	Department: Ecology, agronomy and aquaculture						
	Study programme: The study of applied ecology in agriculture						
Description of	The study of applied ecology in agriculture includes integrated and ecological						
the study programme	approach, with emphasis on Mediterranean ecosystems. Focus is on ecology and management, not exploitation. Departmental philosophy is to promote and understand acceptable methods for food production while accounting for ecological balance, biodiversity and economical benefits, meanwhile keeping an eye on systems sustainability.						
	Program in Applied ecology in Mediterranean agriculture is adapted to a three- year undergraduate study education system that includes ECTS credits. Undergraduate students from this program can directly continue their studies in other study programs in Croatia and/or EU countries, taking into consideration their respective requirements. Since study program is comparable with other undergraduate programs in the field of biotechnical sciences (Agronomy, Forestry, Food Technology and Biotechnology faculty at University of Zagreb and Agronomy faculty at University of Osijek), vertical mobility after graduation is ensured. Since teaching plan is made in collaboration with Agronomy Faculty, University of Perugia, Agronomy faculty Tuscia, University of Viterbo (Italy), State University in Utah, Veterinary Faculty, University of Zagreb, Agricultural faculty, University of Osijek, several of our courses are also taught there. This is primarily true for Universities in Perugia and Tuscia in Italy. After the completion of the study program students can seek employment in the following areas: 1. Family farms						
	2. NGOs						
	3. Food processing and production companies.						
	4. Retail and wholesale companies.5. Agricultural advising agencies, local and federal government.						
Learning outcomes of the study programme	 application of the basic knowledge from the fields of biology (botany/zoology/ecology), pedology, chemistry, math, physics, and informatics in solving practical situations in agronomy production use of applied research methods and acquired expertise in solving varied situations in the fields of plant production, plant ecology, animal husbandry, especially when applied to Mediterranean climatic zone proficiency in the field and laboratory situations and use of skills from the areas of fruit, vegetable and fodder production ability to conduct basic lab analysis in the areas of quality control, storage and usage of fruits and vegetables in fresh, pre-processed and processed form ability to raise, keep and breed farm animals rationally use and manage sustainable grasslands in Mediterranean ecosystems offer practical and technical assistance in the fields of plant and animal ecology be professional and ethical manage farms based on the principles of economy, organizational management and entrepreneurship 						
	 continually improve expertise and stay current in the filed besides Croatian, posses active use of English language (courses will be 						

	 taught both in Croatian and English) exchange and manage data and information from the field of agronomy be cooperative and team oriented whilst retaining a degree of independence 								
List of courses	-	Introduction to scien	tific meth	nods and	biometric	S			
offered in a	-	Fisheries							
foreign language									
in winter term									
(by semesters)									
List of courses	-	Biochemistry							
offered in a	-	Aquaculture							
foreign language	-	Environmental scien							
in summer term	-	- Bees and beekeeping							
(by semesters)									
		cription of the courses				ge			
Name of the	Introd	uction to scientific me	thods and	d biometr	ics				
course		ſ	1	1		1	1		
Number of ECTS	6	Manner of	L	E	S	Semester			
credits		implementation of	2	2	2	1			
		the study							
		programme							
Description of		ourse aims are to teach				•			
the course		mental data (arising for	•				-		
		nts will be proficient in	the use o	fstatistic	al method	ls under applicat	ion of		
		tistical program R.							
Learning	-	use mathematical mo	-						
outcomes of the	-	select and apply appr	•		methods				
course	-	use computer aided of							
	-	apply scientific method		•	•	ms			
	-	collect, analyse and in	nterpret s	cientific o	data				

2. Name of the course	Fisheri	es								
Number of ECTS credits	3	Manner of implementation of the study programme	L 2	E 1	S 0	Semester 1				
Description of the course	•	Acquiring basic knowledge of the marine environment, morphology and physiology of fish, fisheries and its impact on the economy and environment.								
Learning outcomes of the course	After p - - - - -	assing the exam, stud explain morphologic the environment relate term overfishi specify biological se describe impact of fi the economy enumerate basic typ world economy	al and phy ng with st a resource sheries or	vsiologica cock asse es and th the env	al adaptations ssment of f e basics of ironment a	fish populations its rational explo and its importanc	oitation ce to			

2. Name of the	Biochemistry								
course									
Number of ECTS	6	Manner of	L	E	S	Semester			
credits		implementation of	4	0	1				
		the study				2			
		programme							
Description of	To obt	tain basic knowledge of	structure	e and fu	nction of	biological molecu	les,		
the course	genetic information and metabolism in order to understand processes in living								
	organisms and adaptation to ecological conditions								
Learning	-	Uponthecompletion	of thiscou	rse stud	entswill l	be able to:			
outcomes of the	-	indentifyand classify	carbohydı	ates,fat	s, amino	acids and nucleot	ides		
course	-	Explain kinetics ar	ndmechar	nismof	enzymat	ic reactions, m	embrane		
		transport							
	-	Relate structureandf	unctionof	[:] nucleic	acidsan	dexplainthe flowo	f genetic		
		information							
	-	Explain carbohydrate	metabol	ism and	fatty aci	d metabolism			
	-	Describe degradation	of amino	o acids a	nd urea	cycle			
	-	Describe photosynthe	esis and b	oiosynth	esis of po	olysaccharides			

2. Name of the course	Aquaculture									
Number of ECTS credits	4	Manner of implementation of the study programme	S 2	E 1	S 1	Semester 4				
Description of the course	knowl becom both f	The main objective of the course is to acquire theoretical and practical knowledge regarding controlled breeding of aquatic organisms. Students will become familiar with the latest technological aspects of aquaculture, including both freshwater and marine aquaculture in the world, with special emphasis on aquaculture in Europe, especially in countries of the Mediterranean and the Adriatic								
Learning outcomes of the course		 recognize the importance of aquaculture in state of the world fisheries identify and respond to market demands in relation to the specifics of production and processing of aquatic organisms gain knowledge of legislation relating to the possibility of growing of aquatic organisms 								

2. Name of the course	Bees a	nd beekeeping							
Number of ECTS credits	4	Manner of implementation of the study programme	L 3	E O	S 1	Semester 4			
Description of		This course will introduce students to the basics of biology and ecology of bees and beekeeping. They will earn technical skills in beekeeping for commercial							

the course	purposes and learn about direct and indirect benefits of bees for the mankind and nature.
Learning outcomes of the course	 Upon passing the course requirements students should be able to: describe and explain the basics of biology and ecology of bees and understand the physiology and behavior of honey-bee colony describe and explain the modern beekeeping technology, personal protection and proper housing, bee handling and exploitation describe benefits of different bee products: honey, propolis, pollen, beeswax, bee venom, royal jelly understand the role of bees in pollinating crops recognize main diseases and pests explain the rights and obligations of beekeeper and landlord

2. Name of the	Enviro	nmental science							
course									
Number of ECTS	6	Manner of	L	E	S	Semester			
credits		implementation of	4	1	1				
		the study				6			
		programme							
Description of	This co	ourse explores environr	nental ch	ange on a	global sc	ale, emphasizing	g the		
the course	fundar	mental concepts of mat	ter, ener	gy, and ec	cology as a	applied to			
	conter	nporary concerns. Envi	ronmenta	al issues ir	npacting I	more than two d	lozen		
		ies are illustrated in or		•	nternatio	nal perspective of	on the		
		nmental challenges fac							
Learning	- Upon the successful completion of this course, student will be able to:								
outcomes of the		plain how human impa			-		and		
course		ny environmental conce		•		•			
		escribe the major enviro		-	es facing n	nodern societies	and		
		e trade-offs these chall				_			
		escribe the scientific pri vironmental changes	nciples ur	nderlying	basic phe	nomena of			
	- As	sess the technologies a	ssociated	l with maj	or enviro	nmental probler	ns and		
	the	e technologies that ma	y aid in sc	lving the	se probler	ns			
	- Dis	stinguish between the	environm	ental imp	acts of ind	dustrial and deve	eloping		
	SO	cieties							
	- Ex	plain why different typ	es of soci	eties perc	eive envir	onmental probl	ems		
	dif	ferently and pursue dif	fferent so	lutions					
		escribe the ethical cons			•	-			
	en	vironmental legislation	and polic	cies from	multiple p	perspectives.			