

Zachodniopomorski Uniwersytet Technologiczny w Szczecinie

Faculty of Food Sciences and Fisheries

	study	Aquad	culture and Fi	sheries					
Mode of study		statio	nary	Level first cycle			ż:D		
Graduate's qualification		inżyni	ier			WNo	ZIK		
Fields o	of science	agricu	ultural science	es					
Disciplii	nes of science	anima	al science and	l fisheries (100%)					
Educati	ional profile	gener	ral academic						
Module						□ I I,	$\overline{}$		
Course	unit	Inver	tebrates aq	uaculture		-ı r			
Code			WNOZIR/AQF/S1/						
Field of	specialisation								
	stering faculty	Denai	rtment of Aqu	atic Rioengineeri	ng and Aguaculture				
ECTS		5.0	Department of Aquatic Bioengineering and Aquaculture 5.0						
Form of course credit			, ,						
		Exam	examination Language english						
Elective				Elective group					
	f instruction	Cod	Semester	Hours	ECTS	Weight	Credit		
lecturin	ig course	Α	4	30	2.0	0.50	credits		
lecture		W	4	30	3.0	0.50	examination		
Leading	g teacher	Sadov	Sadowski Jacek (Jacek.Sadowski@zut.edu.pl)						
Other to	eachers	Bierna	Biernaczyk Marcin (Marcin.Biernaczyk@zut.edu.pl)						
Prerequ	uisites	<u> </u>							
							aquatic organisms		
W-1				ave basic knowledg	je of biology, physiolog	y and systematics of	aquatic organisms,		
	hydrochemistry a	and mathe		ave basic knowledg	ge of biology, physiolog	y and systematics of	aquatic organisms,		
	hydrochemistry a /course unit objecti	ives	ematics.						
	hydrochemistry a /course unit objecti To acquaint stud	ind matherives ents with in both the	ematics. the issues of b	reeding selected gr	ge of biology, physiolog oups of aquatic inverte g method. Clarification	brates, presenting m	ethods and		
Module, C-1	hydrochemistry a /course unit objecti To acquaint stude techniques used	ives ents with in both th	ematics. the issues of bine extensive an	reeding selected gr d intensive breedin	oups of aquatic inverte	brates, presenting m	ethods and		
Module, C-1 Course	hydrochemistry a /course unit objecti To acquaint studitechniques used farming operation	ents with in both the income in both the income in the inc	ematics. the issues of bine extensive an	reeding selected gr d intensive breedin	oups of aquatic inverte	brates, presenting m	ethods and Il aspects of the		
Module/ C-1 Course T-A-1 T-A-2	hydrochemistry a /course unit objecti To acquaint studitechniques used farming operation content divided int	ives ents with in both th n. co variou nethods	ematics. the issues of bine extensive an	reeding selected gr d intensive breedin	oups of aquatic inverte	brates, presenting m	ethods and I aspects of the		
Module/ C-1 Course T-A-1 T-A-2 T-A-3	hydrochemistry a /course unit objects To acquaint study techniques used farming operation content divided int Oyster farming m Mussel farming n Scallop farming r	ives ents with in both th n. co variou nethods nethods	the issues of book extensive and as forms of ins	reeding selected gr d intensive breedin truction	oups of aquatic inverte	brates, presenting m	ethods and aspects of the Number of hours 4 4 2		
Module/ C-1 Course T-A-1 T-A-2 T-A-3 T-A-4	hydrochemistry a /course unit objects To acquaint studitechniques used farming operation content divided int Oyster farming m Mussel farming m Scallop farming r Snail rearing met	ives ents with in both th n. o variou nethods nethods thods of ti	the issues of bine extensive and is forms of ins	reeding selected gr d intensive breedin truction	oups of aquatic inverte	brates, presenting m	Number of hours 4 2 2		
C-1 Course T-A-1 T-A-2 T-A-3 T-A-4 T-A-5	hydrochemistry a //course unit objects To acquaint study techniques used farming operation content divided int Oyster farming m Mussel farming m Scallop farming met Farming methods	ives ents with in both th n. co variou nethods nethods thods of th s for muse	the issues of book extensive and is forms of instance. The Haliotis genusels from the Trees.	reeding selected gr d intensive breedin truction	oups of aquatic inverte	brates, presenting m	ethods and aspects of the Number of hours 4 4 2 2 2		
Module/ C-1 Course T-A-1 T-A-2 T-A-3 T-A-4 T-A-5 T-A-6	hydrochemistry a //course unit objects To acquaint study techniques used farming operation content divided int Oyster farming m Mussel farming m Scallop farming m Snail rearing met Farming methods Saltwater shrimp	ives ents with in both th n. co variou nethods nethods chods of th s for muss farming	the issues of bine extensive and is forms of instance. The Haliotis genusels from the Transcels from the Tr	reeding selected gr d intensive breedin truction	oups of aquatic inverte	brates, presenting m	Number of hours 4 2 2 4		
Module/ C-1 Course T-A-1 T-A-2 T-A-3 T-A-4 T-A-5 T-A-6 T-A-7	hydrochemistry a /course unit objecta To acquaint studitechniques used farming operation content divided int Oyster farming m Mussel farming m Scallop farming m Snail rearing met Farming methods Saltwater shrimp Freshwater shrim	ives ents with in both th n. co variou nethods nethods chods of th s for muse farming aps farming	the issues of bine extensive and is forms of instance. The Haliotis genusels from the Transchods and methods	reeding selected gr d intensive breedin truction	oups of aquatic inverte	brates, presenting m	Number of hours 4 4 2 2 4 4		
Module/ C-1 Course T-A-1 T-A-2 T-A-3 T-A-4 T-A-5 T-A-6 T-A-7 T-A-8	hydrochemistry a /course unit objecta To acquaint stude techniques used farming operation Content divided int Oyster farming m Mussel farming m Scallop farming met Farming methods Saltwater shrimp Freshwater shrim Crayfish farming	ives ents with in both th n. co variou nethods nethods chods of th s for muss farming nps farmir methods	the issues of bine extensive and is forms of instance. The Haliotis genusels from the Transcels from the Tr	reeding selected gr d intensive breedin truction	oups of aquatic inverte	brates, presenting m	ethods and aspects of the Number of hours 4 4 2 2 2 4 4 4 2		
Module/ C-1 Course T-A-1 T-A-2 T-A-3 T-A-4 T-A-5 T-A-6 T-A-7 T-A-8 T-A-9	hydrochemistry a //course unit objects To acquaint study techniques used farming operation Content divided int Oyster farming m Mussel farming m Scallop farming m Snail rearing met Farming methods Saltwater shrimp Freshwater shrim Crayfish farming Lobster and craw	ives ents with in both the n. o variou nethods nethods chods of the farming nps farming methods fish farm	the issues of bine extensive and is forms of instance. The Haliotis genusels from the Trimethods and methods ing methods	reeding selected gr d intensive breedin truction	oups of aquatic inverte	brates, presenting m	Number of hours A 4 4 2 2 4 4 2 2 2 2 4		
Module/ C-1 Course T-A-1 T-A-2 T-A-3 T-A-4 T-A-5 T-A-6 T-A-7 T-A-8 T-A-9 T-A-10	hydrochemistry a /course unit objects To acquaint studitechniques used farming operation Content divided int Oyster farming m Mussel farming m Scallop farming m Snail rearing met Farming methods Saltwater shrimp Freshwater shrim Crayfish farming Lobster and craw Octopus farming	ives ents with in both th n. co variou nethods nethods chods of th s for muse farming nps farmir methods fish farm methods	the issues of bine extensive and is forms of instance. The Haliotis genusels from the Transchods and methods and methods are methods and methods are methods.	reeding selected gr d intensive breedin truction	oups of aquatic inverte	brates, presenting m	ethods and aspects of the Number of hours 4 4 2 2 2 4 4 4 2		
Module/ C-1 Course T-A-1 T-A-2 T-A-3 T-A-4 T-A-5 T-A-6 T-A-7 T-A-8 T-A-9	hydrochemistry a //course unit objects To acquaint study techniques used farming operation content divided int Oyster farming m Mussel farming m Scallop farming m Snail rearing met Farming methods Saltwater shrimp Freshwater shrimm Crayfish farming Lobster and craw Octopus farming Diseases of aqua	ives ents with in both the covariou nethods nethods chods of the farming nps farmin methods fish farm methods tic organi	the issues of bine extensive and is forms of instance the Haliotis genusels from the Transethods and methods ing methods isms used in aquickless.	reeding selected gr d intensive breedin truction us idacnidae family	oups of aquatic inverte g method. Clarification	brates, presenting m of the environmenta	Number of hours A 4 4 2 2 4 4 2 2 2 2 4 4 2 2		
Module/ C-1 Course T-A-1 T-A-2 T-A-3 T-A-4 T-A-5 T-A-6 T-A-7 T-A-8 T-A-9 T-A-10 T-A-11 T-W-1	hydrochemistry a //course unit objects To acquaint studitechniques used farming operation content divided int Oyster farming m Mussel farming m Scallop farming met Farming methods Saltwater shrimp Freshwater shrim Crayfish farming Lobster and craw Octopus farming Diseases of aqua World invertebra	ives ents with in both the n. io variou nethods nethods chods of the sfor muse farming nps farmin methods fish farm methods tic organi te aquacu	the issues of bine extensive and is forms of instance in the Haliotis genusels from the Transethods in general methods in general methods is methods in the methods in the methods in the methods is methods in the method	reeding selected gr d intensive breedin truction us idacnidae family uaculture ature and naming u	oups of aquatic inverte	brates, presenting m of the environmenta	ethods and aspects of the Number of hours 4 4 2 2 4 4 4 2 2 2 4 4 2 2		
Module/ C-1 Course T-A-1 T-A-2 T-A-3 T-A-4 T-A-5 T-A-6 T-A-7 T-A-8 T-A-9 T-A-10 T-A-11 T-W-1	hydrochemistry a //course unit objects To acquaint studitechniques used farming operation content divided int Oyster farming m Mussel farming m Scallop farming m Snail rearing met Farming methods Saltwater shrimp Freshwater shrim Crayfish farming Lobster and craw Octopus farming Diseases of aqua World invertebra	ives ents with in both th in both th n. co variou nethods nethods chods of th s for muse farming nps farmin methods fish farm methods tic organi te aquacu	the issues of bine extensive and is forms of instance in the Haliotis genusels from the Tranethods ing methods isms used in aquiture. Nomenci dividual groups	reeding selected gr d intensive breedin truction US idacnidae family uaculture ature and naming u	oups of aquatic inverte g method. Clarification	brates, presenting m of the environmenta	Number of hours A 4 4 4 2 2 4 4 2 2 2 4 4 2 2		
Module/ C-1 Course T-A-1 T-A-2 T-A-3 T-A-4 T-A-5 T-A-6 T-A-7 T-A-8 T-A-9 T-A-10 T-A-11 T-W-1 T-W-1	hydrochemistry a //course unit objects To acquaint studitechniques used farming operation content divided int Oyster farming m Mussel farming m Scallop farming met Farming methods Saltwater shrimp Freshwater shrim Crayfish farming Lobster and craw Octopus farming Diseases of aqua World invertebra Production statist	ives ents with in both the n. co various nethods nethods for muss farming methods fish farm methods tic organi te aquacu	the issues of bine extensive and its forms of instance in the Haliotis genusels from the Transels from	reeding selected gr d intensive breedin truction us ridacnidae family uaculture ature and naming u of aquatic organism	oups of aquatic inverte g method. Clarification	brates, presenting m of the environmenta	Number of hours Number of hours 4 4 2 2 2 4 4 2 2 4 4 2 2		
Module/ C-1 Course T-A-1 T-A-2 T-A-3 T-A-4 T-A-5 T-A-6 T-A-7 T-A-8 T-A-9 T-A-10 T-A-11 T-W-1 T-W-1 T-W-2 T-W-3 T-W-4	hydrochemistry a //course unit objecti To acquaint studitechniques used farming operation content divided int Oyster farming m Mussel farming m Scallop farming m Snail rearing met Farming methods Saltwater shrimp Freshwater shrim Crayfish farming Lobster and craw Octopus farming Diseases of aqua World invertebra Production statist Systematic revies	ives ents with in both the n. co variou nethods nethods chods of the sfor muss farming nps farmin methods fish farm methods tic organi te aquacu tics for income of aqua ng method	the issues of bine extensive and is forms of instance in the Haliotis genusels from the Transethods in generated in a guiture. Nomencle dividual groups atic organisms.	reeding selected gr d intensive breedin truction us ridacnidae family uaculture ature and naming u of aquatic organism	oups of aquatic inverte g method. Clarification used in the rearing process according to FAO data groups of organisms amental requirements	brates, presenting m of the environmenta	ethods and aspects of the Number of hours 4 4 2 2 2 4 4 2 2 4 4 4 2 2		
Module/ C-1 Course T-A-1 T-A-2 T-A-3 T-A-4 T-A-5 T-A-6 T-A-7 T-A-8 T-A-9 T-A-10 T-A-11 T-W-1 T-W-1 T-W-2 T-W-3 T-W-4 T-W-5	hydrochemistry a //course unit objects To acquaint study techniques used farming operation Content divided int Oyster farming m Mussel farming m Scallop farming m Snail rearing met Farming methods Saltwater shrimm Crayfish farming Lobster and craw Octopus farming Diseases of aqua World invertebra Production statist Systematic review Crustacean farming Mollusc farming m Reproduction and	ives ents with in both the n. io variou nethods nethods chods of the strong farming methods tics farm methods tic organiate aquacu tics for incomethods, did acquisit	the issues of bine extensive and is forms of instance in the Haliotis genusels from the Transethods in general methods is must be used in aquiture. Nomencial dividual groups atic organisms. Tods, technical deviction of restocking in general methods.	reeding selected grd intensive breeding truction us ridacnidae family uaculture ature and naming u of aquatic organisr The most important evices and environmen g material of individ	oups of aquatic inverte g method. Clarification used in the rearing process according to FAO dat groups of organisms amental requirements tal requirements dual groups of organisms	brates, presenting m of the environmenta	Number of hours A 4 4 2 2 4 4 2 2 4 4 4 4 4		
Module/ C-1 Course T-A-1 T-A-2 T-A-3 T-A-4 T-A-5 T-A-6 T-A-7 T-A-8 T-A-9 T-A-10 T-A-11 T-W-1 T-W-1 T-W-2 T-W-3 T-W-4 T-W-5 T-W-6 T-W-7	hydrochemistry a //course unit objecti To acquaint studitechniques used farming operation content divided int Oyster farming m Mussel farming m Scallop farming m Snail rearing met Farming methods Saltwater shrimp Freshwater shrim Crayfish farming Lobster and craw Octopus farming Diseases of aqua World invertebra Production statist Systematic revies Crustacean farming Mollusc farming m Reproduction and	ives ents with in both the n. co variou nethods nethods chods of the sfor muss farming nps farmin methods tic organi te aquacu tics for ine w of aqua ng methods d acquisit coment opp	the issues of bine extensive and its forms of instance in the Haliotis genusels from the Transethods in generated in a guiture. Nomencle dividual groups attic organisms. Tods, technical deviction of restocking portunities and	reeding selected grid intensive breeding truction us ridacnidae family uaculture ature and naming us of aquatic organism The most important evices and environment g material of individerestrictions on rear	oups of aquatic inverte g method. Clarification used in the rearing process according to FAO data groups of organisms at mental requirements tal requirements dual groups of organism ing. Threats to the environments	brates, presenting m of the environmenta	Number of hours A 4 4 2 2 4 4 4 4 4 4 4 4 4		
Module/ C-1 Course T-A-1 T-A-2 T-A-3 T-A-4 T-A-5 T-A-6 T-A-7 T-A-8 T-A-9 T-A-10 T-A-11	hydrochemistry a //course unit objects To acquaint studitechniques used farming operation content divided int Oyster farming m Mussel farming m Scallop farming m Snail rearing methods Saltwater shrimp Freshwater shrim Crayfish farming Lobster and craw Octopus farming Diseases of aqua World invertebra Production statist Systematic review Crustacean farming Mollusc farming m Reproduction and Potential develop Operation of "Inter	ives ents with in both the n. io variou nethods nethods chods of the strong in methods fish farm methods tic organi te aquacu tics for in- w of aqua ing methods, d acquisit ment opp	the issues of bine extensive and is forms of instance in the Haliotis genusels from the Tranethods in generated in the Haliotis genusels from the Tranethods in generated in a gulture. Nomencal dividual groups atic organisms. Tods, technical deviction of restocking portunities and multi-trophic agricultion.	reeding selected grad intensive breeding struction US ridacnidae family uaculture ature and naming user of aquatic organism. The most important evices and environmen grade en	oups of aquatic inverte g method. Clarification used in the rearing process according to FAO date groups of organisms amental requirements stal requirements dual groups of organismital groups organism	brates, presenting mof the environmenta	ethods and aspects of the Number of hours 4 4 2 2 2 4 4 4 2 2 4 4 4		
Module/ C-1 Course T-A-1 T-A-2 T-A-3 T-A-4 T-A-5 T-A-6 T-A-7 T-A-8 T-A-9 T-A-10 T-A-11 T-W-1 T-W-1 T-W-2 T-W-3 T-W-4 T-W-5 T-W-6 T-W-7	hydrochemistry a //course unit objects To acquaint studitechniques used farming operation content divided int Oyster farming m Mussel farming m Scallop farming m Snail rearing methods Saltwater shrimp Freshwater shrim Crayfish farming Lobster and craw Octopus farming Diseases of aqua World invertebra Production statist Systematic reviee Crustacean farming Mollusc farming m Reproduction and Potential develop Operation of "Intel Legal regulations	ives ents with in both the n. co variou nethods nethods chods of the strong farming methods fish farm methods tic organi te aquacu tics for in- w of aqua ing methods, d acquisit coment opperated ne	the issues of bine extensive and is forms of instance in the Haliotis genusels from the Transethods in general methods is must be a self of the Haliotis genusels from the Transethods is must be a self of the theorem is the constance of the c	reeding selected grad intensive breeding struction US ridacnidae family uaculture ature and naming user of aquatic organism. The most important evices and environmen grade en	oups of aquatic inverte g method. Clarification used in the rearing process according to FAO data groups of organisms at mental requirements tal requirements dual groups of organism ing. Threats to the environments	brates, presenting mof the environmenta	Number of hours A 4 4 2 2 4 4 4 4 4 4 4 4 4		
Module/ C-1 Course T-A-1 T-A-2 T-A-3 T-A-4 T-A-5 T-A-6 T-A-7 T-A-8 T-A-9 T-A-10 T-A-11 T-W-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	hydrochemistry a //course unit objects To acquaint studitechniques used farming operation content divided int Oyster farming m Mussel farming m Scallop farming m Snail rearing methods Saltwater shrimp Freshwater shrim Crayfish farming Lobster and craw Octopus farming Diseases of aqua World invertebra Production statist Systematic review Crustacean farming Mollusc farming m Reproduction and Potential develop Operation of "Inter	ives ents with in both the n. io variou nethods nethods chods of the sing farming inps farming methods fish farm methods tic organi te aquacu tics for in- w of aqua ing methods, d acquisit oment opp egrated in a regardin anitary re	the issues of bine extensive and is forms of instance in the Haliotis genusels from the Tranethods is methods is methods is methods is methods it is not ulture. Nomencle dividual groups atic organisms. Tods, technical deviction of restocking portunities and multi-trophic aquig the acquisitic quirements.	reeding selected grad intensive breeding struction US ridacnidae family uaculture ature and naming user of aquatic organism. The most important evices and environmen grade en	oups of aquatic inverte g method. Clarification used in the rearing process according to FAO date groups of organisms amental requirements stal requirements dual groups of organismital groups organism	brates, presenting mof the environmenta	ethods and aspects of the Number of hours 4 4 4 2 2 2 4 4 4 4 4 4 4		
Module/ C-1 Course T-A-1 T-A-2 T-A-3 T-A-4 T-A-5 T-A-6 T-A-7 T-A-8 T-A-9 T-A-10 T-A-11 T-W-1 T-W-1 T-W-2 T-W-3 T-W-4 T-W-5 T-W-6 T-W-7 T-W-7 T-W-8 T-W-9 T-W-10	hydrochemistry a //course unit objects To acquaint studitechniques used farming operation content divided int Oyster farming m Mussel farming m Scallop farming m Scallop farming methods Saltwater shrimp Freshwater shrim Crayfish farming Lobster and craw Octopus farming Diseases of aqua World invertebra Production statist Systematic review Crustacean farming Mollusc farming m Reproduction and Potential develop Operation of "Intel Legal regulations Veterinary and sa	ives ents with in both the n. o variou nethods nethods chods of the strong aps farming methods fish farm methods tic organi the aquacutics for in- w of aqua ang methods d acquisit omethods, d acquisit oment opp egrated in a regardin anitary re of selling	the issues of bine extensive and is forms of instance in the Haliotis genusels from the Transethods in general methods in general methods is must be a self of the transethod in the transethod in the transethod is must be a self of the transethod in the transethod	reeding selected grad intensive breeding struction US ridacnidae family uaculture ature and naming user of aquatic organism. The most important evices and environmen grade en	oups of aquatic inverte g method. Clarification used in the rearing process according to FAO date groups of organisms amental requirements stal requirements dual groups of organismital groups organism	brates, presenting mof the environmenta	Rethods and all aspects of the Round All aspec		



Faculty of Food Sciences and Fisheries

			Faculty of F	ood Scien	ces and	Fisherie	S				
Student wo	tudent workload - forms of activity							Nun	Number of hours		
A-A-2	reparation for classes, including studying the literature on the subject							20			
A-A-3	Preparation for completing the course							10			
A-W-1	Participation in classes								30		
A-W-2	Preparation for completing the course								60		
Teaching m	nethods	/ tools	S						•		
M-1	informati	ive lec	ture with the use of multimed	dia presentations	5						
M-2	Conversation lecture										
M-3	didactic d	discus	sion								
Evaluation	method	s (F -	progressive, P - final)								
S-1	F A	Assess student achievement by asking written or oral questions at the beginning and during the				class					
S-2			sessment of the presentation prepared by the student on the method of breeding a selected groganisms.					group o	of aquat	ic	
S-3			n test after the end of the course								
I	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 o	content	Teaching methods	Evaluation methods
Knowledge											
AQF_1A_C13_W01 The student knows the methods of aquatic invertebrate breeding, the devices used and environmental factors influencing the breeding process.			AQF_1A_W04	P6S_WG	P6S_WG	C-1	T-A-2 T-A-3 T-A-4 T-A-5 T-A-6 T-A-7 T-A-8 T-A-9	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 M-2 M-3	S-1 S-2 S-3	
Skills											
technique for i to develop the demand for the	able to ch ndividual (rules of the basic tec	groups ne bree chnical	ne appropriate breeding of aquatic organisms. He is able ding operation and prepare the elements of breeding.	AQF_1A_U21	P6S_UW	P6S_UW	C-1	T-A-2 T-A-3 T-A-4 T-A-5 T-A-6 T-A-7 T-A-8 T-A-9	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 M-2 M-3	S-1 S-2 S-3
Social comp	petence	S		1	T			I		ı	
AQF_1A_C13_K01 The student is aware of the importance of invertebrate aquaculture and appreciates the nutritional value of seafood				AQF_1A_K03	P6S_KO P6S_KR		C-1	T-A-2 T-A-3 T-A-4 T-A-5 T-A-6 T-A-7 T-A-8 T-A-9	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	M-1 M-2 M-3	S-1
Outcom	es G	rade		E	valuation cr	iterion					
Knowledge											
AQF_1A_C13_V		3,0	The student has knowledge of the the ways of using particular grou environmental requirements.								
		4,0									
		4,5									
		5,0									



Faculty of Food Sciences and Fisheries

Skills		
AQF_1A_C13_U01	2,0	
	3,0	The student is able to choose the appropriate devices and organize the facilities for breeding. The student is able to apply knowledge to carry out a complete breeding cycle of the most important groups of aquatic organisms.
	3,5	
	4,0	
	4,5	
	5,0	
Other social con	npetenc	res
AQF_1A_C13_K01	2,0	
	3,0	The student is aware of his knowledge and skills, but does not see the need for self-education.
	3,5	
	4,0	
	4,5	
	5,0	
Required readin	g	
1. The State of Wo	orld Fish	eries and Aquaculture, FAO Fisheries and Aquaculture Department, Rzym, 2012
2. J. F. Wickins, D.	O'C. Lee	e, Crustacean farming, Blackwell science, 2002
Supplementary	reading	

1. FAO, Materiały statystyczne oraz opracowania tematyczne dotyczące ryb i owoców morza, www.fao.org, 2012