

Subject card

Subject name and code	Alien, invasive and conflict species – treats and prevention, PG_00179652						
Field of study	Environmental Protection						
Date of commencement of studies	October 2026		Academic year of realisation of subject		2027/2028		
Education level	Master's studies		Subject group		Optional subject group		
Mode of study	full-time studies		Mode of delivery		at the university		
Year of study	2		Language of instruction		Polish		
Semester of study	4		ECTS credits		2.0		
Learning profile	academic		Assessment form		credit		
Conducting unit	Laboratory of Geobotanics and Nature Conservation -> Department of Plant Taxonomy and Nature Conservation -> Faculty of Biology -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Renata Afranowicz-Cieślak				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	30.0	0.0	0.0	0.0	30
	E-learning hours included: 0.0						
Learning activity and number of study hours	Learning activity	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	Number of study hours	30		3.0		17.0	50
Subject objectives	1. To identify organisms of foreign origin. 2. To learn about the mechanisms of spread of plants and animals of foreign origin and the consequences of their invasion. 3. To learn about the methods and possibilities of combating invasive species.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[OŚMU2_W06] Analyses the impact of human activities on biodiversity and environmental quality on a local, regional and global scale.		- knows the methods of eliminating and combating invasive organisms		[SW2] presentation/project/paper/report		
	[OŚMU2_K10] Has a need for continuous professional development.		- updates his/her knowledge of the occurrence of alien species in nature, the effects of their impact and the possibilities for elimination		[SK1] oral statement/conversation/discussion [SK2] presentation/project/paper/report		
	[OŚMU2_U05] Searches, selects and analyses the literature achievements of environmental sciences, including scientific journals and databases, reading and understanding scientific texts in her/his native language and in English.		- uses literature sources to improve knowledge of selected alien, invasive and conflict species and their impact on nature		[SU2] presentation/project/paper/report		
	[OŚMU2_U01] On the basis of the acquired knowledge, proposes to solve environmental problems.		- describes the impact of a selected invasive species on the ecosystem and methods of limiting its population or eliminating it		[SU1] oral statement/conversation/discussion [SU2] presentation/project/paper/report		
Subject contents	Definitions and concepts related to alien species. Legal acts, national and international regulations on alien species. Causes and mechanisms of invasion by alien plant and animal species. Impacts of alien species at different levels, including threats to ecosystems, effects on humans. Examples of selected alien, invasive and conflict vertebrate and invertebrate plants and animals. Compensation for damage caused by conflict species. Monitoring methods and control options for invasive species.						

Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	multimedia presentation	51.0%	100.0%
Recommended reading	Basic literature	Głowaciński Z., Okarma H., Pawłowski J., Solarz W. 2011. Gatunki obce w faunie Polski. Instytut Ochrony Przyrody PAN, Kraków, 698 ss. Jażdżewski K., Grabowski M. 2011. Alien Crustaceans Along the Southern and Western Baltic Sea. [W:] Galil B. S., Clark P. F., Carlton J.T. (red.). In the Wrong Place Alien Marine Crustaceans: Distribution, Biology and Impacts. Springer International, 323-344. Najberek K., Solarz W. 2016. Gatunki obce. Przyczyny inwazyjnych zachowań i sposoby zwalczania. Kosmos, 65(1), 81-91. Rozporządzenie Rady Ministrów z dnia 9 grudnia 2022 r. w sprawie listy inwazyjnych gatunków obcych stwarzających zagrożenie dla Unii i listy inwazyjnych gatunków obcych stwarzających zagrożenie dla Polski, działań zaradczych oraz środków mających na celu przywrócenie naturalnego stanu ekosystemów. Dz.U.2022.2649. Tokarska-Guzik B., Dajdok Z., Zając M., Zając A., Urbisz A., Danielewicz W., Hołdyński C. 2012. Rośliny obcego pochodzenia w Polsce ze szczególnym uwzględnieniem gatunków inwazyjnych. Wyd. Generalna Dyrekcja Ochrony Środowiska, Warszawa, 197 ss. USTAWA z dnia 11 sierpnia 2021 r. o gatunkach obcych. Dz.U. z dnia 17 września 2021 r., poz. 1718.	
	Supplementary literature	Canning-Clode J. 2016. Biological Invasions in Changing Ecosystems. De Gruyter Open Ltd, Warsaw/Berlin, 473 ss. Drake J.A. 2009. Handbook of Alien Species in Europe. Springer International, 399 ss. Rilov G., Crooks J.A. 2009. Biological Invasions in Marine Ecosystems. Springer-Verlag, Berlin, 641 ss.	
	eResources addresses	Basic https://www.iop.krakow.pl/ias - Alien species in Poland.	
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		

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