Avian Ecology and Conservation - part 1

Educational subject description sheet

Basic information

Field of study Environmental Protection and Management **Speciality** - **Department** Faculty of Biology **Study level** second cycle **Study form** full-time degree programme **Education profile** General academic **Mandatory** obligatory	**Education cycle** 2021/22 **Subject code** UJ.WBIEPMS.210.5cac67bb61e80.21 **Lecture languages** English **Disciplines** Biological sciences **ISCED classification** 0511 Biology **USOS code**

Subject coordinator	Ulf Bauchinger
Lecturer	Ulf Bauchinger

Period Semester 1	**Examination** assessment **Activities and hours** lecture: 8, classes: 4, conversatory classes: 14, field classes: 8	**Number of ECTS points** 2.0

Goals

C1	Provide fundamental knowledge in avian biology and ecology and its use to applied conservation related problems. Obtain knowledge and practical skills of 1) how to assess avian diversity and abundance on different scales 2) how to determine potential threats to avian diversity and abundance, 3) how to develop conservation strategies, implement and evaluate them

Subject's learning outcomes

Code	Outcomes in terms of	Effects	Examination methods
Knowledge – Student knows and understands:			
W1	Student understands complex natural phenomena and processes (P2A_W01) consistently uses and disseminates the principle of a strict - based on empirical data- interpretation of natural phenomena and processes in research work and practical activities (P2A_W02) has in-depth knowledge of the fields of science and scientific disciplines, relevant to the studied field of study enabling the perception of relationships and dependencies in nature (P2A_W04) has in-depth knowledge of the fields of science and scientific disciplines, relevant to the studied field of study enabling the perception of relationships and dependencies in nature (P2A_W05) has knowledge of the principles of research planning using the research techniques and tools used in the field of science and scientific disciplines, relevant to the studied field of study (P2A_W07)	EPM_K2_W01, EPM_K2_W02, EPM_K2_W07	essay
Skills – Student can:			
U1	Student uses advanced techniques and research tools in the fields of science and scientific disciplines appropriate for the studied field of study (P2A_U01) is fluent in scientific literature in the fields of science and scientific disciplines relevant to the studied field of study in English; reads with understanding complicated scientific texts in English (P2A_U02) demonstrates the ability to critically analyze and select information, especially from electronic sources (P2A_U03) plans and performs research tasks or expert opinions under the supervision of a tutor (P2A_U04) uses statistical methods and IT techniques and tools to describe phenomena and analyze specialized data (P2A_U05) collects and interprets empirical data and on this basis formulate appropriate conclusions (P2A_U06) demonstrates the ability to formulate legitimate judgments based on data from various sources (P2A_U07) demonstrates the ability to prepare oral presentations in the field of research using various verbal communication means (P2A_U08) demonstrates the ability to write a short scientific report in English based on own scientific research (P2A_U09) has the ability to speak in English about specific issues in the field of science and scientific disciplines, relevant to the studied field of study (P2A_U10) has language skills in the fields of science and scientific disciplines relevant to the studied field of study, in accordance with the requirements set for the B2 + level of the European System of Language Description (P2A_U12)	EPM_K2_U01, EPM_K2_U02, EPM_K2_U03, EPM_K2_U04, EPM_K2_U05, EPM_K2_U06, EPM_K2_U07, EPM_K2_U08, EPM_K2_U09, EPM_K2_U10, EPM_K2_U11	essay
Social competences – Student is ready to:			

K1	Student understands the need to learn throughout life, can inspire and organize the learning process of other people (P2A_K01) is able to interact and work in a group, assuming different roles in it (P2A_K02) can properly determine the priorities for the implementation of a task specified by itself or other tasks (P2A_K03) correctly identifies and resolves dilemmas related to the profession (P2A_K04) understands the need to systematically familiarize yourself with scientific and popular scientific journals, basic for the studied field of study, in order to broaden and deepen knowledge (P2A_K05) systematically updates knowledge of nature and knows its practical applications (P2A_K07)	EPM_K2_K01, EPM_K2_K02, EPM_K2_K03, EPM_K2_K04, EPM_K2_K05, EPM_K2_K07	essay

Calculation of ECTS points

Activity form	**Activity hours***
lecture	8
classes	4
conversatory classes	14
field classes	8
report preparation	20
konsultacje	2
self-study regarding classes	4

Student workload	**Hours** 60	**ECTS** 2.0
Workload involving teacher	**Hours** 34	**ECTS** 1.2
Practical workload	**Hours** 8	**ECTS** 0.3

* hour means 45 minutes

Study content

No.	**Course content**	**Subject's learning outcomes**

1.	The module contains four basic elements that are alternating (lectures, field courses, laboratory courses and round table seminars). Completion of the course comprises attendance of at least 3/4 of the lectures, 3/4 of the practical courses (field and laboratory) and a minimum of 6 out of seven round table seminars. Avian Ecology and Conservation I: winter semester sets focus on the activities of European birds in autumn and winter. E.g. autumn migration, overwintering, winter survival etc. (Avian Ecology and Conservation II which takes place in the summer semester covers spring migration and reproductive periods). Lectures: Avian ecology with special attention to potential threats for single species, bird communities or birds of higher taxonomic levels. Annual cycle stages, life history stages, causes for population decline in birds. Avian diversity and abundance. Avian conservation, protection and management. Field practical course: Assessing avian diversity and abundance. Field methods from observations to catching. Bird ringing and handling. Laboratory practical course Avian morphology and structures. Computer simulations of migratory birds. Analysis of telemetric data. Round table seminar Chaired discussion on specific topics distributed by one paper. Threats to birds. Case studies. Students provide material for discussions gathered thrugh own search.	W1, U1, K1

Course advanced

Teaching methods:

text analysis, project method, seminar, brainstorming, conversation lecture, lecture with multimedia presentation, discussion, case study, laboratories, participation in research, practicals, konsultacje

Activities	Examination methods	Credit conditions
lecture	essay	Course is passed successfully with a percentage greater than 50% (final course score) to which the students round table seminar contribution and written assignment each contribute a half. Course score = (Seminar evaluation score in % + evaluation score in % for written assignment) divided by 2 Student round table seminar contribution: is calculated as the sum of individual seminar contributions divided by the total number of seminars. One paper is distributed to students prior to the seminar and each student provides additional information acquired through individual search to the seminar. Each student is rated in percent (0-100) for each seminar day based on contributions to discussion by the teacher Student written assignment: Student 5-page case study for a species at risk Case study report includes: Abstract, population assessment through literature, determination of risk factors, a protection and/or conservation plan, evaluation plan, literature. Report is due one month after the last round table seminar and is evaluated in percentages in steps of 5% (from 0-100%). Student is provided with comments and has the option to improve report within two weeks after provision of the comments. If revised version is provided only this one will be evaluated and taken into account for final course score Marks for the completion of the course can be assigned according to the final percentage (course score) of 0 -50 = not passed > 50 - 60 = 3.0 > 60 – 70 = 3.5 > 70 – 80 = 4.0 > 80 – 90 = 4.5 > 90 – 100 = 5.0

Activities	Examination methods	Credit conditions
classes		
conversatory classes		
field classes		

Literature

Obligatory

1. Ornithology: by Frank B. Gill; Publisher W. H. Freeman; (2006) ISBN-13: 978-0716749837
2. Bird Populations: by Ian Newton; Publisher: William Collins (2013) ISBN-13: 978-0007429530
3. Bird Ecology and Conservation, A handbook of Techniques, by William T. Sutherland, Ian Newton and Rhys E. Green; Publisher: Oxford University Press (2004) ISBN-13: 978-0198520863

Optional

1. U Birds Directive (aktualizacja 2009)
2. Manual of Ornithology: Avian Structure and Function. By Noble S. Proctor and Patrick J. Lynch. Yale University Press (1998) ISBN-13: 978-0300076196
3. The Migration Ecology of Birds. By Ian Newton. Academic Press (2007) ISBN-13: 978-0125173674
4. Techniques for Wildlife Investigation and Management 6th Edition. By Clait Braun. Wildlife Society (2005) ISBN-13: 978-0933564152

Effects

Code	Content
EPM_K2_W01	The graduate knows and understands complexity of natural phenomena and processes and their impact on nature and environment
EPM_K2_W02	The graduate knows and understands methodology of environmental sciences, especially including valorization and evaluation of environmental risks
EPM_K2_W07	The graduate knows and understands the rules of acquiring and settling academic and implementation projects in environment protection and natural resources management
EPM_K2_U01	The graduate is able to use research procedures and tools appropriate for measures of environment protection and managing natural resources
EPM_K2_U02	The graduate is able to use appropriate statistical tools and software to collect and interpret data
EPM_K2_U03	The graduate is able to use specialist knowledge necessary to interpret collected empirical data and to draw appropriate conclusions
EPM_K2_U04	The graduate is able to prepare public presentations related to environment and nature protection using various techniques of verbal and multimedia communication
EPM_K2_U05	The graduate is able to write a text on environment protection issues presenting his/her own research and describe the results of his/her professional evaluations and environmental analyses
EPM_K2_U06	The graduate is able to search for, select an use necessary information found in various English language sources
EPM_K2_U07	The graduate is able to plan and evaluate the condition of the environment and natural resources under the guidance of the academic supervisor and to evaluate the risks of planned actions and investments for the environment.
EPM_K2_U08	The graduate is able to use specialist terminology related to environment protection and natural resources management
EPM_K2_U09	The graduate is able to communicate fluently in a foreign language, enter a debate and present issues related to his/her line of study in the field of environment sciences in accordance with the requirements set for the B+ language fluency level.
EPM_K2_U10	The graduate is able to manage the work of others, set tasks and evaluate their completion
EPM_K2_U11	The graduate is able to continuously acquire knowledge and raise his/her qualifications, inspire and help others, set and achieve career objectives
EPM_K2_K01	The graduate is able to critically appraise acquired information, use reliable and well-established sources of scientific information and draw appropriate conclusions when settling practical problems
EPM_K2_K02	The graduate is able to lead discussion and present scientific arguments related to environment protection and nature
EPM_K2_K03	The graduate is able to take responsibility for an appropriate evaluation of job risks and take care of safety and ergonomics while completing various tasks
EPM_K2_K04	The graduate is able to think and act independently to protect natural environment and to manage common resources in a sustainable way
EPM_K2_K05	The graduate is able to plan his/her further career, shape the course of activities pursued by others and use entrepreneurial skills while achieving set goals
EPM_K2_K07	The graduate is able to identify and settle dilemmas related to his work following the rules of ethics and legal requirements