New Bachelor
In “Agriculture Sciences and Food Security”

Why a Bachelor in “Agriculture Sciences and Food Security”

To better meet the demands of the labor market

To improve the competences of the students in management of the agricultural farms

Prepare the students with a better practical competence!

Bachelor in “Agriculture Sciences and Food Security”

Competences graduates will have

Be able to apply the best cultivation technology in different climatic and soil conditions

Design a typical farm structure in different climatic and socio-economic conditions.

Manage the farm

Describe the inputs needed in agricultural production and their use

Advice the farmers in their everyday work

Bachelor in “Agriculture Sciences and Food Security”

Potential employer and/or career path

Small farms with diverse crops and animals (Main job source)

Supportive agricultural activities (ex. input traders)

Agricultural advisory system (also private advisers)

Agricultural institutions under the umbrella of MARD

Bachelor in “Agriculture Sciences and Food Security”

Alumni which may serve as representative examples

Moltine Prebibaj – Master in IAM Bari – Lecturer at AUT

Dritan Sadikaj – Master in Germany – Successful Ag input trader

Shkelqim Karaj – Master and Dr. Degree in Germany
Owner and manager of an exp farm and Input trader

Griselda Kupe – Specialist at the State Seed Entity

Artan Sota – Successful wheat and maize breeder and farm manager

Bachelor “Agriculture Sciences and Food Security”

1st Semester - Overview 30 ECTS fundamental courses

Module Name	ECTS credit points	shares 3 pillars		
		Technology & Engineering	% Natural Sciences	% Econ. Social. Law
Chemistry for Agricultural Sciences	**6**			
General and Inorganic Chemistry (AW)	2	15	85	0
Organic Chemistry and Biochemistry	4	25	75	0
Biology for Agricultural Sciences	**6**			
Zoology (AW)	3	15	85	0
Microbiology (AW)	3	25	70	5
Mathematics and Statistics for Agricultural Sciences	***6***			
Mathematics	***4***	0	100	0
Statistics and Data science	***2***	0	100	0
Agroecology, Meteorology and Climatology	**6**			
Agroecology	3	60	30	10
Meteorology and Climatology (AW)	3	25	70	5
General Botany for Agricultural Sciences	**3**			
General Botany	3	15	85	0
Exercises, Excursions, laboratory work	3			
Agroecology exercises	1	30	70	0
Microbiology exercises	1	30	70	0
Zoology exercises (AW)	1	0	100	0
Botany-Exercises-Anatomy	1	0	100	0
Inorganic Chemistry	1	0	100	0
Organic chemistry and Biochemistry exercises	1	0	100	0
Statistics	1	0	70	30

Bachelor “Agriculture Sciences and Food Security”

2nd Semester - Overview 30 ECTS fundamental courses

Module name	ECTS credit points	shares 3 pillars		
		Technology & Engineering	% Natural Sciences	% Econ. Social. Law
Soil Science and Geology for Agricultural Sciences	**6**			
soil science	**4**	**30**	**60**	**10**
geology	**2**	**10**	**80**	**10**
Economics and Agricultural Policy and Law	**6**			
Economics and Agricultural Policy	**3**	**0**	**0**	**100**
Fundamentals of Law	**3**	**0**	**0**	**100**
Agricultural business Administration and marketing	**6**			
Agricultural Business Administration	***3***	**5**	**0**	**95**
Marketing and agricultural markets	**3**	**0**	**0**	**100**
Systematic Botany (AW)	***3***	***15***	***85***	***0***
Systematic Botany (AW)	***3***	***15***	***85***	***1***
Agricultural Genetics	**3**	**25**	**70**	**5**
Agricultural Genetics	**3**	**25**	**70**	**5**
Social and Economic Science Methods, Exercises and Lab work	**6**			
Agricultural Business Administration – Exercises	**1**	**5**	**5**	**90**
Economics – Exercises	**1**	**0**	**0**	**100**
Marketing – Exercises	**1**	**0**	**0**	**100**
Agricultural Genetics	**1**	**30**	**60**	**10**
Soil Science and Geology	**2**	**15**	**75**	**10**
Systematic Botany Exercises	**1**	**0**	**100**	**0**

Bachelor “Agriculture Sciences and Food Safety”

3rd Semester - Overview 30 ECTS fundamental courses

Module Name	ECTS credit points	shares 3 pillars		
		Technology & Engineering	% Natural Sciences	% Econ. Social. Law
Principles of Acquaculture and Fisheries	***6***			
Introduction to Acquaculture and Fisheries	4	55	15	30
Fish Feeding	*2*	55	15	30
Agricultural Physics and Agricultural Engineering	6			
agricultural physics	3	20	80	0
agricultural Engineering	3	80	0	20
animal nutrition, breeding and husbandry	6			
animal Nutrition	2	55	35	10
animal breeding	2	55	35	10
animal husbandry	2	55	35	10
Plant nutrition and physiology	6			
Plant Nutrition	3	60	30	10
Plant Physiology	3	50	50	0
Plant Breeding	2	50	35	14
plant Breeding	3	50	35	15
Agricultural and Scientific Exercises and Excursions I	3	6	6	6
Principles to Acquaculture and Fisheries	1	15	65	20
animal nutrition, breeding and husbandry	2	20	80	0
Plant Physiology	1	10	70	20
Plant Nutrition	1	15	65	20
Physic and Agricultural Engineering	2	30	35	20
Plant Breeding	1	30	35	20

Bachelor “Agriculture Sciences and Food Security”

4th Semester - Overview 30 ECTS fundamental courses

Module Name	ECTS credit points	shares 3 pillars		
		Technology & Engineering	% Natural Sciences	% Econ. Social. Law
Environment standards in Agriculture and Good agricultural practices	**6**			
Environment standards in Agriculture	**3**	**70**	**0**	**30**
Good agricultural practices and Organic Farming	**3**	**70**	**0**	**30**
Plant Protection	**6**			
Phytopathology	**3**	**50**	**35**	**15**
Entomology	**3**	**50**	**35**	**15**
Vegetable, fruit and wine growing	**6**			
fruit and vineyards	**3**	**60**	**10**	**30**
vegetable cultivation	**3**	**60**	**10**	**30**
Crop Production	**6**			
Crop Production	**6**	**60**	**10**	**30**
Agricultural and Scientific Exercises and Excursions	**6**	**6**	**6**	**6**
plant protection exercises	**2**	**40**	**60**	**0**
Vegetable, fruit and Vineyard growing	**2**	**50**	**50**	**0**
Good agricultural practices/Organic agric	**2**	**50**	**35**	**15**
Crop Production	**2**	**25**	**25**	**50**

Bachelor "Agriculture Sciences and Food Security"
Specialization - Agronomy
5th Semester - Overview 30 ECTS

Module Name	ECTS credit points	shares 3 pillars		
		Technology & Engineering	% Natural Sciences	% Econ. Social. Law
Agricultural Machineries, Irrigation and drainage	**6**			
Agricultural Machineries,	**3**	**90**	**0**	**10**
Irrigation and drainage	**3**	**80**	**10**	**10**
Plant Adaptation and Crop Improvement	**6**	**40**	**40**	**20**
Biochemical in crop improvement	**2**	**40**	**40**	**20**
Crop Adaption Physiology	**2**	**40**	**40**	**20**
Crop Improvement	**2**	**40**	**40**	**20**
Smart Agriculture	**6**	**60**	**20**	**20**
Free Choise	**6**			
Free Choise	**6**			

Bachelor "Agriculture Sciences and Food Security"
Specialization - Agronomy
6th Semester - Overview 30 ECTS

Module Name	ECTS credit points	shares 3 pillars		
		Technology & Engineering	% Natural Sciences	% Econ. Social. Law
Field Practice Exercises, Excursions	12			
Cultivation of Cereal Crops	2	70		30
Cultivation of Industrial Crops	2	70		30
Cultivation of Forage Crops	2	70		30
Seed Technology	2	70		30
Agricultural Machinery	2	70		30
Irrigation and Drainage	2	70		30
Cultivation technologies in Horticulture	6			
Vegetables cultivation in green house and in open field	2	70		30
Technologies of cultivation in fruits, vineyard and citrus	2	70		30
Integrated plant protected in horticulture	2	70		30
Internship	6			
Bachelor Thesis	6			

Bachelor "Agriculture Sciences and Food Security"
Specialization – Horticulture
5th Semester - Overview 30 ECTS

Module Name	ECTS credit points	shares 3 pillars		
		Technology & Engineering	% Natural Sciences	% Econ. Social. Law
Floriculture and Urban Gartens and Parcs	**6**	**70**		**30**
Floriculture	**4**	**70**		**30**
Gardens and Urban Parcs	**2**	**70**		**30**
Vegetable Production systems	**6**	**70**		**30**
Open field cultivation of vegetables	**2**	**70**		**30**
Protected vegetables cultivation	**2**	**70**		**30**
Soilless cultivation	**2**	**70**		**30**
Pomology, subtropical plants, ampelography	**6**			
Pomology	**2**	**70**		**30**
Subtropical Crops	**2**	**70**		**30**
Ampelography	**2**	**90**		**10**
Plant Propagation and Postharvest Technology	**6**			
The propagation of horticultural crops	**3**	**80**	**0**	**20**
Postharvest technology	**3**	**80**	**0**	**20**
Practical Training and exercises in vegetable production and floriculture	**6**			
Floriculture and Urban Parcs	**2**	**70**		**30**
Open field cultivation of vegetables	**1**	**70**		**30**
Protected vegetables cultivation	**2**	**70**		**30**
Soilless production	**1**	**70**		**30**

Bachelor “Agriculture Sciences and Food Security”
Specialization - Horticulture
6th Semester - Overview 30 ECTS

Module Name	ECTS credit points	shares 3 pillars		
		Technology & Engineering	% Natural Sciences	% Econ. Social. Law
Free Choice	6			
Free Choice	6			
Practical training and exercises in Horticulture	6	70		30
Pomology	2	70		30
Subtropical plants	1	70		30
Ampelography	1	70		30
Propagation of Horticultural Plants	1	70		30
Postharvest Technology	1	70		30
Internship	6	70		30
Bachelor Thesis	6			

Bachelor “Agriculture Sciences and Food Security”
Specialization - Plant Protection
5th Semester - Overview 30 ECTS

Module Name	ECTS credit points	shares 3 pillars		
		Technology & Engineering	% Natural Sciences	% Econ. Social. Law
Agricultural machineries and irrigation and Drainage	6			
Agricultural machineries	3	90	0	10
Irrigation and Drainage	3	80	10	10
Biological control and Integrated pest management	6			
Biological control	3	80	10	10
Integrated pest management	3	70	0	30
Weeds	6	70	0	30
Plant protection products and their action mode	6			
Chemically synthetised Plant protection products and their action mode	3	70	0	30
Biological pesticides and their action mode	3	70	0	30
Ornamental, urban and forestry pests control	6	90	0	10

Bachelor "Agriculture Sciences and Food Security"
Specialization - Plant Protection
6th Semester - Overview 30 ECTS

Module Name	ECTS credit points	shares 3 pillars		
		Technology & Engineering	% Natural Sciences	% Econ. Social. Law
Free Choice	6			
Free Choice	6			
Exercises, Excursions Practices	6			
Laboratory practical training	4	70	0	30
Field trips	2	70	0	30
Practical training	6			
Field determination of pests in Fruit trees vineyards and subtropicals	2	70	0	30
Field determination and control of pests in vegetables	2	70	0	30
Field determination and control of pests in field crops	2	70	0	30
Bachelor Thesis	6			

Bachelor "Agriculture Sciences and Food Security"
Specialization - Animal Science
5th Semester - Overview 30 ECTS

Module Name	ECTS credit points	shares 3 pillars		
		Technology & Engineering	% Natural Sciences	% Econ. Social. Law
Anatomy, Physiology, Ethology of Farm Anima	**6**			
Theoretical part *	3			
- Basics of animal anatomy	1	**80**	**20**	**0**
- Physiology, Ethology of Farm Animals	2	**80**	**20**	**0**
Practical Part **	3			
- Anatomy of Farm Animals	2			
- Physiology, Ethology of Farm Animals	1			
Livestock feeding	**6**			
Theoretical part	3	**60**	**10**	**30**
- Livestock Feeding				
Practical Part	3			
- Diet formulation & Assessment of nutrition status		**60**	**10**	**30**
Feed Production, Quality & Safety	**6**			
Theoretical part	3			
- Forage & grassland production	1	**60**	**10**	**30**
- Feed quality and safety	1	**60**	**10**	**30**
- Feed industry	1	**60**	**10**	**30**
Practical Part	3			
- Forage & grassland production	1	**60**	**10**	**30**
Evaluation of feeds quality in Farm and F	2	**60**	**10**	**30**
Good Practices In Livestock Breeding & Husbar	**6**			
Theoretical part	3			
- Livestock Breeding Programs	1.5	**60**	**10**	**30**
- Good practices in Livestock Husbandry &	1.5	**60**	**10**	**30**
Practical part				
Good Practices In Livestock Breeding & Husba	3	**60**	**10**	**30**
Poultry and Honey Bee Production	6			
Theoretical part	3			
- Poultry Production	2	**60**	**10**	**30**
- Honey Bee Production	1	**60**	**10**	**30**
Practical Part	3			
Good practices in Poultry & Honey Bee Production		**60**	**10**	**30**

Bachelor "Agriculture Sciences and Food Security"
Specialization - Animal Science
6th Semester - Overview 30 ECTS

Module Name	ECTS credit points	shares 3 pillars		
		Technology & Engineering	% Natural Sciences	% Econ. Social. Law
Biotechnology and animal reproduction	**6**			
Theoretical part	**3**			
- Biotechnology in livestock productions	**1.5**	**60**	**10**	**30**
Animal Reproduction & Artificial Inseminatio	**1.5**	**60**	**10**	**30**
Practical Part	***3***			
- Biotechnology in livestock productions	***1***	**60**	**10**	**30**
- Animal Reproduction & Artificial Inseminatic	***2***	**60**	**10**	**30**
TOTAL COMPULSORY MODULES	**36**			
Elective	**6**			
Theoretical part	**3**			
Practical Part	***3***			
Elective	**6**			
Theoretical part	**3**			
Practical Part	***3***			
TOTAL ELECTIVE MODULES	**12**			
(Theoretical part + Practical Part)				
Professional internship (25 days on the farm x	**6**			

Bachelor "Agriculture Sciences and Food Security"
Specialization - Aquaculture and Fisheries
5th Semester - Overview 30 ECTS

Module Name	ECTS credit points	shares 3 pillars		
		Technology & Engineering	% Natural Sciences	% Econ. Social. Law
Aquatic Ecosystems and Ichthyology	**6**			
Aquatic Ecosystems	**3**	**0**	**90**	**10**
Ichthyology	**3**	**10**	**90**	**0**
Fisheries Theory and Fishing techniques	**6**			
Fisheries Theory	**3**	**15**	**80**	**5**
Fishing Techniques	**3**	**100**	**0**	**0**
Aquacultural Engineering	**6**			
Aquacultural Engineering	**2**	**50**	**40**	**10**
Shellfish Farming Methods	**2**	**50**	**35**	**15**
Fish Farming Methods	**2**	**80**	**10**	**10**
Aquaculture Production Technologies	**6**			
Fish Reproduction and Larval Production	**3**	**60**	**30**	**10**
Fish Hygiene and Disease Prevention	**3**	**60**	**30**	**10**
Free choice	**6**			

Bachelor "Agriculture Sciences and Food Security"
Specialization - Aquaculture and Fisheries
6th Semester - Overview 30 ECTS

Module Name	ECTS credit points	shares 3 pillars		
		Technology & Engineering	% Natural Sciences	% Econ. Social. Law
Free choice	6			
Practical works and Exercises in Fishery Science and Aquatic Ecosystems	6			
Practices on Aquatic Ecosystems	1	0	80	20
Practices on Ichthyology	1	10	90	0
Practices on Fisheries Theory	2	15	80	5
Practices on Fishing Techniques	2	90	5	5
Practices on Aquaculture	6			
Practices on Fish reproduction and dieseases	2	60	30	10
Practices on Aquaculture Engeneering	2	50	40	10
Practices on Fish farming	2	80	10	10
Internship	6			
Bachelor Thesis	6			

How is the interdisciplinarity of the program according to Muster Curricula implemented?

25-26 % ECTS in Social Science

26-28 % ECTS in Natural Science

46-48% ECTS in Technical Science

12 ECTS of English classes

Bachelor in “Agriculture Sciences and Food Security”

Which Master Programs are possible?

Agronomy Sciences,

Horticulture Sciences,

Plant Medicine,

Animal Production,

Aquaculture,