

COURSE TITLE:

GENERAL ECOLOGY

COURSE DESCRIPTION:

Students are given advanced-level knowledge on selected topics in ecology deserving the attention of each would-be environmental scientist irrespective of his/her field of specialization. Subjects include ecological consequences of ongoing climate change; global biodiversity patterns; geosphere – biosphere – atmosphere interactions; energy flow and material cycling in ecosystems; historical biogeography; species richness, species composition and spatial patterns in ecological communities; community dynamics; trophic networks and their regulation; ecological guilds; limnology (still and running freshwaters); marine ecology; relationships between biodiversity and functioning of ecosystems; ecosystem services; behavioural ecological grounds of conservation biology; molecular methods in ecological research; behavioural ecology of plants; landscape ecology.

Competences to be reached within this course are as follows:

- students obtain an insight into large-scale and long-term ecological processes
- students understand the functioning and regulation of complex ecological systems
- students recognize the vulnerability of ecosystems
- students learn to distinguish between reversible and irreversible ecological processes
- students get acquainted with various forms of human impacts on ecosystems
- students have a deeper insight of ecological processes in aquatic ecosystems

LITERATURE:

Compulsory:

Begon M, Townsend C R és Harper J L 2005: Ecology: From individuals to ecosystems. 4th ed., Blackwell Science, Oxford. 1128. pp.

Recommended:

Gaston, K J, Spicer, J I 2004: Biodiversity: an introduction. 2nd ed. Wiley-Blackwell

Mittelbach, GG 2012: Community Ecology. Sinauer Associates, Sunderland.

Rohde K 2006: Nonequilibrium Ecology. Cambridge Univ. Press, Cambridge, 272. pp.

Wetzel RG 2001: Limnology: Lake and River Ecosystems. Academic Press, San Diego 1006. pp.

TEACHER:

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