# *Module syllabus:* ***Vegetation ecology***

## 1. Overall information

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| Module coordinator | Dr hab. Anna Orczewska, Ph.D. (Department of Ecology) |
| Contact | anna.orczewska@us.edu.pl; +48 32 359 1548 |
| ECTS | **5** |
| Method for the verification of learning outcomes | The final grade for the module is weighted on the average of the following student activities:<br>- Active participation in discussion sessions, laboratories and field trips (0.3)<br>- Reports and/or oral presentations from the realised laboratory/discussion sessions and field trip tasks (0.7)<br>To be awarded a final grade, the student must have passed each activity of the module.<br>Grades:<br>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) |

## 2. Description of student activity and work

| **Lectures/discussion sessions (=seminars)** | |
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| Responsible instructors | Dr hab. Anna Orczewska PhD; dr Karolina Bierza PhD (Department of Ecology) |
| Content | **The main objective** of the module is to emphasise the vegetation-environment relationships, plant adaptations and interactions, spatial patterns in the landscape, the role of time and space in vegetation dynamics, the role of natural and human-induced disturbances on the biodiversity of plant communities and methods of vegetation analysis.<br>**Lectures/discussion sessions** comprise the theoretical background of vegetation science and community ecology<br>**Lectures/discussion session content**: Vegetation ecology is a modern science that studies the plant cover and its relationships with the environment and the physical and biological processes that control the distribution and dynamics of plant communities. The application of this scientific discipline in nature management, preservation of biodiversity and the detection of the global environmental risk in plant communities are also discussed. Based on the scientific literature, each participant will prepare an individual oral presentation on a selected topic. |

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| Number of didactic hours (contact hours) | **15** |
| Literature | 1. Van der Maarel E. (ed.) 2009. Vegetation ecology. Wiley-Blackwell, pp. 408<br>2. Kent M., Coker P. 1995. Vegetation description and analysis. A practical approach. Wiley & Sons. pp. 363.<br>3. Research papers from scientific journals, both those supplied by the instructor and those found by students in the journal collection database |

| **Field trips/Laboratory** | |
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| Responsible instructors | Dr hab. Anna Orczewska PhD; dr Karolina Bierza PhD (Department of Ecology) |
| Field trips and laboratory projects | There will be three field trips whose aims are to present selected types of natural (forests, peat bogs) and semi-natural (fresh and wet meadows) vegetation, examples of primary and secondary succession. During the field visits, students will be familiarised with selected techniques for describing and sampling vegetation. The data collected during the trips combined with other databases from similar communities will be used to learn how to analyse vegetation data and how to link these data with environmental factors. The principle statistical methods that are used in community ecology together with their interpretation will be introduced and practiced. The group projects of students, which will be based on these computations, will be presented orally. |
| Methodology of laboratory classes | Work will be performed in small groups under the supervision of an instructor and will include:<br>- Techniques for describing and sampling vegetation<br>- Analysing and interpreting vegetation data<br>- Presenting group projects (Power Point presentations) |
| Number of didactic hours (contact hours) | **60** |
| Literature | Van der Maarel E. (ed.) 2009. Vegetation ecology. Wiley-Blackwell, pp. 408<br>Kent M., Coker P. 1995. Vegetation description and analysis. A practical approach. Wiley & Sons. pp. 363.<br>Research papers from scientific journals, both supplied by the instructor and found by a student in the journal collection database |

**3. Forms of verification**

| Continuous evaluation of knowledge and activity | |
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| Grades | Grades are awarded on a scale: A -F, where A is the best and F is a fail.<br>An excellent performance (A) – the student actively participates in laboratories, demonstrates an excellent understanding of the discussed problems, is engaged and creative in solving analysed problems.<br>A good performance (C) – the student actively participates in laboratories, demonstrates a good understanding of the discussed problems, is engaged and creative in solving analysed problems.<br>A satisfactory performance (E) – the student participates in laboratories with some engagement, demonstrates a proper understanding of the discussed problems, is sufficiently engaged and creative in solving analysed problems.<br>A performance that does not meet the minimum academic criteria (F) –<br>the student does not participate in some laboratories, does not demonstrate a proper understanding of the discussed problems, is neither engaged nor creative in solving analysed problems. |

| Reports from realised laboratory tasks | |
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| Evaluation | Evaluation comprises judgment and knowledge related to the solved tasks, engagement in realisation, quality of presentation of final results, use of reference materials.<br>Grades for final projects are awarded on a scale of A-F, where A is the best and F is a fail.<br>An excellent report (A) – without any essential errors<br>Fail (F) – no project submitted<br>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.<br>Good (C) – the student presents good knowledge of the topics discussed during the course, makes rare but subtle errors.<br>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.<br>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. |