**SYLLABUS**

**regarding the qualification cycle FROM 2023/2024 TO 2023/2024**

1. Basic Course/Module Information

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| --- | --- |
| Course/Module title | *Principles of ecology* |
| Course/Module code \* |  |
| Faculty (name of the unit offering the field of study) | *Institute of Agricultural Sciences, Land Management and Environmental Protection* |
| Name of the unit running the course | *Department of Ecology and Environmental Protection* |
| Field of study | Environmental Protection |
| Qualification level | 1st |
| Profile | *academic* |
| Study mode | *full-time studies* |
| Year and semester of studies | *Year 1, 2, or 3 / winter semester* |
| Course type | *to choose* |
| Language of instruction | English |
| Coordinator | Aneta Bylak, PhD, DSc, Associate Professor |
| Course instructor | Krzysztof Kukuła, full Professor  Aneta Bylak, PhD, DSc, Associate Professor |

\* - as agreed at the faculty

1.1.Learning format – number of hours and ECTS credits

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Semester  (n0.) | Lectures | Classes | Colloquia | Lab classes | Seminars | Practical classes | Internships | others | **ECTS credits** |
| winter |  | 30 |  |  |  |  |  |  | 5 |

1.2. Course delivery methods

- conducted in a traditional way

- involving distance education methods and techniques

1.3. Course/Module assessment (exam, pass with a grade, pass without a grade)

pass with a grade

2. Prerequisites

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| Knowledge of ecology at the basic high school level. |

3. Objectives, Learning Outcomes, Course Content, and Instructional Methods

3.1. Course/Module objectives

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| --- | --- |
| O1 | Acquaintance with designing and conducting field studies in ecology. |
| O2 | Comprehension of fundamental concepts that define the field of ecology, and conceptual models used to describe ecological systems. |
| O3 | Knowledge of species interactions, community structure, as well as population and landscape ecology. |
| O4 | Comprehension of ecosystems functioning, and human impacts on biodiversity. |

3.2. Course/Module Learning Outcomes (to be completed by the coordinator)

|  |  |  |
| --- | --- | --- |
| Learning Outcome | The description of the learning outcome  defined for the course/module | Relation to the degree programme outcomes |
| LO\_01 | students will know terminology, concepts that define the field of ecology, understand species interactions, community structure, ecosystems functioning, and human impacts on biodiversity. | K\_W01  K\_W03  K\_W04  K\_W08 |
| LO\_02 | students will be able to understand primary literature in ecology, select appropriate methods and design field study in ecology, prepare written presentation of ideas and results from ecological studies. | K\_W01  K\_W09  K\_U01  K\_U02 |
| LO\_03 | students will be able to think creatively, and co-operate in group making conceptual model used to describing ecological system | K\_U02  K\_K02 |

**3.3. Course content (to be completed by the coordinator)**

1. Lectures

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| Content outline |
| Introduction. Life on land, life in the water. Population ecology: population distribution and abundance, population dynamics, life histories. Interactions: predation, natural selection, competition, exploitative interactions. Species abundance and diversity, community structure. Succession. |

1. Classes, tutorials/seminars, colloquia, laboratories, practical classes

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| Content outline |
| Design and analysis of ecological field studies. Adaptation and evolution. Population dynamics. Keystone species. Human impact on biodiversity. |

3.4. Methods of Instruction

e.g.

*Lecture: a problem-solving lecture/a lecture supported by a multimedia presentation/ distance learning*

*Classes: text analysis and discussion/project work (research project, implementation project, practical project)/ group work (problem solving, case study, discussion)/didactic games/ distance learning*

*Laboratory classes: designing and conducting experiments*

Classes

4. Assessment techniques and criteria

4.1 Methods of evaluating learning outcomes

|  |  |  |
| --- | --- | --- |
| Learning outcome | Methods of assessment of learning outcomes (e.g. test, oral exam, written exam, project, report, observation during classes) | Learning format (lectures, classes,…) |
| LO-01 | Written open test, Written presentation | Classes,  Consultation hours |
| LO-o2 | Written presentation | Classes,  Consultation hours |
| LO-o3 | Written presentation | Classes,  Consultation hours |

4.2 Course assessment criteria

|  |
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| Written open test (max. 100 points)  Written presentation (max. 100 points)  Grade 5.0, > 92%; Grade 4.5, 84-91%; Grade 4.0, 76-83%; Grade 3.5, 68-75%; Grade 3.0, 60-67% points.  Percent of final grade: written presentation - 50%, written open test - 50% |

5. Total student workload needed to achieve the intended learning outcomes

– number of hours and ECTS credits

|  |  |
| --- | --- |
| Activity | Number of hours |
| Scheduled course contact hours | 30 |
| Other contact hours involving the teacher (consultation hours, examinations) | 10 |
| Non-contact hours - student's own work (preparation for classes or examinations, projects, etc.) | 85 |
| Total number of hours | 125 |
| Total number of ECTS credits | 5 |

\* One ECTS point corresponds to 25-30 hours of total student workload

6. Internships related to the course/module

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| --- | --- |
| Number of hours | *n/a* |
| Internship regulations and procedures | *n/a* |

7. Instructional materials

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| Compulsory literature:   * Krebs C.J. 2009. Ecology: the experimental analysis of distribution and abundance, 6th ed. Pearson. * Smith T.M., Smith R.L. 2006. Elements of ecology, 6th ed. Pearson. |
| Complementary literature:   * Townsend T.M., Begon M., Harper J.L. 2014. Essentials of ecology 3rd ed. Wiley. |

Approved by the Head of the Department or an authorised person