S164 Analysis of environmental processes

Coordinator: Prof. Dr. I. Unkel

Teaching Staff: Prof. Dr. I. Unkel

Section for SSE: E - Open Studies

Status for SSE: Elective

Section for EM: B7 - Human Development in Landscapes

Status for EM: Elective

Contact time overall:	52 hours	**Credit points:**	6 ECTS	**Term (Semester):**	2 Summer
Independent study:	128 hours	**Prerequisites:**	None	**Language of tuition:**	English
Overall workload:	180 hours			**Class size:**	15

Teaching Units:

Exercise - Analysing and publishing environmental proxy data

Teaching Staff: Prof. Dr. I. Unkel

Contact time: 39

Excusion - Regional environmental processes

Teaching Staff: Prof. Dr. I. Unkel

Contact time: 13

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Teaching Staff:

Contact time:

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Teaching Staff:

Contact time:

Competences the module has been designed to develop:

Mastery of subject matter:	not at all	**Problem solving competences:**	strong
Mastery of methods:	strong	**Communication competences:**	medium
Application of knowledge and understanding:	strong	**Learning competences:**	medium

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Content:

• Field course, taking sediment samples at selected locations (e.g. Schleswig-Holstein or Switzerland)
• Producing/describing/drawing sedimentary profiles
• Laboratory analyses (e.g. grain size, LOI)
• Setting up scientific articles
• Article writing and data implementation
• Reading and presenting respective reference literature

Learning outcomes:

The module focuses on sedimentary archives of environmental processes. Sample material which is described and taken by the students in the field is analyzed in the laboratory. The results of the field and laboratory analyses are assembled in a scientific text simulating a peer-reviewed scientific publication.
This course fosters the ability of the students to analyze environmental data from the sedimentary record on their own. In the end they should present and discuss this data in a boarder scientific context going beyond a standard lab report. This should enable/prepare them to write scientific monographs (theses) or peer-reviewed journal articles.
Key skills:
1. Designing experiments/field work
2. Managing data
3. Publishing data (transforming data into graphs and texts)

References:

Example: Journal of Environmental Management
http://www.sciencedirect.com/science/journal/03014797

The course materials are made available through the e-learning platform OLAT

Recommended previous knowledge:

Module: Climate and Landscape Changes – Past and Future
Module: Fundamentals of Statistics for Ecologists

Teaching media:

Field and laboratory equipment for sedimentary analyses
Selected software tools (Inkscape, R, Citavi, Endnote, Mendeley)

Assessment:

Seminar paper 100%

Contact details of module coordinator:

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