

**A COURSE SYLLABUS – DOCTORAL SCHOOL**  
**REGARDING THE QUALIFICATION CYCLE FROM 2022 TO 2026**  
**REGARDING THE QUALIFICATION CYCLE FROM 2023 TO 2027**

<b>GENERAL INFORMATION ABOUT COURSE</b>				
Course title		Biological conditions for the protection of flora and plant communities		
Name of the unit running the course		Doctoral School at University of Rzeszów		
Type of course ( <i>obligatory, optional</i> )		optional		
Year and semester of studies		I-II / 2 and 4		
Discipline		Biological sciences		
Language of Course		polish		
Name of Course coordinator		dr hab. Tomasz Durak, prof. UR		
Name of Course lecturer		dr hab. Tomasz Durak, prof. UR		
Prerequisites		Completion of a biology course of Ecology		
<b>BRIEF DESCRIPTION OF COURSE</b> (100-200 words)				
<p>The subject analyzes the diversity and threat status of flora and plant communities and its causes. Contemporary threats to flora and plant communities are also analyzed, as well as methods used today and in the past to protect flora and plant communities, as well as problems related to habitat restoration and species reintroduction. In the light of modern achievements in biology, problems, difficulties and prospects for overcoming them in planning and implementing the protection of flora and plant communities are analyzed. Attention is drawn to the fact that modern nature protection should not be limited to traditional methods of species and area protection, but it is necessary to protect entire communities on a large spatial scale. Indication of the biological basis and methods of vegetation protection.</p>				
<b>COURSE LEARNING OUTCOMES AND METHODS OF EVALUATING LEARNING OUTCOMES</b>				
Learning outcome	The description of the learning outcome defined for the course	Relation to the degree programme outcomes (symbol)	Learning Format (Lectures, classes,...)	Method of assessment of learning outcomes (e.g. test, oral exam, written exam, project,...)
<b>Knowledge (no.)</b>	<b>(Knows and understands)</b>			
	Scientific achievements, including theoretical foundations as well as general issues and selected specific issues in the area of protection of flora and plant communities	P8S_WG1	seminar	Paper with multimedia presentation, discussion
1	Directions of development and the latest discoveries in the selected scientific discipline current scientific achievements including global ones, in the field of research in the field of protection of flora and plant communities	P8S_WG2	seminar	Paper with multimedia presentation, discussion
2	Conceptual grid of a given discipline (also in a foreign language leading to it) and related disciplines	P8S_WG3	seminar	Paper with multimedia presentation, discussion

	Dilemmas of modern civilization related to nature conservation	P8S_WK1	seminar	Paper with multimedia presentation, discussion
<b>Skills (no.)</b>	<b>(Able to)</b>			
	Use knowledge from various fields of science to creatively identify and innovatively solve complex problems or perform research tasks, and also uses the appropriate workshop to create new elements of scientific achievements	P8S_UW1 P8S_UW2	seminar	Paper with multimedia presentation, discussion
1	Critically analyze and evaluate the results of scientific research, expert activity and other creative work and their contribution to the development of knowledge	P8S_UW3	seminar	Paper with multimedia presentation, discussion
	Speak a foreign language at level B2 of the European System of Language Education to a degree that enables participation in an international scientific and professional environment	P8S_UK6	seminar	Paper with multimedia presentation, discussion
<b>Social competence (no.)</b>	<b>(Ready to)</b>			
1	Recognizing the importance of knowledge in solving cognitive and practical problems	P8S_KK3	seminar	Paper with multimedia presentation, discussion

#### LEARNING FORMAT – NUMBER OF HOURS

Semester (no.)	Lectures	Seminars	Lab classes	Internships	others	ECTS
2 and 4					15	2

#### METHODS OF INSTRUCTION

seminar

#### COURSE CONTENT

Biodiversity, diversity patterns

Spatial distribution of vegetation on the globe

Human impact on vegetation transformation and species extinction

Methods of effective vegetation protection

Geobotanical division of Poland

Rare and endangered plants and communities in Poland

Invasive species and their impact on the condition of vegetation

Forms of plant and vegetation protection	
Global impact of environmental changes on the state of preservation of vegetation	
<b>COURSE ASSESSMENT CRITERIA</b>	
Passing based on the level of prepared papers with multimedia presentation and participation in the discussion: satisfactory level -3.0; medium level – 4.0; outstanding level – 5.0	
<b>TOTAL PhD STUDENT WORKLOAD REQUIRED TO ACHIEVE THE INTENDED LEARNING OUTCOMES – NUMBER OF HOURS AND ECTS CREDITS</b>	
Activity	Number of hours
Scheduled course contact hours	15
Other contact hours involving the teacher (consultation hours, examinations)	5
Non-contact hours – student`s own work (preparation for classes or examinations, project, etc.)	180
<b>Total number of hours</b>	<b>200</b>
<b>Total number of ECTS credits</b>	<b>2</b>
<b>INSTRUCTIONAL MATERIALS</b>	
Compulsory literature:	<ul style="list-style-type: none"> <li>- Weiner J. 2015. Życie i ewolucja biosfery. PWN</li> <li>- Krebs C. 1996. Ekologia. PWN;</li> <li>- Lack A.J., Evans D.E. 2003. Biologia roślin;</li> <li>- Falińska K. 1996. Ekologia roślin. PWN;</li> <li>- Podbielkowski Z. 1991. Geografia roślin;</li> <li>- Szafer W., Zarzycki K. 1972. Szata roślinna Polski. PWN;</li> </ul>
Complementary literature:	<ul style="list-style-type: none"> <li>- Matuszkiewicz J.M. 2002. Zespoły leśne Polski. PWN, Warszawa;</li> <li>- Matuszkiewicz W. 2001. Przewodnik do oznaczania zbiorowisk roślinnych Polski. PWN;</li> <li>- Wysoki C., Sikorki P. 2002. Fitosocjologia stosowana. Wydawnictwo SGGW, Warszawa</li> </ul>