

<b>Course title</b> Biologia/Biology		<b>ECTS code</b> 7.2.0614	
<b>Name of unit administrating study</b>  <b>Faculty of Chemistry</b>			
<b>Studies</b>			
<b>Field of study</b>	<b>Type</b>	<b>Form</b>	
Environmental Protection	Bachelor	Full-time studies	
<b>Teaching staff</b> Dr hab. Izdebska Joanna N., prof. UG; dr hab. Leszek Rolbiecki prof. UG			
<b>Forms of classes, the realization and number of hours</b>		<b>ECTS credits</b> 3	
<b>A. Forms of classes, in accordance with the UG Rector's regulations</b> Lecture, exercises		Classes - 105 h consultations -12 h student's own work - 158 h TOTAL: 275 h - 11 pkt. ECTS	
<b>B. The realization of activities</b> classes in the didactic room			
<b>C. Number of hours</b> Lecture 45 h, Exercises 60 h			
<b>The academic cycle</b> First year, winter semester, summer semester			
<b>Type of course</b> obligatory		<b>Language of instruction</b> Polish	
<b>Teaching methods</b>  Lecture with multimedia presentation Performance of experiments		<b>Form and method of assessment and basic criteria for evaluation or examination requirements</b>	
		<b>A. Final evaluation, in accordance with the UG study regulations</b> Credit, examination	
		<b>B. Assessment methods</b> Lecture - semester I: credit Lecture - semester II: written test examination with closed and open questions. Exercises - establishing a credit score on the basis of the partial grades obtained during the semester.	
		<b>C. The basic criteria for evaluation or exam requirements</b>  Lecture  <ul style="list-style-type: none"> <li>• The examination covers the issues from the lecture</li> <li>• The written test examination is graded according to the percentage ("UG Study Regulations")</li> </ul> Exercises  <ul style="list-style-type: none"> <li>• Written tests with closed questions (passes): include the level of mastery of the material of the exercises in written form;</li> <li>• Written tests with open tasks - include material from several completed exercises,</li> </ul>	

	<ul style="list-style-type: none"> <li>• Practical skills test - covers the recognition of organisms from different systematic groups known during the exercises,</li> <li>• Exercise credit score: passes are awarded points; the sum of points earned is converted into a final grade by a percentage (“UG Study Regulations”); written tests and practical credit are assessed by a percentage (“UG Study Regulations”); the average of grades from passes, written tests and practical tests is the final grade.</li> </ul>
<p><b>Required courses and introductory requirements</b> Brak</p>	
<p><b>Aims of education</b></p> <ol style="list-style-type: none"> <li>1. Getting to know the basics of structure, biology and classification of living organisms.</li> <li>2. Understanding of biological processes conditioning life at different levels of its organization.</li> <li>3. Ability to identify and classify different groups of organisms.</li> </ol>	
<p><b>Course contents</b></p> <p>A. Issues of the lecture. Levels of biological organization (molecular, organism, population and species). Diversity of modern groups within Procaryota and Eucaryota - systematic review and biological characteristics, metabolism, reactivity, coordination and reproduction of organisms. Main issues related to inheritance and evolution, including evolutionary processes of species formation and extinction. Biodiversity of Polish flora and fauna, with particular emphasis on endangered, protected and bioindicating species.</p> <p>B. Issues of the exercise Review of the most important systematic groups of organisms, taking into account different construction plans.</p>	
<p><b>Bibliography of literature</b></p> <p><b>A. Literature required to pass the course</b></p> <p>A.1. wykorzystywana podczas zajęć</p> <ul style="list-style-type: none"> <li>• Campbell N.A., Reece J.B., Urry L.A., Cain M.L., Wasserman S.A., Minorsky P.V., Jackson R.B. 2014. Biologia. Rebis, Poznań.</li> <li>• Gorczyński T. [red.]. 1986. Ćwiczenia z botaniki. PWN, Warszawa.</li> <li>• Moraczewski J., Riedel W., Sołtyńska M., Umiński T. 1974. Ćwiczenia z zoologii bezkręgowców, PWN, Warszawa.</li> </ul> <p>A.2. studiowana samodzielnie przez studenta</p> <ul style="list-style-type: none"> <li>• Błaszak C. [red.] 2009. Zoologia, t.1. Bezkręgowce. PWN, Warszawa.</li> <li>• Błaszak C. [red.] 2011. Zoologia, t. 2. Stawonogi. cz. 1. PWN, Warszawa.</li> <li>• Błaszak C. [red.] 2012. Zoologia, t. 2. Stawonogi. cz. 2. PWN, Warszawa.</li> <li>• Błaszak C. [red.] 2015. Zoologia t. 3. Szkarłupnie - płazy. cz. 1. PWN, Warszawa.</li> <li>• Boczek J., Brzeski M., Kropczyńska-Linkiewicz D. 2000. Wybrane działy zoologii. Podręcznik dla studiujących ochronę środowiska. PWN, Warszawa.</li> <li>• Jura C. Bezkręgowce. 2007. PWN, Warszawa.</li> </ul>	

- Grodziński Z. 1979. Zoologia Strunowce i Przedstrunowce. PWN, Warszawa.
- Szweykowska A., Szweykowski J. 2008. Botanika. PWN, Warszawa.

**B. Extracurricular readings**

B. Literatura uzupełniająca

- Kunicki-Goldfinger W. J. H. 1980. Podstawy biologii od bakterii do człowieka. PWN, Warszawa.
- Encyklopedia biologiczna. T.I-XIII. OPRES, Kraków, 1998.
- Gajewski W. 1992. Genetyka. PWRiL, Warszawa.
- Głowaciński Z. [red.] 2001. Polska czerwona księga zwierząt. Kręgowce. PWRiL, Warszawa.
- Jasiński A. 1984. Zootomia kręgowców. PWN, Warszawa.
- Malinowski E. 1983. Anatomia roślin. PWN, Warszawa.
- Podbielkowski Z. 1990. Rozmnażanie się roślin. WSiP, Warszawa.
- Rajski A. 1994. Zoologia. T. I i II. PWN, Warszawa.
- Villee C.A., Solomon E.P., Berg L.R., Martin D.W. 2007. Biologia. Multico, Warszawa.
- Zawistowski S. 1990. Zarys histologii. PZWL, Warszawa.