS0209	VT2023	Katharina Meurer	Short introduction to soil system sciences with focus on micro-analytical techniques and their application to environmental samples. Literature review combined with a 1-week seminar with invited international scientists.
Organic micropoll in the aquatic environment	PNS0119	VT2023	Foon Yin Lai	Introduction into environmental chemistry by investigating the sources, transport and fate of organic micropollutants. Literature review combined with a 1-week seminar with invited international scientists, and 1-week field/laboratory part
From source to sea: Methods for evaluating human impact in aquatic habitats with a focus on biota, and databases	P000037	HT2023	Maria Kahlert	Introduction to Aquatic Sciences & its application to environmental assessment, including an introduction into practical methods, threats to water, and aims of monitoring such as SDGs & national environmental goals.
Molecular methods: from theory to methods and applications	P000050 & P000051	HT2023	Karina Clemmensen	Overview course on a theoretical and practical "toolbox" to study complex communities in natural settings (diversity, composition, biogeography and metabolics), with practical labs where students will do the different steps of molecular analysis as example labs. Overview on all organism groups, focus on microbiology.
How to speak in front of a crowd?	Workshop	VT 2023	Cecilia Almlöv	Oral presentation
Data handling with R	PNG0100	HT2023	Alistair Auffret	Writing reproducible code, basic use of GitHub and Rmarkdown, standardize code and data structure

2024

Course	Code	Term	Instructor	Description
Data management and modelling	new course	VT2024	Katharina Meurer	Data management and modelling: a model-based assessment of management options to maintain soil organic carbon stocks in agricultural soils, 2 ECTS
Minerals in soils and sediments and their X-ray identification and quantification	PNS0134	VT2024	Jon-Petter Gustafsson	Minerals in soils and sediments and their X-ray identification and quantification
Watershed ecology and biogeochemistry	PFS0100	HT2024	Hjalmar Laudon	Concepts and challenges of watershed science, including forest management aspects and its impact on watershed biogeochemistry in boreal lands. Collaboration with the Dept of Forest Ecology and Management and RS SILVA. Literature & practical part at field station.
Soil sciences: theory, practical methods, management, threats	new course	HT2024	Nadia Maaroufi	Introduction to soil science. What are soils, why they are important, potential threats. Including soil sampling & data management.
P & N cycling in terrestrial and aquatic ecosystems	new course	HT2024	Karolina Jörgensen	Providing basic knowledge on N&P cycling in terrestrial and aquatic ecosystems, state-of-the techniques, including isotopes, farming, management, sustainable use, mitigation options minimizing eutrophication.
Introduction to bioinformatics	suggested course	2024	*TBC: Stefan Bertilsson*	Short introduction to bioinformatics with focus on the practical use of own DNA data. Lectures, interactive computer exercises.
FoSW biannual member meeting	Worshop/social	HT2024	Maria Kahlert & Eveline Krab	practical workshop followed by dinner & social activities for all FoSW members

2025

Course	Code	Year	Instructor	Description
Synchrotron X-ray methods (spectroscopy and imaging)	new course	2025	Jon-Petter Gustafsson	Spektroskopy and other soil chemistry methods. Characterize element associations and speciation in e.g. soils and biological materials. In collaboration with MAX IV.
Ecosystem functioning: From theory to applications	PNG0057	2025	Brendan McKie	Discuss and evaluate different definitions of ecosystem functioning, relate ecosystem functioning to ecosystem services, relation to own research.
Agricultural catchments in a changing world	PNS0204	2025	Magda Bieroza	Introduction to the importance of agricultural catchments and their sensitivity to global change, dominant processes shaping agricultural landscapes: hydrological, biogeochemical, ecological, economic and societal.
eDNA methods for biodiversity monitoring and assessment	new course	2025	Stefan Bertilsson	How to use (meta)barcoding (or maybe other molecular tools) for environmental monitoring and assessment. Focus on how to design and carry out an eDNA-based inventory of organisms in different terrestrial and aquatic environments. Limitations, annotation, sampling. The applied site of barcoding. All organism groups, with fish as example organism.
Advanced statistics in practice	PNS0211	2025	Mohammad Bahram	Demonstrate the ability to identify relevant functions and packages in R for analyzing their own datasets. Analyze data using R, including reporting advanced statistics, univariate and multivariate modelling and generation of graphs. Interpret, think critically and draw conclusions on data analysis results. Seminar series with practical hands-on labs on different topics, can
Soil systems: Analytical methods	PNS0209	2025	Katharina Meurer	Short introduction to soil system sciences with focus on micro-analytical techniques and their application to environmental samples. Literature review combined with a 1-week seminar with invited international scientists.
How to speak in front of a crowd?	Workshop	2025	Cecilia Almlöv	Oral presentation