



WNoŻiR



<i>Field of study</i>		Aquaculture and Fisheries				
<i>Mode of study</i>		stationary	<i>Level</i>	first cycle		
<i>Graduate's qualification</i>		inżynier				
<i>Fields of science</i>		agricultural sciences				
<i>Disciplines of science</i>		animal science and fisheries (100%)				
<i>Educational profile</i>		general academic				
<i>Module</i>						
<i>Course unit</i>		Conservation genetics				
<i>Code</i>		WNOZIR/AQF/S1/				
<i>Field of specialisation</i>						
<i>Administering faculty</i>		Department of Meat Technology				
<i>ECTS</i>		6.0	<i>ECTS (forms)</i>	6.0		
<i>Form of course credit</i>		examination	<i>Language</i>	english		
<i>Electives</i>		7	<i>Elective group</i>			
<i>Form of instruction</i>	<i>Cod</i>	<i>Semester</i>	<i>Hours</i>	<i>ECTS</i>	<i>Weight</i>	<i>Credit</i>
laboratory course	L	4	30	3.0	0.50	credits
lecture	W	4	30	3.0	0.50	examination
<i>Leading teacher</i>		Panicz Remigiusz (rpanicz@zut.edu.pl)				
<i>Other teachers</i>						
<i>Prerequisites</i>						
<i>W-1</i>	Students should have completed Ecology, Genetics, Biology courses.					
<i>Module/course unit objectives</i>						
<i>C-1</i>	The course is aimed at giving an introduction to conservation genetics and understand values of: <ul style="list-style-type: none"> • biodiversity and genetic diversity, • current conservation issues, • importance of genetic information in conservation of living organisms, • molecular tools used for conservation biology. 					
<i>Course content divided into various forms of instruction</i>						<i>Number of hours</i>
<i>T-L-1</i>	Computer programs for population genetics data analysis					2
<i>T-L-2</i>	Effective population size					2
<i>T-L-3</i>	Genetic drift					2
<i>T-L-4</i>	Field trip 1 (aquatic organisms)					4
<i>T-L-5</i>	Population subdivision					2
<i>T-L-6</i>	Evolutionary biology					2
<i>T-L-7</i>	Field trip 2 (birds)					4
<i>T-L-8</i>	Quantitative genetics					2
<i>T-L-9</i>	Molecular phylogenetics					2
<i>T-L-10</i>	Field trip 3 (mammals)					4
<i>T-L-11</i>	Heterozygosity					2
<i>T-L-12</i>	Hardy-Weinberg principle					2
<i>T-W-1</i>	Scope of conservation genetics					2
<i>T-W-2</i>	Molecular markers					2
<i>T-W-3</i>	Molecular techniques					3
<i>T-W-4</i>	Identification of hybrid species					3
<i>T-W-5</i>	Genetic structure of natural and managed populations					4
<i>T-W-6</i>	Hybridization in native populations					4
<i>T-W-7</i>	Introgression between species					3
<i>T-W-8</i>	Variation in small or endangered populations					3
<i>T-W-9</i>	Values of biodiversity and loss of biodiversity					3
<i>T-W-10</i>	Use of Genetics in Forensics					3



Student workload - forms of activity		Number of hours
A-L-1	Classes and field trips	40
A-L-2	Independent study (literature review)	30
A-L-3	Preparing for exam	20
A-W-1	Lectures	30
A-W-2	Independent study (literature review)	30
A-W-3	Preparing for exam	30

Teaching methods / tools	
M-1	Lectures and laboratory

Evaluation methods (F - progressive, P - final)		
S-1	F	Continuous assessment (laboratory)
S-2	P	Written exam (lecture)

Designed learning outcomes	Reference to the learning outcomes designed for the fields of study	Reference to Learning Outcomes for qualifications at PQF 6, 7 or 8	Reference to learning outcomes for qualifications at level 6 or 7 that enable acquiring engineering competences	Course objectives	Course content	Teaching methods	Evaluation methods
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Knowledge								
AQF_1A_C15a_W01 Has knowledge of the current state and the latest developmental trends in conservation genetics as well as the related areas in Poland and abroad.	AQF_1A_W06	P6S_WG		C-1	T-W-1 T-W-2 T-W-3 T-W-4 T-W-5	T-W-6 T-W-7 T-W-8 T-W-9 T-W-10	M-1	S-1 S-2

Skills								
AQF_1A_C15a_U01 Student is able to plan and conduct measurements/operations, as well as to interpret the obtained results and draw the conclusions	AQF_1A_U14	P6S_UW		C-1	T-L-1 T-L-2 T-L-3 T-L-4 T-L-5 T-L-6	T-L-7 T-L-8 T-L-9 T-L-10 T-L-11 T-L-12	M-1	S-1 S-2

Social competences								
AQF_1A_C15a_K01 Student is able to collect and interpret data from field trips and literature, prepare written experimental reports and present results of literature study using audiovisual ways.	AQF_1A_K01	P6S_KK P6S_KR		C-1	T-L-1 T-L-2 T-L-3 T-L-4 T-L-5 T-L-6 T-L-7 T-L-8 T-L-9 T-L-10 T-L-11	T-L-12 T-W-1 T-W-2 T-W-3 T-W-4 T-W-5 T-W-6 T-W-7 T-W-8 T-W-9 T-W-10	M-1	S-1 S-2

Outcomes	Grade	Evaluation criterion
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Knowledge		
AQF_1A_C15a_W01	2,0	
	3,0	Student demonstrates basic knowledge of conservation genetics
	3,5	
	4,0	
	4,5	
	5,0	

Skills		
AQF_1A_C15a_U01	2,0	
	3,0	Student can prepare written reports from field trips and present literature study on given subject.
	3,5	
	4,0	
	4,5	
	5,0	

Other social competences		
AQF_1A_C15a_K01	2,0	
	3,0	Student is able to finish all tasks during course with the help of the colleagues and a teacher.
	3,5	
	4,0	
	4,5	
	5,0	



Required reading

1. Hartl D.L., Principles of population genetics, Sinauer Associates, Sunderland, 2007, Fourth edition

2. Słomski R. [Ed.], Restoration of endangered and extinct animals, Poznań University of Sciences, Poznań, 2010

3. Conservation genetics, <http://www.springer.com/life+sciences/ecology/journal/10592>