



Module syllabus: *Restoration ecology*

1. Overall information

Module coordinator	Dr hab. Anna Orczewska, Ph.D. (Department of Ecology)
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ECTS	5
Method for the verification of learning outcomes	<p>The final grade for the module is weighted on the average of the following student activities:</p> <ul style="list-style-type: none">- participation in lectures, discussion sessions and field trips (0.3)- Reports and/or oral presentations from realised laboratory/discussion sessions and field trip tasks (0.7) <p>To be awarded a final grade, the student must have passed each activity of the module.</p> <p>Grades: below 51% – fail (F); 52-60% – with minimum academic criteria (E); 61-65% – satisfactory (D); 66-75% – good (C); 76-85% – very good (B), ≥ 85% – excellent (A)</p>

2. Description of student activity and work

Lectures/discussion sessions (=Seminars)	
instructor	Dr hab. Anna Orczewska PhD
Content	<p>The main objective of the module is to familiarise students with the basic ecological principles that are involved in the management and restoration of natural and semi-natural vegetation communities (with special emphasis on forests, meadows, xerothermic grasslands and peat bogs of the temperate climatic zone of Europe). The basic ecological concepts, theories, processes and mechanisms involved in ecological restoration will be discussed. Selected recovery projects will also be presented.</p> <p>Lectures/discussion sessions comprise the theoretical background of ecological restoration</p> <p>Lectures/discussion session content: Restoration ecology is a modern field of ecology, which developed as a response to the environmental degradation and destruction of many ecosystems. The methods of active human intervention that are aimed to restore disturbed ecosystems will be analysed and discussed during the discussion sessions. Those will be accompanied with presentations of the knowledge on the most important ecological processes of vegetation dynamics and their mechanisms, the most widely observed human-induced disturbances and the reaction of vegetation to them. Based on the scientific literature and on the sites visited during the field trips, each participant will prepare an individual oral presentation of the selected topic.</p>
Number of didactic hours (contact hours)	15





Literature	<ol style="list-style-type: none">1. Van der Maarel E. (ed.) 2009. Vegetation ecology. Wiley-Blackwell, pp. 4082. Perrow M.R., Davy A.J. 2002. Handbook of ecological restoration. Cambridge University Press.3. Research papers from scientific journals, both supplied by the teacher and found by a student in the journal collection database
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Field trips

Responsible instructors	Dr hab. Anna Orczewska PhD and dr Karolina Bierza PhD (Department of Ecology) (optionally, in the case of many participants)
Field trips	Three field trips, whose aims are to present selected types of natural and semi-natural vegetation and sites that either require restoration or were restored in the past, will be taken. Handouts describing a short history of the visited sites will be provided prior to the trips. During the excursions, students will see the physiognomy of the communities, will be encouraged to discuss the main drivers that shape their current structure, threaten their existence, allow their maintenance or are required to repair the community and to allow a sustainable existence. The knowledge gained during the trips will be useful in the preparation of the final, oral presentation that will be given by students during the final discussion session.
Methodology of the field trips and discussion sessions	Work performed in small groups under the supervision of the teachers will include: <ul style="list-style-type: none">- Observing the selected topics during the excursions and documenting them (notes, schemes, photographs, etc.)- Presenting individual reports from these trips that will focus on the observed processes of vegetation dynamics, management methods and types of restoration that are required (Power Point presentation)
Number of didactic hours (contact hours)	60
Literature	<ol style="list-style-type: none">1. Van der Maarel E. (ed.) 2009. Vegetation ecology. Wiley-Blackwell, pp. 4082. Perrow M.R., Davy A.J. 2002. Handbook of ecological restoration. Cambridge University Press.3. Research papers from scientific journals, both this supplied by the instructor and those found by students in the journal collection database

3. Forms of verification

Continuous evaluation of knowledge and activity	
Grades	Grades are awarded on a scale of A-F, where A is the best and F is a fail. <u>An excellent performance (A)</u> – the student actively participates in student lectures, discussion sessions and excursions, demonstrates an excellent understanding of the discussed problems, is engaged and creative in solving the





	<p>analysed problems.</p> <p><u>A good performance (C)</u> – the student actively participates in the lectures, discussion sessions and excursions, demonstrates a good understanding of the discussed problems, is engaged and creative in solving the analysed problems.</p> <p><u>A satisfactory performance (E)</u> – the student participates in the lectures, discussion sessions and excursions with some engagement, demonstrates a proper understanding of the discussed problems, is sufficiently engaged and creative in solving the analysed problems.</p> <p><u>A performance that does not meet the minimum academic criteria (F)</u> – the student does not participate in some lectures, discussion sessions and excursions, does not demonstrate a proper understanding of the discussed problems, is not engaged and creative in solving the analysed problems.</p>
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Reports from realised laboratory tasks	
Evaluation	<p>Evaluation comprises judgment and knowledge related to the solved tasks, engagement in realisation, quality of the presentation of the final results, use of reference materials.</p> <p>Grades for final projects are awarded on a scale of A-F, where A is the best and F is a fail.</p> <p>An excellent report (A) – without any essential errors</p> <p>Fail (F) – no project submitted</p> <p>Excellent (A) – the student presents fluent knowledge of the topics discussed during the course, makes minimal errors that do not affect the quality of the presentation.</p> <p>Good (C) – the student presents good knowledge of the topics discussed during the course, makes rare but subtle errors.</p> <p>Satisfactory (E) – the student exhibits satisfactory knowledge of the topics discussed during the course, but with a poor understanding of some of the discussed problems and makes subtle errors.</p> <p>Fail (F) – the student does not present satisfactory knowledge of the topics discussed during the course and makes many substantial errors, which disqualify their presentation.</p>

