



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>		Fisheries resources				
<i>Code</i>		WNOZIR/AQF/S1/				
<i>Field of specialisation</i>						
<i>Administering faculty</i>		Department of Aquatic Bioengineering and Aquaculture				
<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>			<i>Elective group</i>			
<i>Form of instruction</i>		<i>Cod</i>	<i>Semester</i>	<i>Hours</i>	<i>ECTS</i>	<i>Weight</i>
project course		P	3	30	3.0	0.50
lecture		W	3	30	3.0	0.50
<i>Leading teacher</i>		Stepanowska Katarzyna (Katarzyna.Stepanowska@zut.edu.pl)				
<i>Other teachers</i>		Biernaczyk Marcin (Marcin.Biernaczyk@zut.edu.pl), Sadowski Jacek (Jacek.Sadowski@zut.edu.pl)				
<i>Prerequisites</i>						
<i>W-1</i>	Hydrobiology; Oceanography; Fish Systematics; Fish Biology					
<i>Module/course unit objectives</i>						
<i>C-1</i>	To provide students with basic courses of fisheries resources.					
<i>Course content divided into various forms of instruction</i>						<i>Number of hours</i>
<i>T-P-1</i>	<ol style="list-style-type: none"> 1. Fisheries statistics. The state of world fisheries. 2. The stock identification. 3. Composition of the exploited part of the stock in terms of body length and fish age. 4. Fishing effort standardization. 5. Daily fluctuations in fishing efficiency. 6. Biomass assessment of aquatic biological resources. 7. Mathematical modeling of individual growth. 8. Assessment of total, natural and fishing mortality. 9. Selectivity of fishing gears. 10. Colloquium. 11. Drawing up a fishing plan with the help of a fishing atlas. 12. Virtual population analysis. 13. Dependence of the size of the supplement on the size of the spawning stock. 14. Selected elements of monitoring aquatic biological resources. 15. Colloquium. 					30
<i>T-W-1</i>	<ol style="list-style-type: none"> 1. Global living aquatic resources - characteristic and main species. 2. Fisheries resources - stocks and their exploitation. 3. Capture fisheries production. The most important fishing countries in the world and their catches. The most important fish species. 4. Small scale fisheries. 5. Characteristics of the world's most important fisheries areas. 6. Characteristics of freshwater fisheries resources. 7. Characteristics of marine fisheries resources. 8. Methodology of researching fisheries resources. 9. Sustainable exploitation of fisheries resources - management and development. 10. History of fisheries resources research. 					30
<i>Student workload - forms of activity</i>						<i>Number of hours</i>
<i>A-P-1</i>	Participation in classes					30
<i>A-P-2</i>	Self-study					30
<i>A-P-3</i>	Preparation for classes					30
<i>A-W-1</i>	Lectures					30
<i>A-W-2</i>	Self-study					30
<i>A-W-3</i>	Study of the literature					30



Teaching methods / tools

M-1 Lectures, presentations, movies

Evaluation methods (F - progressive, P - final)

S-1 F Grade

S-2 P Exam

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_C07_W01

Student is able to characterize the distribution and size of fisheries resources. Student is able to determine the dynamics of changes in fisheries resources, taking into account the reasons for these changes.

AQF_1A_W11

P6S_WG

C-1

T-W-1

M-1

S-1
S-2

Skills

AQF_1A_C07_U01

Student is able to characterize and analyze the fisheries resources based on available information.

AQF_1A_U05
AQF_1A_U13

P6S_UO
P6S_UU
P6S_UW

C-1

T-W-1

M-1

S-1
S-2

Social competences

AQF_1A_C07_K01

Student is able to assess the effects of activities in the field of fisheries and water management.

AQF_1A_K04

P6S_KK

C-1

T-W-1

M-1

S-2

Outcomes	Grade	Evaluation criterion
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Knowledge

AQF_1A_C07_W01

2,0

3,0

3,5

4,0

4,5

5,0

Basic knowledge about global living aquatic resources (characteristic and main species) and fisheries resources (stocks and their exploitation).

Skills

AQF_1A_C07_U01

2,0

3,0

3,5

4,0

4,5

5,0

Student is able to analyze the size of fisheries resources based on available informations,

Other social competences

AQF_1A_C07_K01

2,0

3,0

3,5

4,0

4,5

5,0

Student has the ability to planning of rational and ethical fisheries management.

Required reading

1. 1. Kompowski A., Horbowy J., Dynamika stada, Wydawnictwo Morskiego Instytutu Rybackiego, Gdynia, 1990, Dynamika stada, Wydawnictwo Morskiego Instytutu Rybackiego, Gdynia, 1990

2. Caddy J.F., Griffiths R.C., Living marine resources and their sustainable development: some environmental and institutional perspectives, FAO, Rome, 1995, FAO, Rome, 1995

3. Wilson D.E., Reeder D.M., Marine mammals of the world. FAO species identification guide, John Hopkins University Press, Baltimore, 2005, Marine mammals of the world. FAO species identification guide, John Hopkins University Press, Baltimore, 2005, John Hopkins University Press, Baltimore, 2005

4. FAO, The State of World Fisheries and Aquaculture, FAO, Rome, <http://www.fao.org/state-of-fisheries-aquaculture> (pdf FAO fish book), FAO, Rome, 2018

5. FAO, Impacts of climate change on fisheries and aquaculture. Synthesis of current knowledge, adaptation and mitigation options, FAO, Rome, <http://www.fao.org/3/i9705en/i9705en.pdf> (pdf FAO book), FAO, Rome, 2018