

Course title Functioning of marine ecosystems / Funkcjonowanie ekosystemów morskich		ECTS code 7.2.0621	
Name of unit administrating study Faculty of Chemistry			
Studies			
Field of study	Type	Form	
Environmental protection	Bachelor	Full-time studies	
Teaching staff			
Forms of classes, the realization and number of hours		ECTS credits	
A. Forms of classes, in accordance with the UG Rector's regulations lecture		classes - 30 h	
B. The realization of activities In-class learning		tutorial classes – 2 h	
C. Number of hours 30 h lecture		student's own work – 18 h	
		Total: 50 h - 2 ECTS	
The academic cycle Second year, summer semester			
Type of course Obligatory		Language of instruction Polish	
Teaching methods - lecture - multimedia presentation - case study - seminar		Form and method of assessment and basic criteria for evaluation or examination requirements	
		A. Final evaluation, in accordance with the UG study regulations -graded credit - examination	
		B. Assessment methods - written exam (test) -written exam with open questions	
		C. The basic criteria for evaluation or exam requirements Exam grade (90%), activity grade in the form of seminars (10%)	
Required courses and introductory requirements none			
Aims of education The aim of the course is to familiarize students with the basic processes taking place in the aquatic environment, determining the influence of abiotic factors (i.e. temperature, salinity, oxygen depletion, presence of hydrogen sulphide, heavy metals) on the functioning of marine organisms in various environmental conditions. Course cover issues related to the basic concepts/ definitions related to the functioning of organisms, populations, species in aquatic ecosystems.			
Course contents Course focus on the functioning of marine ecosystems on the example of various types of water reservoirs. Students are introduced in to functioning of marine ecosystems, assessment of the diversity of marine life and the principles of its protection. Students take an active part in the seminar by preparing presentations and using the literature on the subject.			
Bibliography of literature A. Literature required to pass the course Wolnomiejski N., Pawlikowski T.. Zarys ekologii i ochrony mórz. Część I. Wydawnictwo Uniwersytetu Mikołaja Kopernika. Toruń 2006 Duxbury A.C., Duxbury A.B., Sverdrup K.A.. Oceany świata. Wydawnictwo Naukowe PWN. Warszawa 2002 Byatt A., Fothergill A., Holmes M.. Błękitna planeta. Historia naturalna oceanów. MUZA SA. Warszawa 2002 Pliński M. Hydrobiologia ogólna. Uniwersytet Gdański, 1992 B. Extracurricular readings			

Knowledge

Students can characterize the relationships and dependencies between various scientific disciplines, uses knowledge of mathematics, physics, chemistry and biology for the description of basic concepts and principles in environmental protection. Students are familiar with the type and scope of the influence of abiotic factors on aquatic organisms and chemical as well as biological processes and phenomena occurring in nature on different levels of the organization and get knowledge concerning aquatic environment components: ecosystem, biocenosis, population. Students know the mechanisms of anthropopressure on environment and recognize the possibilities of its limitation with the use of the latest knowledge and achievements of science. Students get the knowledge about the basic methods, techniques and tools concerning sustainable use and restoration of natural resources.

Skills

Students can assess the functioning of natural and human-changed systems and determine the impact of anthropopressure on specific processes taking place in the marine environment. Student can define the influence of disturbing factors on the functioning of organisms in the environment by usage of terminology in the field of environmental protection and nomenclature specific in disciplines related to it. Student can conduct nature observations, interpret their results and formulate appropriate conclusions based on them.

Social competence

Student can identify the level of own knowledge and skills and the need for continuous learning/training, updating knowledge about the environment and its protection. Student has a self-awareness about need of active following changes in the surrounding environment and studying recent literature to constantly improve itself knowledge and abilities. Student know the value of practical application of the acquired knowledge.