

# SYLLABUS

REGARDING THE QUALIFICATION CYCLE FROM 2021/2022 TO 2021/2022

## 1. BASIC COURSE/MODULE INFORMATION

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

\* - as agreed at the faculty

### 1.1. Learning format – number of hours and ECTS credits

| Semester (no.) | Lectures | Classes | Colloquia | Lab classes | Seminars | Practical classes | Internships | others | ECTS credits |
|----------------|----------|---------|-----------|-------------|----------|-------------------|-------------|--------|--------------|
| winter         | 2        |         |           | 3           |          |                   |             |        | 2            |

### 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

Knowledge of ecology at the basic high school level.

### 3. OBJECTIVES, LEARNING OUTCOMES, COURSE CONTENT, AND INSTRUCTIONAL METHODS

#### 3.1. Course/Module objectives

|    |  |
|----|--|
| 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_Wo1, K_Wo3, K_Wo4, K_Wo8                |
| 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_Wo1, K_Wo9, K_Uo1, K_Uo2                |
| LO_03            | students will be able to think creatively, and co-operate in group making conceptual model used to describing ecological system   | K_Uo2, K_Ko2                              |

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

##### A. Lectures

|  |
|--|
| 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. |

##### B. Classes, tutorials/seminars, colloquia, laboratories, practical classes

|   |
|---|
| Content outline   |
| Design and analysis of ecological field studies. Adaptation and evolution. Population dynamics. 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*

Lecture, Classes, Laboratory 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  | Lecture, Laboratory classes                     |
| LO-02            | WRITTEN PRESENTATION   | Lecture, Laboratory classes, Consultation hours |
| LO-03            | WRITTEN PRESENTATION   | Laboratory classes, Consultation hours          |

### 4.2 Course assessment criteria

Written open test (max.25 questions, 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   | 5               |
| Other contact hours involving the teacher (consultation hours, examinations)                     | 10              |
| Non-contact hours - student's own work (preparation for classes or examinations, projects, etc.) | 35              |
| Total number of hours  | 50              |
| Total number of ECTS credits   | 2               |

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

## 6. Internships related to the course/module

|                                       |            |
|---------------------------------------|------------|
| Number of hours                       | <i>n/a</i> |
| Internship regulations and procedures | <i>n/a</i> |

## 7. Instructional materials

|   |
|---|
| Compulsory literature: <ul style="list-style-type: none"><li>• Krebs C.J. 2009. Ecology: the experimental analysis of distribution and abundance, 6th ed. Pearson.</li><li>• Smith T.M., Smith R.L. 2006. Elements of ecology, 6th ed. Pearson.</li></ul> |
| Complementary literature: <ul style="list-style-type: none"><li>• Townsend T.M., Begon M., Harper J.L. 2014. Essentials of ecology 3rd ed. Wiley.</li></ul>   |

Approved by the Head of the Department or an authorised person