

**Karta opisu zajęć (syllabus)**

Nazwa kierunku studiów	Environmental protection
Nazwa modułu, także nazwa w języku angielskim	Urban ecology
Język wykładowy	English
Rodzaj modułu	Optional
Poziom studiów	Bachelor's
Forma studiów	Stationary
Rok studiów dla kierunku	III
Semestr dla kierunku	5
Liczba punktów ECTS z podziałem na kontaktowe/niekontaktowe	3 (2.0/1.0)
Tytuł naukowy/stopień naukowy, imię i nazwisko osoby odpowiedzialnej za moduł	dr hab. Robert Stryjecki
Jednostka oferująca moduł	Department of Zoology and Animal Ecology
Cel modułu	To teach students about the specifics of ecosystem functioning in urban areas. To learn about the relationship between biotic and abiotic elements of urban environments. To present the groupings of organisms found in different environments of urban areas. To learn about the methods of studying these organisms. Perspectives on the development of the ecology of urbanized areas.
Efekty uczenia się dla modułu to opis zasobu wiedzy, umiejętności i kompetencji społecznych, które student osiągnie po zrealizowaniu zajęć.	Knowledge:
	W1. Knows the specific functioning of ecosystems in urban areas and knows the basic species of plants and animals living in urban environments under the influence of increased anthropogenic impact
	Skills:
	U1. Is able to recognize the basic species of plants and animals occurring in urban ecosystems and is able to analyze environmental data and diagnose the state of the environment
	Social competences:
	K1. The graduate is ready to update the acquired knowledge by following the latest literature on the subject and has the ability to cooperate while performing tasks in a team.
Wymagania wstępne i dodatkowe	Knowledge of zoology, botany and general ecology
Treści programowe modułu	The city as an ecological system. Discuss the specifics of ecosystem functioning in urban areas. Characteristics of habitats and environments in urban areas. Abiotic elements of ecosystems in urban areas. Flora and fauna of urban environments - species composition and adaptations (adaptations) of species to life in urban areas. Factors shaping biodiversity in urban areas. Methods of

	<p>studying urbanized ecosystems. Assessment of the state of the environment based on the analysis of abiotic and biotic elements of urban ecosystems. Prospects for the development of the ecology of urbanized areas. Ecology of the urban landscape. Ecology of the city and the quality of human life in urban areas.</p>
<p>Wykaz literatury podstawowej i uzupełniającej</p>	<p>Basic literature:  1. James P., Douglas I. Urban Ecology, An Introduction. Published November 6, 2014 by Routledge, 2015.  2. Marzluff J.M., Shulenberger E., Endlicher W., Alberti M., Bradley G., Ryan C., Simon U., ZumBrunnen C. (Eds.). Urban Ecology. An International Perspective on the Interaction Between Humans and Nature. Springer New York, NY, 2008.  Supplementary literature:  1. Journal of Urban Ecology. Online ISSN 2058-5543. Oxford University Press. Access: <a href="https://academic.oup.com/jue">https://academic.oup.com/jue</a>  2. Materials provided by the instructor.</p>
<p>Planowane formy/działania/metody dydaktyczne</p>	<p>Lectures: conducted in the form of multimedia presentations prepared in PowerPoint, using a computer and a multimedia projector. The classic informational lecture is complemented by films on the topic discussed.  Exercises: are mostly practical in nature; students work with biological samples collected in the field. In addition to material collected in the field, solid microscopic and macroscopic preparations, wet preparations, dissected animal specimens, and display cases are used.  Supplementary aids include: transparencies, transparencies, tables, and models of organisms. In addition, short videos are demonstrated.  The exercise room is equipped with microscopes and audiovisual equipment (monitors, microscope camera, projectoscope, laptop, multimedia projector, video equipment).</p>
<p>Sposoby weryfikacji oraz formy dokumentowania osiągniętych efektów uczenia się</p>	<p>Ways of verifying the achieved learning outcomes:  W1 - partial tests /test and open questions/, questioning during exercises, written final assessment.  U1 - passing practical tasks during laboratory exercises  K1 – discussion during classes and lectures – assessment of student activity</p> <p><b>DOCUMENTING ACHIEVED LEARNING OUTCOMES</b> in the form of: stage work: partial tests and final work: assessment, archiving in paper form,</p> <p>Detailed criteria for assessing credit and control work  Criteria used for evaluation:Obtaining the appropriate percentage of the sum of points assessing the level of required knowledge/ skills:  2.0 &lt;51%  3.0 - 51-60%  3.5 - 61-70%  4.0 - 71-80%  4.5 - 81-90%</p>

	5.0 > 91-100%
Elementy i wagi mające wpływ na ocenę końcową	The final grade is influenced by: partial tests on material covered during lectures and classes 2 x 45% = 90% rating of the prepared presentation 10%
Bilans punktów ECTS	Contact lecture (15 h/0.6 ECTS), exercises (30 hours/1.2 ECTS), consultations (3 hours/0.12 ECTS), resit examination (2 hours/0.08 ECTS). Total – 50 hours/2.0 ECTS  Non-contact preparation for exercises and their passing (15 h/0.6 ECTS) studying literature (5 h/0.2 ECTS) Preparation of presentation (5 h/0.2 ECTS) A total of 25 h/1.0 ECTS
Nakład pracy związany z zajęciami wymagającymi bezpośredniego udziału nauczyciela akademickiego	lecture (15 h), exercises (30 h), consultations (3 h), resit examination (2 h) Total – 50 hours
Odniesienie modułowych efektów uczenia się do kierunkowych efektów uczenia się	W1 – OS_W05 U1 – OS_U02 K1 – OS_K01