



Field of study		Aquaculture and Fisheries						
Mode of study		stationary	Level	first cycle				
Graduate's qualification		inżynier						
Fields of science		agricultural sciences						
Disciplines of science		animal science and fisheries (100%)						
Educational profile		general academic						
Module								
Course unit		Fisheries management and new fish catching techniques						
Code		WNOZIR/AQF/S1/						
Field of specialisation								
Administering faculty		Department of Commodity Science, Quality Assessment, Process Engineering and Human Nutrition						
ECTS		6.0	ECTS (forms)	6.0				
Form of course credit		examination	Language	english				
Electives		6	Elective group					
Form of instruction		Cod	Semester	Hours	ECTS	Weight	Credit	
laboratory course		L	3	30	3.0	0.50	credits	
lecture		W	3	30	3.0	0.50	examination	
Leading teacher		Czerniejewski Przemysław (Przemyslaw.Czerniejewski@zut.edu.pl)						
Other teachers								
Prerequisites								
W-1		Basic of technology, growth, and types of fishery.						
Module/course unit objectives								
C-1		Students will know about worldwide fisheries, value chains, and ecological research. They will learn traditional methods to investigate exploited organisms, such as determination of population parameters, and field work for direct estimation of fish density.						
Course content divided into various forms of instruction							Number of hours	
T-L-1		History of Polish fisheries management . Fisheries: recreation commercial. Institutions of fisheries management: domestic and international and fisheries law . Anadromous fish management. New fish catching technics. Fish collection in lake, rivers and Baltic sea.					30	
T-W-1		Principles of fisheries management and methods for assessment and analysis of fish populations and aquatic habitats. Modelling and Quantitative Methods in Fisheries. Using new technics in fisheries.					30	
Student workload - forms of activity							Number of hours	
A-L-1		Practice in lake and river					30	
A-L-2		Self-study					30	
A-L-3		Exercises					30	
A-W-1		Lecture					30	
A-W-2		Self-study					30	
A-W-3		Participation in classes					30	
Teaching methods / tools								
M-1		Lectures/Laboratory						
Evaluation methods (F - progressive, P - final)								
S-1		P	Lecture - exam					
S-2		F	Laboratory - grade					
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
Knowledge								



AQF_1A_C10a_W01 Students will learn about the role of the fisheries management authority in Poland, the importance of sustainable fishing and protecting the marine environment.	AQF_1A_W03 AQF_1A_W05 AQF_1A_W11	P6S_WG	P6S_WG	C-1	T-L-1	T-W-1	M-1	S-1 S-2
<i>Skills</i>								
AQF_1A_C10a_U01 The student has the ability to lead a rational fishing management	AQF_1A_U09 AQF_1A_U12 AQF_1A_U13 AQF_1A_U16 AQF_1A_U19	P6S_UO P6S_UW	P6S_UW	C-1	T-L-1	T-W-1	M-1	S-1 S-2
<i>Social competences</i>								
AQF_1A_C10a_K01 The student has good competences to plan the fisheries management, exploitation and stocking of fish	AQF_1A_K01 AQF_1A_K02 AQF_1A_K03 AQF_1A_K04 AQF_1A_K05	P6S_KK P6S_KO P6S_KR		C-1	T-L-1	T-W-1	M-1	S-1 S-2

Outcomes	Grade	Evaluation criterion
<i>Knowledge</i>		
AQF_1A_C10a_W01	2,0	the student has not knowledge of fishing and stocking on basic level
	3,0	the student has knowledge of fishing and stocking on basic level
	3,5	the student has knowledge of fishing and stocking on upper than basic level
	4,0	the student has knowledge of fishing and stocking on good level
	4,5	the student has knowledge of fishing and stocking on upper than good level
	5,0	the student has knowledge of fishing and stocking on very good level
<i>Skills</i>		
AQF_1A_C10a_U01	2,0	The student has not the ability to lead a rational fishing management on basic level
	3,0	The student has the ability to lead a rational fishing management on basic level
	3,5	The student has the ability to lead a rational fishing management on upper than basic level
	4,0	The student has the ability to lead a rational fishing management on good level
	4,5	The student has the ability to lead a rational fishing management on upper than good level
	5,0	The student has the ability to lead a rational fishing management on vary good level
<i>Other social competences</i>		
AQF_1A_C10a_K01	2,0	The student has not any competences to plan the fisheries economy
	3,0	The student has a good competences to plan the fisheries economy on the basic level
	3,5	The student has a good competences to plan the fisheries economy on the upper than basic level
	4,0	The student has a good competences to plan the fisheries economy on the good level
	4,5	The student has a good competences to plan the fisheries economy on the upper than good level
	5,0	The student has a good competences to plan the fisheries economy on the very good level

<i>Required reading</i>
1. John C. Sainsbury, Commercial Fishing Methods: An Introduction to Vessels and Gears, Wiley 3 edition, 1996
2. Ian Wellby, Ash Girder, Robin Welcomme, Fisheries Management: A Manual for Still - Water Coarse Fisheries, John Wiley & Sons, 2010
3. R. Quentin Grafton, Ray Hilborn, Dale Squires, Meere Tait, Handbook of Marine Fisheries Conservation and Management, Oxford University Press, 2010