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# **Master Study Program Elaborate**

## **University of Prishtina**

### **(WP2 - Deliverable 2.4)**

## First year (first semester)

### Course Title: URBAN AGRICULTURE: INTRODUCTION, HISTORY AND EVOLUTION

<b>Course Basic Information</b>	
<b>Academic Unit:</b>	Faculty of Agriculture and Veterinary
<b>Course title:</b>	Urban agriculture: introduction, history and evolution
<b>Level:</b>	MSC.
<b>Course status:</b>	Mandatory
<b>Year of Study:</b>	First year/First Semester
<b>Number of classes per week:</b>	2+2
<b>ECTS/Credits:</b>	5
<b>Time / location:</b>	Classroom /According to the timetable
<b>Lecturer:</b>	Prof.dr.
<b>Contact details:</b>	
<b>Course description</b>	The course introduces students to subject field, concepts and definitions related to urban agriculture, historical evolution of urban agriculture with reference to different regions: Europe, Africa, Asia, North and South America. It enables students to understand trends related to today's urban environment: models of urban agriculture trends in food consumptions, trends in city development and urban planning, territorial analysis and governance. The course defines and enables students to understand actors, stakeholders and challenges for urban agriculture development.
<b>Course goals:</b>	The main goal of this course is to enable students to understand actors, stakeholders and challenges for urban agriculture development.
<b>Expected Learning outcomes:</b>	Upon completion of this course, student should be able to: <ul style="list-style-type: none"> <li>- Identify an adapted definition of urban agriculture depending on the objective and context</li> <li>- Understand the development and current status of urban agriculture in Europe, Africa,</li> </ul>

	<p>Asia and North and South America</p> <ul style="list-style-type: none"> <li>- Understand the development constant or specific forms of urban agriculture</li> <li>- Identify constant or specific evolution factors</li> <li>- Identify opportunities and constraints for urban agriculture development</li> <li>- Understand the objectives and main steps of an urban planning project</li> <li>- Use tools and methods for territorial analysis</li> <li>- Understand and map main actors and stakeholders in urban agriculture</li> <li>- Identify constant or specific forms of urban agriculture</li> <li>- Understand different typology and activity depending on the goal and the context.</li> </ul>		
<b>Student Workload (should be in compliance with student's Learning Outcome)</b>			
<b>Activity</b>	<b>Hours</b>	<b>Day/week</b>	<b>Total</b>
Lectures	2	15	30
Theory/Lab work/ Exercise	2	15	30
Practice work	1	10	10
Consultation with teacher	1	5	5
Field work	1	4	4
Test, seminar paper	1	4	4
Homework	1	15	15
Self-study (library or home)			12
Preparation for final exam			8
Assessment time (test, quiz, final exam)			4
Projects, presentations, etc.	1	1	1
<b>Total</b>			<b>125</b>
<b>Teaching methods</b>	The teaching methodology is based on a lecture, exercises, evaluation tests (2) and work seminar.		
<b>Assessment methods</b>	Student evaluation is based on student's attendance of lectures and their participation in theoretical and practical lectures, success on mid-evaluation, final exam. Criteria for passing the course are based on the criteria decided on the Agricultural and Veterinary Faculty Council.		

	Attendance (90-100% = 5 points; 80-90% = 4 points; 70-80% = 3 points <70% = dropout. 5% Activates -Theory and -Practical work 5% Colloquium class 25% Written works (home works) 20% Final exam 45%
<b>Primary Literature:</b>	1.Katrin Bohn, Kristian Ritzmann (2015). Playing/Field Urban Agriculture: Ecological education and practice-based design. Technischen Universität Berlin.
<b>Additional Literature:</b>	1. Erasmus +, UrbanGreenTrain, <a href="http://www.urbangreentrain.eu/upimg/pdf/Module_1_final_version-compressed.pdf">http://www.urbangreentrain.eu/upimg/pdf/Module_1_final_version-compressed.pdf</a>

**Designed teaching plan:**

<i>Week</i>	<b>Title of lecture</b>
<i>First week:</i>	Introduction to course organization, teaching conditions, literature, grading.
<i>Second week:</i>	Definition of urban agriculture depending on the objective and context.
<i>Third week:</i>	Development constant or specific forms of urban agriculture.
<i>Fourth week:</i>	Development and current status of urban agriculture in Europe, Africa, Asia and North and South America
<i>Fifth week:</i>	Climate, lifestyle, demography and urban technology.
<i>Sixth week:</i>	Urban agriculture as part of a productive urban landscape.
<i>Seventh week:</i>	Objectives and main steps of an urban planning project.
<i>Eighth week:</i>	Tools and methods for territorial analysis.
<i>Ninth week:</i>	Challenges, opportunities and limitations for urban agriculture development. Actors and stakeholders in urban agriculture.
<i>Tenth week:</i>	Constant or specific forms of urban agriculture.
<i>Eleventh week:</i>	Typology and activity of forms in urban agriculture.
<i>Twelfth week:</i>	Content depended activities.
<i>Thirteenth week:</i>	Form depended activates.
<i>Fourteenth week:</i>	Education and research in sustainable urban environments.
<i>Fifteenth week:</i>	Field visit

**Academic Policies and Code of Conduct**

Tools used during class must be cleaned and stored away at the end of class. Mobile/smart phones, and other electronic devices (e.g. iPods) must be turned off (or on vibrate) and hidden from view during class time. Laptop and tablet computers are allowed for quiet use only; other activities such as checking personal e-mail or browsing the Internet are prohibited.

**Course Title: URBAN FOOD SYSTEM**

<b>Course Basic Information</b>	
<b>Academic Unit:</b>	Faculty of Agriculture and Veterinary
<b>Course title:</b>	Urban food system
<b>Level:</b>	MSC.
<b>Course status:</b>	Mandatory
<b>Year of Study:</b>	First year/First Semester
<b>Number of classes per week:</b>	2+2
<b>ECTS/Credits:</b>	5
<b>Time / location:</b>	Classroom /According to the timetable
<b>Lecturer:</b>	Prof.dr.
<b>Contact details:</b>	
<b>Course description</b>	The course introduces students to UA cultivation technologies, various urban agriculture types and production systems including characteristics, location, functions, technical aspects, development challenges and support needs. The course also provides information on UA input supply, service delivery, food processing and different types of marketing of urban agriculture produce, including short food supply chains. It enables students to understand main linkages between urban agriculture, wider economy and food value chains. The course analyse links between urban agriculture and food value chains in specific cases, and defines and enables students to understand actors, stakeholders and challenges for urban agriculture value chain development.
<b>Course goals:</b>	The course objective is to analyse links between urban agriculture and food value chains in specific cases, and defines and enables students to understand actors, stakeholders and challenges for urban agriculture value chain development.

<b>Expected Learning outcomes:</b>	<p>Upon completion of this course, student should be able to:</p> <ul style="list-style-type: none"> <li>- Analyse major issues and constrains on urban food system</li> <li>- Identify the constrains related to the food supply chain and the main limiting factors for developing;</li> <li>- Identify actors and stakeholders of urban food system and food supply chain;</li> <li>- Understand small-scale production system in small areas</li> <li>- Understand traditionally rural-based enterprises adapted farm strategies to a more urban environment</li> <li>- Understand large-scale farms and agro-enterprises as a local economic development and urban food security at the city level</li> <li>- Identify potential of alternative food supply chain</li> <li>- Identify opportunities offered by the city in terms of market potential and access to inputs and infrastructure</li> </ul>		
<b>Student Workload (should be in compliance with student's Learning Outcome)</b>			
<b>Activity</b>	<b>Hours</b>	<b>Day/week</b>	<b>Total</b>
Lectures	2	15	30
Theory/Lab work/ Exercise	2	15	30
Practice work	1	15	15
Consultation with teacher	1	5	5
Field work			
Test, seminar paper	1	4	4
Homework	1	15	15
Self-study (library or home)			12
Preparation for final exam			8
Assessment time (test, quiz, final exam)			4
Projects, presentations, etc.	1	1	1
<b>Total</b>			<b>125</b>
<b>Teaching methods</b>	Lectures, discussions, commentaries, individual and group work.		
<b>Assessment methods</b>	Student evaluation is based on student's attendance of lectures and their participation in theoretical and practical lectures, success on mid-evaluation, final exam. Criteria for		

	<p>passing the course are based on the criteria decided on the Agricultural and Veterinary Faculty Council.</p> <p>Attendance (90-100% = 5 points; 80-90% = 4 points; 70-80% = 3 points &lt;70% = dropout. 5</p> <p>Activates -Theory and -Practical work 5 Colloquium class 25 Written works (home works) 20 Final exam 45</p>
<b>Primary Literature:</b>	1. Erasmus +, Urban Green Train, <a href="http://www.urbangreentrain.eu/upimg/pdf/Module_1_final_version-compressed.pdf">http://www.urbangreentrain.eu/upimg/pdf/Module_1_final_version-compressed.pdf</a>
<b>Additional Literature:</b>	1. Biel, R. 2016. Sustainable Food Systems: The Role of the City. UCL press.
<b>Designed teaching plan:</b>	
<b>Week</b>	<b>Title of lecture</b>
<i>First week:</i>	Introduction to course organization, teaching conditions, literature, grading.
<i>Second week:</i>	Definition of urban food system
<i>Third week:</i>	Urban food security
<i>Fourth week:</i>	Main linkages between urban agriculture, wider economy and food value chains
<i>Fifth week:</i>	The food value chain starting from the agricultural inputs to the final products
<i>Sixth week:</i>	Farming sector, processing, marketing and distribution
<i>Seventh week:</i>	Specialized enterprises inside the UA sector like plant and animal feed producers
<i>Eighth week:</i>	Breeding / multiplying enterprises for plant varieties and breeding animals
<i>Ninth week:</i>	Small-scale production system in small areas in or on the house (balcony, windowsill, cellar, barn, rooftop, and kitchen) as well as around the house (front and backyard, patio).
<i>Tenth week:</i>	Traditionally rural-based enterprises adapted farm strategies to a more urban environment as a result of urban expansion
<i>Eleventh week:</i>	Large-scale farms and agro-enterprises as a local economic development and urban food security at the city level
<i>Twelfth week:</i>	Farm planning and management, access to information on advanced and sustainable technologies, market information and sources of financing
<i>Thirteenth week:</i>	Market potential and access to inputs and infrastructure (roads, airports, harbours) for the development of large-scale agro-enterprises
<i>Fourteenth week:</i>	Consumer distribution

<i>Fifteenth week:</i>	Field visit
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<b>Academic Policies and Code of Conduct</b>
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**Course Title: ENTREPRENEURSHIP AND URBAN DEMANDS**

<b>Course Basic Information</b>	
<b>Academic Unit:</b>	Faculty of Agriculture and Veterinary
<b>Course title:</b>	Entrepreneurship and urban demands
<b>Level:</b>	MSC.
<b>Course status:</b>	Mandatory
<b>Year of Study:</b>	First year/First Semester
<b>Number of classes per week:</b>	2+2
<b>ECTS/Credits:</b>	5
<b>Time / location:</b>	Classroom /According to the timetable
<b>Lecturer:</b>	Prof.dr.
<b>Contact details:</b>	
<b>Course description</b>	<p>The purpose of this course is to equip students to understand entrepreneurship, definitions about entrepreneurship in the field of Urban Agriculture, the role of entrepreneurship in creating small and medium enterprises, their function, and the importance of entrepreneurship in national economy, market economy, etc.</p> <p>To put the customers at the heart of your urban agriculture business idea</p> <p>To be aware of the food and urban food market</p> <p>To be able to consider consumer demands and behaviours</p> <p>To know about (qualitative) market research and know how to conduct the research</p>
<b>Course goals:</b>	Through this course students will gain knowledge about the entrepreneurship in the field of Urban agriculture.
<b>Expected Learning outcomes:</b>	<p>Upon completion of this course, student should be able to:</p> <ul style="list-style-type: none"> <li>- Identify attributer od entrepreneurs in UA</li> <li>- Detect customer groups relevant for the business idea;</li> <li>- Analyze their demands and behaviours;</li> <li>- Choose the right market research approach to get;</li> <li>- Insights into customers' thinking and decision-making</li> </ul>
<b>Student Workload (should be in compliance with student's Learning Outcome)</b>	

<b>Activity</b>	<b>Hours</b>	<b>Day/week</b>	<b>Total</b>
Lectures	2	15	30
Theory/Lab work/ Exercise	2	15	30
Practice work	1	10	15
Consultation with teacher	1	5	5
Field work			
Test, seminar paper	1	4	4
Homework	1	15	15
Self-study (library or home)			12
Preparation for final exam			8
Assessment time (test, quiz, final exam)			4
Projects, presentations, etc.	1	6	6
<b>Total</b>			<b>125</b>
<b>Teaching methods</b>	Lectures, discussions, commentaries, individual and group work.		
<b>Assessment methods</b>	<p>During one semester will be organized two MIDTERM tests, and in the end a final test. Tests have closed questions, multiple choice, with a total of 20 questions. Each question has 2 points with a maximum of 40 points. Exceptions make some specific classes which have special specifications, number of questions – assignments might be less, but with more point, and in the total of 40 points doesn't change.</p> <p>The student passes the midterm if he has more than half of more correct answers. Only if the student passes the first midterm, he can attend the second one.</p> <p>To determine the final grade for full time students will be applied this evaluation method:</p> <p>80 points maximum from two midterms, written or oral, in essay format or filling put the written test, by which will be evaluated the final knowledge of the specific course</p> <p>10 points maximum from a paper, essay, research paper, presentation</p> <p>10 points maximum from their attendance in class – attendance and interactivity (participation) during the lectures.</p> <p><b>FINAL EXAM</b></p> <p>To determine the final grade for full time students will be applied this evaluation method:</p>		

	<p>80 points maximum from final exam, written or oral, in essay format or filling put the written test, by which will be evaluated the final knowledge of the specific course</p> <p>10 points maximum from a paper, essay, research paper, presentation</p> <p>10 points maximum from their attendance in class – attendance and interactivity (participation) during the lectures.</p> <p>To determine the final grade for part-time students will be applied this evaluation method:</p> <p>80 points maximum from two midterms, written or oral, in essay format or filling put the written test, by which will be evaluated the final knowledge of the specific course</p> <p>10 points maximum from a paper, essay, research paper, presentation</p> <p>10 points maximum from their consultation with the lecturer or the assistant, at least 1 (one) time in 2 (two) weeks for each course.</p> <p>-Activity during classes -Activity during lectures -Activity during exercise Colloquium/ midterm</p>
<b>Primary Literature:</b>	<ol style="list-style-type: none"> <li>1. Stephen Roper: Entrepreneurship a global Perspective Routledge-2013.</li> <li>2. Vanessa Raten: Entrepreneurship, Innovation and Smart Cities, Routledge 2017.</li> <li>3. Mohamed Samer. 2016. Urban Agriculture Published by ExLi4EvA,</li> </ol>
<b>Additional Literature:</b>	<ol style="list-style-type: none"> <li>1. H.S Kumawat (2009). Modern entrepreneur and entrepreneurship. Theory process and practice..</li> <li>2. Robin Lowe &amp; Sue Marriot (2006). Enterprise Entrepreneurship and Innovation Concepts Contexts and Commercialization.</li> <li>3. Tracey - Urban_Agriculture_Ideas_and_Design for the new food revolution (2011).</li> </ol>
<b>Designed teaching plan:</b>	
<b>Week</b>	<b>Title of lecture</b>
<i>First week:</i>	Who are the entrepreneurs?
<i>Second week:</i>	The start-up decision

<b>Third week:</b>	Understanding business success: strategy, luck and policy
<b>Fourth week:</b>	Financing entrepreneurship
<b>Fifth week:</b>	Small firms and innovation
<b>Sixth week:</b>	Antisocial, unlawful and criminal enterprise. Enterprise policy
<b>Seventh week:</b>	First Colloquium
<b>Eighth week:</b>	Global Competitiveness of Cities, Regional Development of cities
<b>Ninth week:</b>	Social Innovations, Knowledge and network in smart cities Sustainable Entrepreneurship in Cities
<b>Tenth week:</b>	Institutional Entrepreneurship and Urban planning , Future of smart cities
<b>Eleventh week:</b>	Urban Agriculture Case Studies in Central Texas: From the Ground to the Rooftop by Bruce D. Dvorak and Ahmed K. Ali
<b>Twelfth week:</b>	Urban Gardening: From Cost Avoidance to Profit Making — Example from Ljubljana, Slovenia by Matjaž Glavan, Majda Černič Istenič, Rozalija Cvejić and Marina Pintar
<b>Thirteenth week:</b>	Comparison of the Land Uses and Sustainable Development in Small Islands: The Case of Skiathos Island, Greece by Fani Samara, Stergios Tampekis, Stavros Sakellariou, Olga Christopoulou and Athanasios Sfougaris
<b>Fourteenth week:</b>	Identifying Functionality of Peri-Urban Agricultural Systems: A Case Study by Inmaculada Marques-Perez and Baldomero Segura García del Río Relationship between Population and Agricultural Land in Amasya by Mustafa Ergen
<b>Fifteenth week:</b>	Second colloquium

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**Course Title: URBAN ECOLOGY**

<b>Course Basic Information</b>	
<b>Academic Unit:</b>	Faculty of Agriculture and Veterinary
<b>Course title:</b>	Urban ecology
<b>Level:</b>	MSC.
<b>Course status:</b>	Mandatory
<b>Year of Study:</b>	First year/First Semester
<b>Number of classes per week:</b>	2+1
<b>ECTS/Credits:</b>	4
<b>Time / location:</b>	Classroom /According to the timetable
<b>Lecturer:</b>	
<b>Contact details:</b>	
<b>Course description:</b>	The course introduces students to subject field, concepts and definitions related to urban ecology. Furthermore, the course describes basic information of ecology, relationship between plant and other living organisms. The ecological factors and their mechanism of action as well and sustainable development, social aspects which lead to a harmonised development in economic and ecological aspect.
<b>Course goals:</b>	The course objective is to describe the basic information for the urban ecology. Also for the main local and international legislation for the environment and impact of agriculture.
<b>Expected Learning outcomes:</b>	After successfully completing the module, the student will be able to:  - Describe the urban ecological issues; - Evaluate the impacts of humans in the urban environment; - Describe the link between cities and biodiversity; - Argue about UA advantages besides production; - Identify functions and services from UA; - Evaluate factors of UA sustainability; - Plan and manage ecological agricultural systems.
<b>Student Workload (should be in compliance with student's Learning Outcomes)</b>	

<b>Activity</b>	<b>Hours</b>	<b>Day/week</b>	<b>Total</b>
Lectures	2	15	30
Theory/Lab work/ Exercise	1	15	15
Practice work	1	10	10
Consultation with teacher	1	5	5
Field work	1	8	8
Test, seminar paper	1	4	4
Homework	1	10	10
Self-study (library or home)			6
Preparation for final exam			4
Assessment time (test, quiz, final exam)			4
Projects, presentations, etc.	1	4	4
<b>Total</b>			<b>100</b>
<b>Teaching methods</b>		Lecture, Discussion, Seminar	
<b>Assessment methods:</b>		Attendance (90-100% =5 points; 80-90% =4 points; 70-80%= 3 points <70% = dropout 5 Activities 15 Theory Practice Colloquium class 20 Homework and essays 20 Final exam 40	
<b>Primary Literature:</b>		2. Richard T. T. Forman, 2014. Urban Ecology science of cities. st Edition, Kindle Edition. 2. Kate Orff Scape . 2016. Toward an Urban ecology. The Monacelli Press. 3. Demaj. A. And Mehmeti , A. 2018. Ekologjia dhe mbrojtja e mjedisit në bujqësi- Ligjerata të autorizuar. Fakulteti i Bujqësisë dhe Veterinarisë Prishtinë, (skriptë).	
<b>Additional Literature:</b>		1. Veselin, P., dhe Mankolli, H. 2005. Ekologjia e Zbatuar, UBT-Dita 2000.Tiranë 2005. 2. Mjedisi i Evropës 2017). Gjendja dhe perspektiva-sintezë.	
<b>Designed teaching plan:</b>			
<b>Week</b>	<b>Title of lecture</b>		
First week:	Urban ecological issues (impact of climate changes on eco-conditions of urban areas; scenery planning and use in UA; landscape analyses).		
Second week:	UA planning as the component of holistic use of urban area; system of greenery).		
Third week:	Assessment of impact of humans in the urban environment (environmental conditions of urban area,		

	changes in use of soil and its cover; city development, industrialization and ideal cities).
Fourth week:	City biodiversity (urban biodiversity, green corridors, urban flora and fauna).
Fifth week:	Urban agriculture advantages (preservation of environment and biodiversity, natural resources)
Sixth week:	Urban agriculture advantages (cultural historical heritage; acceptance of traditional skills and products, new working places and reduction of poverty rate in local community; UA risk).
Seventh week:	Functions and services of UA (localization of food production, sustainable cities, reduced transport expenses).
Eighth week:	Functions and services of UA (recycling of organic waste; production of free eco products).
Ninth week:	First evaluation
Tenth week:	Sustainability factors in urban agriculture (sustainable agriculture; preservation of agricultural soil in city and suburb areas).
Eleventh week:	Sustainability factors in urban agriculture (population reduction in urban environment; citizens organization in UA).
Twelfth week:	Planning and management of ecological systems.
Thirteenth week:	Protection of biodiversity and ecosystems.
Fourteenth week:	Local and international legislation for environment-impact of agriculture.
Fifteenth week:	Second evaluation

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**Course Title: PRECISION AGRICULTURE AND SMART FOOD PRODUCTION**

<b>Course Basic Information</b>	
<b>Academic Unit:</b>	Faculty of Agriculture and Veterinary
<b>Course title:</b>	Precision agriculture and smart food production
<b>Level:</b>	MSC.
<b>Course status:</b>	Mandatory
<b>Year of Study:</b>	First year/First Semester
<b>Number of classes per week:</b>	2+1
<b>ECTS/Credits:</b>	4
<b>Time / location:</b>	Classroom /According to the timetable
<b>Lecturer:</b>	Prof.dr.
<b>Contact details:</b>	
<b>Course description</b>	The course introduces students to modern information technology trends such as mobile technologies, social networks, Internet of Things, cloud computing and big data. A special emphasis is placed on Internet of Things and applications in the field of precise and smart agriculture and food production in urban areas. It enables students to understand basic concepts and definitions related to information technology and their application in urban agriculture. The course introduces students to the understanding of the challenges posed by the exponential development of information technologies and their penetration in agriculture and food production, as well as in all other aspects of life in urban areas.
<b>Course goals:</b>	The aim of the course is that you enabled students during lectures and exercises to acquire basic concepts of challenges posed by the exponential development of information technologies and their penetration in agriculture and food production, as well as in all other aspects of life in urban areas.
<b>Expected Learning outcomes:</b>	After successfully completing the module, the student will be able to:  - Identify and understand modern information technology trends in the context





	(2016). Digitising the Industry: Internet of Things Connecting the Physical, Digital and Virtual Worlds. River Publishers.
<b>Additional Literature:</b>	1. Joseph Valacich, Christop Schneider (2017). Information Systems Today: Managing in the Digital World. Pearson.
<b>Designed teaching plan:</b>	
<b>Week</b>	<b>Title of lecture</b>
<i>First week:</i>	Organization of the course, introduction to teaching environment, literature, grading.
<i>Second week:</i>	Modern information technologies and trends in the context of urban agriculture. Global food production and the digital world.
<i>Third week:</i>	Mobile technologies, social networks, Internet of Things, cloud computing, Big data.
<i>Fourth week:</i>	Internet of things and applications.
<i>Fifth week:</i>	Precision agriculture and smart farming.
<i>Sixth week:</i>	Smart logistics: monitoring food products, food safety, quality control.
<i>Seventh week:</i>	Smart processing of raw materials and food production.
<i>Eighth week:</i>	Food-awareness solutions: information on origin, safety, quality, potential problems.
<i>Ninth week:</i>	Precise agriculture and smart farming in urban surroundings.
<i>Tenth week:</i>	Examples of implementation for urban agriculture. Project.
<i>Eleventh week:</i>	Examples of implementation for urban agriculture. Project.
<i>Twelfth week:</i>	Integration with other systems. Smart cities and urban agriculture.
<i>Thirteenth week:</i>	Social Issues and the Impact of Digitization in Urban Agriculture.
<i>Fourteenth week:</i>	Future trends.
<i>Fifteenth week:</i>	Project presentations.

<b>Academic Policies and Code of Conduct</b>
<p>Tools used during class must be cleaned and stored away at the end of class.</p> <p>Mobile/smart phones, and other electronic devices (e.g. iPods) must be turned off (or on vibrate) and hidden from view during class time.</p> <p>Laptop and tablet computers are allowed for quiet use only; other activities such as checking personal e-mail or browsing the Internet are prohibited.</p>

**Course Title: EXPERIMENTAL STATISTICS**

<b>Course Basic Information</b>			
<b>Academic Unit:</b>	Faculty of Agriculture and Veterinary		
<b>Course title:</b>	Experimental statistics		
<b>Level:</b>	MSC.		
<b>Course status:</b>	Mandatory		
<b>Year of Study:</b>	First year/First Semester		
<b>Number of classes per week:</b>	2+2		
<b>ECTS/Credits:</b>	6		
<b>Time / location:</b>	Classroom /According to the timetable		
<b>Lecturer:</b>	Prof.dr.		
<b>Contact details:</b>			
<b>Course Description:</b>	Course is an introduction of fundamental concepts, principles, and tools of applied statistics. Students should be able to understand the role and importance of statistics and softwares used to compute statistical dates. Furthermore, three major uses of statistics which are: describe the reality through statistical dates, test hypothesis based on theory, and forecast future activities will be presented.		
<b>Course Goals:</b>	The aim of the subject is to introduce statistical methods and analysis needed in data analysis in food and agricultural sciences.		
<b>Expected Learning Outcomes:</b>	<p>After successfully finished subject activities, students will be able to:</p> <ul style="list-style-type: none"> <li>- To develop skills necessary to determine when to use which statistical method;</li> <li>- To develop skills of using statistical methods and working in some of the statistical software environments.</li> <li>- Process, analyze, and interpret the descriptive and inferential statistics</li> <li>- Analyze and interpret tables and graphs</li> <li>- Read and understand the statistical reports</li> </ul>		
<b>Student Workload (should be in compliance with student's Learning Outcomes)</b>			
<b>Activity</b>	<b>Hours</b>	<b>Day/week</b>	<b>Total</b>

Lectures	2	15	30
Theory/Lab work/ Exercise	2	15	30
Practice work			
Consultation with teacher	1	15	15
Field work			
Test, seminar paper	1	12	12
Homework	1	15	15
Self-study (library or home)			15
Preparation for final exam			10
Assessment time (test, quiz, final exam)			10
Projects, presentations, etc.	1	8	8
<b>Total</b>			<b>150</b>

<b>Teaching Methods</b>	Lecture, exercise during class using different materials, one project work in group of 2-3 students (independent work), individual homework,
<b>Assessment Methods</b>	Evaluation and Grading: First Evaluation: 15 Second Evaluation: 15 Homework and Other Activities: 20 Attendance and Participation: 10 Final Exam: 40
<b>Primary Literature:</b>	1. Ton J. Cleophas, Aeilko H. Zwinderman, 2016. SPSS for starters and 2nd Leverages, Second edition, Springer . 2. J.P. Marques de Sa', 2007. Applied Statistics using SPSS, Statistica, Matlab and R, Second edition, Springer
<b>Additional Literature:</b>	1. Andy, F. 2005. Discovering Statistics Using SPSS. 2nd ed. London, Thousand Oaks, New Delhi, University of Sussex, SAGE Publications Ltd. 2. Johnson, R. A. & Bhattacharyya, G. K. 2006. Statistics, Principles and Methods. 5th ed. United States of America, University of Wisconsin at Madison, John Wiley & Sons, Inc.

<b>Designed teaching plan:</b>	
<b>Week</b>	<b>Title of lecture</b>
<i>First week:</i>	Parametric tests
<i>Second week:</i>	z and t tests
<i>Third week:</i>	Analysis of Variance ANOVA
<i>Fourth week:</i>	MANOVA, RNOVA

<i>Fifth week:</i>	Regression analysis
<i>Sixth week:</i>	Multiple regression analysis
<i>Seventh week:</i>	Application of statistical methods
<i>Eighth week:</i>	1 <sup>st</sup> semestral test
<i>Ninth week:</i>	Complete block design
<i>Tenth week:</i>	Randomized block design
<i>Eleventh week:</i>	Latin square
<i>Twelfth week:</i>	Graeco-Latin square
<i>Thirteenth week:</i>	Incomplete block design
<i>Fourteenth week:</i>	Squares, cubic and rectangular grids
<i>Fifteenth week:</i>	Application of scientific methods

<b>Academic Policies and Code of Conduct</b>
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**Course Title RESEARCH METHODOLOGY**

<b>Course Basic Information</b>			
<b>Academic Unit:</b>	Faculty of Agriculture and Veterinary		
<b>Course title:</b>	Research methodology		
<b>Level:</b>	MSC.		
<b>Course status:</b>	Mandatory		
<b>Year of Study:</b>	First year/First Semester		
<b>Number of classes per week:</b>	1+1		
<b>ECTS/Credits:</b>	3		
<b>Time / location:</b>	Classroom /According to the timetable		
<b>Lecturer:</b>	Prof.dr.		
<b>Contact details:</b>			
<b>Course description</b>			
	The course introduces students for scientific work methods steps and applied research, knowledge and skills in writing scientific publications. Also, students will be able to apply skills of data collection, classification of data, data analysis and using proper data forms to make proper conclusions.		
<b>Course goals:</b>			
	The main aim of the subject is to develop abilities, knowledge and skills to critically think, and apply statistical analysis for the master thesis.		
<b>Expected Learning outcomes:</b>			
	After successfully finished subject activities, students will be able to:  - To understand the scientific work methods steps and applied research; - To critically review the importance of scientific knowledge and discoveries; - To demonstrate abilities, knowledge and skills in writing scientific publications.		
<b>Student Workload (should be in compliance with student's Learning Outcomes)</b>			
<b>Activity</b>	<b>Hours</b>	<b>Day/week</b>	<b>Total</b>
Lectures	1	15	15
Theory/Lab work/ Exercise	1	15	15
Practice work	1	10	10
Consultation with teacher	1	5	5
Field work	1	8	8
Test, seminar paper	1	4	4
Homework	1	4	4
Self-study (library or home)			6
Preparation for final exam			2

Assessment time (test, quiz, final exam)			2
Projects, presentations, etc.	1	4	4
<b>Total</b>			<b>75</b>
<b>Teaching methods</b>	Lectures, exercises, practice of working groups, seminars, consultations, access interactive, student presentations etc.		
<b>Assessment methods</b>	The first evaluation: 30% The second evaluation; 25% Homework or other commitments 10% Regular attendance 5% Final Exam 30% Total 100%		
<b>Primary Literature:</b>	1. Kumar, R. 2011. Research methodology a step-by-step guide for beginners. 3 d edition.		
<b>Additional Literature:</b>	1. Kothari, C. R. 2004. Research methodology, Methods and Techniques. New age international (p) limited, publishers		
<b>Designed teaching plan:</b>			
<b>Week</b>	<b>Title of lecture</b>		
<i>First week:</i>	Course organization, introduction to course plan and activities, grading system, introduction to methodology, methods, scientific research.		
<i>Second week:</i>	Methodic – normative, experimental and historical method.		
<i>Third week:</i>	Research approaches – functional, systematic, understanding and dialectical approach.		
<i>Fourth week:</i>	Science and art – history of science, science and art as a center of mind creativity		
<i>Fifth week:</i>	Selection and education of scientists – scientists, science workers		
<i>Sixth week:</i>	Conditions of a successful scientific work – age, characteristics of a scientist, organization, leadership and efficiency.		
<i>Seventh week:</i>	Search for a topic of scientific work – the ways of searching and selecting topics, problem actuality		
<i>Eighth week:</i>	1 <sup>st</sup> semestral test		
<i>Ninth week:</i>	Methods and techniques of data collection – measurement, observations, questionnaire, interview, analysis.		
<i>Tenth week:</i>	Collection and literature study – information, scientific documentation and information, presentation of primary publications, collecting and literature		
<i>Eleventh week:</i>	Writing a scientific work – title, abstract, keywords, introduction, methodology, results, interpretation of results, conclusions		
<i>Twelfth week:</i>	Types of publications – professional work		

<i>Thirteenth week:</i>	Oral presentations of scientific work.
<i>Fourteenth week:</i>	Scientific criticism, an academy of science and art.
<i>Fifteenth week:</i>	Moral and ethics in science.

<b>Academic Policies and Code of Conduct</b>
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## First year (second semester)

### Course Title: PROCESSING OF FRUITS AND VEGETABLES

<b>Course Basic Information</b>	
<b>Academic Unit:</b>	Faculty of Agriculture and Veterinary
<b>Course title:</b>	Processing of fruits and vegetables
<b>Level:</b>	MSC.
<b>Course status:</b>	Mandatory
<b>Year of Study:</b>	First year/Second Semester
<b>Number of classes per week:</b>	2+2
<b>ECTS/Credits:</b>	6
<b>Time / location:</b>	Classroom /According to the timetable
<b>Lecturer:</b>	Prof.dr.
<b>Contact details:</b>	
<b>Course description:</b>	The aim of the course is to define the Principles of the Technology of Fruits and Vegetable Processing, main processes, preserved food products, quality and safety aspects. Furthermore, course offers knowledge about processing technics and methods, production of final products and storage systems of agriculture products.
<b>Course goals:</b>	Main objective of the course “is to offer knowledge about processing of fruits and vegetables and about origin of the plants, which supply raw material used for production of food products and their technological processing.
<b>Learning outcomes:</b>	After successfully completing the module, the student will be able to: <ul style="list-style-type: none"> <li>- Understand historical data of preservation industry development, raw and secondary materials characteristics,</li> <li>- Analyze heat transfer, basic processes and methods, concentration, evaporation, drying, radiation, sterilisation,</li> <li>- Analyze high pressures, hurdle technologies, plant material preserved food, concentrates and juice production,</li> <li>- Identify changes of preserved foods, chemical content, water characteristics in</li> </ul>

	preservation industry, - Identify packing materials, legislative, quality and safety aspects of preserved foods.	
<b>Student Workload (should be in compliance with student's Learning Outcomes)</b>		
<b>Activity</b>	<b>Hours</b> <b>Day/week</b> <b>Total</b>	
Lectures	2                      15                      30	
Theory/Lab work/ Exercise	2                      15                      30	
Practice work	1                      15                      15	
Consultation with teacher	1                      8                        8	
Field work	1                      10                      10	
Test, seminar paper	1                      8                        8	
Homework	1                      15                      15	
Self-study (library or home)		12
Preparation for final exam		8
Assessment time (test, quiz, final exam)		6
Projects, presentations, etc.	1                      4                        4	
<b>Total</b>		<b>150</b>
<b>Teaching methods</b>	The course content consists in lectures and practical work, two assignments, random in-class participation exercises, one mid-term tests and a final oral exam.	
<b>Assessment methods</b>	To determine the final grade: From 50 – 59 accumulated point take the grade 6 (six). From 60 – 69 accumulated point take the grade 7 (seven) From 70 – 79 accumulated point take the grade 8 (eight) From 80 – 89 accumulated point take the grade 9 (nine) From 90 – 100 accumulated point take the grade 10 (ten)  (Note: all details regarding the grading procedures are incorporated in the Regulation for midterms and final exam)  Attendance (90-100% attendance = 5 points; 80-90% = 4 points; 70-80% = 3 points <70% = denied attending attendance                      5 Activity and practical skills and essays    15 - Activity during classes	

	- Activity during lectures - Activity during exercise Mid-term exam 20 Homework and essays 20 Final exam 40
<b>Primary Literature:</b>	1. Jongen, W. 2002. Fruit and Vegetable Processing 1st Edition. Woodhead Publishing
<b>Additional Literature:</b>	1. Kongoli R., Boci I. - Book: Technology of Fruits and Vegetables Processing, 2007

**Designed teaching plan:**

<b>Week</b>	<b>Title of lecture</b>
<i>First week:</i>	Historical description for the treatment of foods
<i>Second week:</i>	Theoretical basis of heat transmission
<i>Third week:</i>	Unit Operations in the Conservation Industry
<i>Fourth week:</i>	Main technological operation for fruit processing, calculation of added ancillary materials
<i>Fifth week:</i>	The process of sterilization in the conservative industry
<i>Sixth week:</i>	Production of fermentable products, principle, fermentation processes
<i>Seventh week:</i>	Canned vegetables of plant origin, conservation changes of plant origin. 1 <sup>st</sup> semestral test
<i>Eighth week:</i>	Canned fruit
<i>Ninth week:</i>	Fruit juices
<i>Tenth week:</i>	Processing of vegetables, determination of degrees of ripening, Method of sterilization
<i>Eleventh week:</i>	Other canned vegetable
<i>Twelfth week:</i>	Water in the cannery industry
<i>Thirteenth week:</i>	Fruits and vegetables as raw material and food
<i>Fourteenth week:</i>	Microflora of fruits and vegetables
<i>Fifteenth week:</i>	Chemical composition of fruits and vegetables 2 <sup>nd</sup> semestral test

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**Course Title: URBAN HORTICULTURE PRODUCTION**

<b>Course Basic Information</b>	
<b>Academic Unit:</b>	Faculty of Agriculture and Veterinary
<b>Course title:</b>	Urban horticulture production
<b>Level:</b>	MSC.
<b>Course status:</b>	Mandatory
<b>Year of Study:</b>	First year/Second Semester
<b>Number of classes per week:</b>	2+2
<b>ECTS/Credits:</b>	6
<b>Time / location:</b>	Classroom /According to the timetable
<b>Lecturer:</b>	Prof.dr.
<b>Contact details:</b>	
<b>Course description</b>	The course provides knowledge of potential of urban agriculture in environmental planning, management, and development. Topics to be covered include fundamentals of a sustainable food system, horticultural principals and techniques, the place of food systems in urban planning, urban agriculture accommodated within the urban environment, and contemporary examples of community gardening and urban agriculture locally and in other parts of the country. The principles of storm water and solid waste management, nutrient and water cycles, and sustainable material sourcing will be explored as well.
<b>Course goals:</b>	The purpose of the course is to increase professional capacity of students on different aspects of horticulture production, different agro- ecologic conditions, and adequate agro technical measures to be applied on horticulture production, starting from a quality seed up to proper harvesting techniques that are the determinant measures for the optimal horticulture yield and quality.
<b>Expected Learning outcomes:</b>	After successfully completing the module, the student will be able to:  - Gain exposure to the terms and practice of urban agriculture - Develop an understanding of how urban resource systems function, with a focus on horticulture food systems

	<ul style="list-style-type: none"> <li>- Identify specific ways that urban agriculture can be applied</li> <li>- Describe and debate the feasibility of urban agriculture and its role in our urban food system</li> <li>- Recognize the limitations and benefits of urban horticulture production</li> </ul>		
<b>Student Workload (should be in compliance with student's Learning Outcomes)</b>			
<b>Activity</b>	<b>Hours</b>	<b>Day/week</b>	<b>Total</b>
Lectures	2	15	30
Theory/Lab work/ Exercise	2	15	30
Practice work	1	15	15
Consultation with teacher	1	8	8
Field work	1	10	10
Test, seminar paper	1	8	8
Homework	1	15	15
Self-study (library or home)			12
Preparation for final exam			8
Assessment time (test, quiz, final exam)			6
Projects, presentations, etc.	1	4	4
<b>Total</b>			<b>150</b>
<b>Teaching methods</b>	The course content consists in lectures and practical work, two assignments, random in-class participation exercises, one mid-term tests and a final oral exam.		
<b>Assessment methods</b>	Attendance (90-100% attendance=5 points; 80-90% =4 points; 70-80%= 3 points <70% =it is denied the verification of attendance 5 Activity and practical skills and essays 15 -Active during lecture -Active during exercise Mid-term exam 20 Homework and essays 20 Final exam 40		
<b>Primary Literature:</b>	1. Arteca, R. 2015, Introduction to Horticultural Science, 2nd ed., Gengage Learning, Stamford, USA, p. 584.		
<b>Additional Literature:</b>	1. Shyr, C.L. & Reily, H.E. 2017. Introductory Horticulture, 9th ed. Gengage Learning, Stamford, USA, p. 5.		
<b>Designed teaching plan:</b>			

<b>Week</b>	<b>Title of lecture</b>
<i>First week:</i>	Introduction to structure, growth and development of horticultural plants from a practical and scientific approach; greenhouse and outdoor production, nutrition
<i>Second week:</i>	Plant Growth: Soil and Nutrition, Soil management, fertilization of horticultural crops
<i>Third week:</i>	Indoor ornamentals, landscape ornamentals
<i>Fourth week:</i>	Home landscaping, container gardens, herbs and medicinal plants and hobby greenhouse management
<i>Fifth week:</i>	Principles and practices of grading, drainage and construction of residential and small commercial landscapes;
<i>Sixth week:</i>	Managing yield and quality in fruit trees and horticultural crops
<i>Seventh week:</i>	Rootstocks, cultivars, identification, site selection, pollination, pruning, fruit thinning
<i>Eighth week:</i>	The effects of organic and nonorganic practices on the garden ecosystem.
<i>Ninth week:</i>	Propagation, Pruning and Grafting
<i>Tenth week:</i>	Greenhouse: Controlled Environments –guest lecture
<i>Eleventh week:</i>	Identification and use of indigenous and introduced landscape plants;
<i>Twelfth week:</i>	Orchard culture management, irrigation, pest control, harvesting and post harvest physiology of temperate fruit species
<i>Thirteenth week:</i>	Winegrape culture - influence of climate, soil, cultivar, rootstock
<i>Fourteenth week:</i>	Analysis of contemporary economic, technological, environmental, human resource, and regulatory issues that impact the way global horticultural firms compete;
<i>Fifteenth week:</i>	Methods and practices related to production of horticultural crops; practical exercises in greenhouse and field

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**Course Title: TECHNOLOGY AND ENGINEERING IN URBAN ENVIRONMENT**

<b>Course Basic Information</b>	
<b>Academic Unit:</b>	Faculty of Agriculture and Veterinary
<b>Course title:</b>	Technology and Engineering in urban environment
<b>Level:</b>	MSC.
<b>Course status:</b>	Mandatory
<b>Year of Study:</b>	First year/Second Semester
<b>Number of classes per week:</b>	2+2
<b>ECTS/Credits:</b>	6
<b>Time / location:</b>	Classroom /According to the timetable
<b>Lecturer:</b>	Prof.dr.
<b>-Contact details:</b>	
<b>Course description</b>	
	The course introduces methodologies in the broad spectrum of agricultural mechanization including safety, tool identification and use, construction methodology, agricultural power systems, and application of methodologies through structured experiential activity.
<b>Course goals:</b>	
	The course introduces students to UA power and machinery, agricultural electrification and applications (motors, controls, and materials handling and processing), agricultural structures (plans, loads, construction materials and layout and design), and soil and water conservation (surveying, mapping, drainage and conservation structures).
<b>Expected Learning outcomes:</b>	
	<p>Upon completion of this course, student should be able to:</p> <ul style="list-style-type: none"> <li>- Analyse major issues and constrains on urban engineering;</li> <li>- Identify the constrains related to the agricultural power and machinery;</li> <li>- Identify agricultural electrification and application;</li> <li>- Understand small-scale production system and agricultural structuress in small area</li> </ul>





<i>First week:</i>	Introduction to course organization, teaching conditions, literature, grading.
<i>Second week:</i>	Definition of urban agriculture engineering. Typical questions associated with machinery management
<i>Third week:</i>	Power and machinery (engines, power transmission including hydraulics, tillage machinery, calibrations, and harvesting equipment)
<i>Fourth week:</i>	Agricultural electrification and applications (motors, controls, and materials handling and processing)
<i>Fifth week:</i>	Agricultural structures (plans, loads, construction materials and layout and design)
<i>Sixth week:</i>	Soil and water conservation (surveying, mapping, drainage and conservation structures)
<i>Seventh week:</i>	Matching machine size and capacity: theoretical, effective, & actual field capacities
<i>Eighth week:</i>	Soil conservation for cropland: Vegetative cover, Mulches, No-till planting, Ridge-till planting, Contour planting, Cover crops, Crop rotations, Strip cropping, Terraces
<i>Ninth week:</i>	Small-scale production system in small areas in or on the house (balcony, windowsill, cellar, barn, rooftop, and kitchen) as well as around the house (front and backyard, patio).
<i>Tenth week:</i>	Scope of horticultural crops. Soil and climatic requirements for different horticultural crops, improved varieties, criteria for site selection
<i>Eleventh week:</i>	Garden tools, farm implements and structures for horticulture crop management
<i>Twelfth week:</i>	Farm planning and management, access to information on advanced and sustainable technologies, market information and sources of financing
<i>Thirteenth week:</i>	Sustainable water practices in UA, irrigation systems and equipment
<i>Fourteenth week:</i>	Set up, adjust, operate, and maintain agricultural machinery and equipment
<i>Fifteenth week:</i>	Field visit

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**Course Title: PLANNING AND URBAN DESIGN**

<b>Course Basic Information</b>	
<b>Academic Unit:</b>	Faculty of Agriculture and Veterinary
<b>Course title:</b>	Planning and urban design
<b>Level:</b>	MSC.
<b>Course status:</b>	Elective
<b>Year of Study:</b>	First year/Second Semester
<b>Number of classes per week:</b>	1+1
<b>ECTS/Credits:</b>	3
<b>Time / location:</b>	Classroom /According to the timetable
<b>Lecturer:</b>	Prof.dr.
<b>Contact details:</b>	
<b>Course description</b>	The course introduces students how cities, suburbs, and metropolitan areas change. A special emphasis is about the ideas of a wide range of people who have addressed urban problems and acted to alter cities, suburbs, and regions through urban design and development. It enables students to understand basic concepts and definitions related to planning and urban design. It is about arranging land uses, transportation networks and amenities in order to create a fabric that can foster healthy, functional and vibrant communities.
<b>Course goals:</b>	The purpose of the course is to explore and understand urban sustainable development in the context of planning and design and to indicate how its practice can be improved, as well and to prepare students for more effective interdisciplinary work in urban design.
<b>Expected Learning outcomes:</b>	After successfully completing the module, the student will be able to:  - Identify and understand planning and urban design; - Understand the application of basic urban design; - Identify and apply planning and design methodologies that contribute to urban sustainable development, including tools for assessment;

	<ul style="list-style-type: none"> <li>- Identify main characteristics of different city districts and analyse these in relation to urban sustainable development,</li> <li>- Understand the goals, the main steps, and challenges in planning and urban design</li> <li>- identify and characterize main actors of urban sustainable development</li> </ul>		
<b>Student Workload (should be in compliance with student's Learning Outcomes)</b>			
<b>Activity</b>	<b>Hours</b>	<b>Day/week</b>	<b>Total</b>
Lectures	1	15	15
Theory/Lab work/ Exercise	1	15	15
Practice work	1	10	10
Consultation with teacher	1	8	8
Field work	1	8	8
Test, seminar paper	1	4	4
Homework	1	4	4
Self-study (library or home)			5
Preparation for final exam			2
Assessment time (test, quiz, final exam)			2
Projects, presentations, etc.	1	2	2
<b>Total</b>			<b>75</b>
<b>Teaching methods</b>	The teaching is combined: lectures and exercises. Interactive methods used in classes, but the main part of the discourse of teachers covered.		
<b>Assessment methods</b>	The first evaluation: 30 Evaluation of the second 25 Homework or other commitments 10 Regular attendance 5 Final Exam 30		
<b>Primary Literature:</b>	1. Steiner, Frederick and Kent Butler, eds. 2006. Planning and Urban Design Standards: Student Edition. New York: Wiley		
<b>Additional Literature:</b>	1. Tiesdell, S., & Adams, D. (2011). Urban design in the real estate development process. Chichester: Wiley-Blackwell		
<b>Designed teaching plan:</b>			
<b>Week</b>	<b>Title of lecture</b>		
<i>First week:</i>	Organization of the course, introduction to teaching environment, literature, grading.		
<i>Second week:</i>	The concept of urban sustainable development.		
<i>Third week:</i>	Differences between policy, science and planning documents		
<i>Fourth week:</i>	Urban sustainable development and perspective		

<i>Fifth week:</i>	Comparing the urban structures and the urban life of areas from different epochs
<i>Sixth week:</i>	The outcomes of planning and design How could plans and designs best address the challenge
<i>Seventh week:</i>	The process of planning and design
<i>Eighth week:</i>	Role of involved stakeholders
<i>Ninth week:</i>	Examples of implementation for planning and urban design. Project.
<i>Tenth week:</i>	Examples of implementation for planning and urban design. Project.
<i>Eleventh week:</i>	The role of local planning in the development of space. Elements of Urban Design
<i>Twelfth week:</i>	Creating a balance of land use, parameters and indicators
<i>Thirteenth week:</i>	Project presentations.
<i>Fourteenth week:</i>	Organization of the course, introduction to teaching environment, literature, grading.
<i>Fifteenth week:</i>	The concept of urban sustainable development.

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**Course Title: CULTIVATION OF MEDICINAL AND AROMATIC PLANTS**

<b>Course Basic Information</b>	
<b>Academic Unit:</b>	Faculty of Agriculture and Veterinary
<b>Course title:</b>	Cultivation of medicinal and aromatic plants
<b>Level:</b>	MSC.
<b>Course status:</b>	Elective
<b>Year of Study:</b>	First year/Second Semester
<b>Number of classes per week:</b>	1+1
<b>ECTS/Credits:</b>	3
<b>Time / location:</b>	Classroom /According to the timetable
<b>Lecturer:</b>	Prof.dr.
<b>Contact details:</b>	
<b>Course description:</b>	The course enables students to understand the cultivation of medicinal and aromatic plants in urban agriculture. The course introduces student's history, scope, opportunities and constraints in the cultivation and maintenance of medicinal and aromatic plants. Importance, origin, distribution, area, production, climatic and soil requirements, propagation and nursery techniques, planting and after care, cultural practices, nutritional and water requirements. Plant protection, harvesting and processing of medicinal and aromatic plants.
<b>Course goals:</b>	The purpose of the course is to introduce knowledge for the cultivation and use of medicinal and aromatic plants in medicine and new methods of medicinal and aromatic plant research.
<b>Expected Learning outcomes:</b>	After successfully completing the module, the student will be able to: <ul style="list-style-type: none"> <li>- Understand general principles of the agronomy and cultivation of aromatic and medicinal plants and the tools for their application</li> <li>- Understand to read, analyze, and discuss research literature dealing with medicinal and aromatic plants</li> <li>- To identify evidence-based information for</li> </ul>

	the cultivation and use of medicinal and aromatic plants, - To analyze and appraise correct information.		
<b>Student Workload (should be in compliance with student's Learning Outcomes)</b>			
<b>Activity</b>	<b>Hours</b>	<b>Day/week</b>	<b>Total</b>
Lectures	1	15	15
Theory/Lab work/ Exercise	1	15	15
Practice work	1	10	10
Consultation with teacher	1	8	8
Field work	1	8	8
Test, seminar paper	1	4	4
Homework	1	4	4
Self-study (library or home)			5
Preparation for final exam			2
Assessment time (test, quiz, final exam)			2
Projects, presentations, etc.	1	2	2
<b>Total</b>			<b>75</b>
<b>Teaching methods</b>	The teaching is combined: lectures and exercises. Interactive methods used in classes, but the main part of the discourse of teachers covered.		
<b>Assessment methods</b>	The first evaluation: 30 Evaluation of the second 25 Homework or other commitments 10 Regular attendance 5 Final Exam 30		
<b>Primary Literature:</b>	1. Yaniv Z and Bachrach, U. Handbook of Medicinal Plants.2005. The Haworth Press. NY.		
<b>Additional Literature:</b>	1. A.A. Farooqi and B. S Sreeramu, 2004: Cultivation of medicinal and aromatic crops. Revised edition. Biodiversity Library.		
<b>Designed teaching plan:</b>			
<b>Week</b>	<b>Title of lecture</b>		
<i>First week:</i>	Organization of the course, introduction to teaching environment, literature, grading.		
<i>Second week:</i>	Historical aspects, terminology and definitions		
<i>Third week:</i>	The economic importance of aromatic and medicinal plants in Kosovo		
<i>Fourth week:</i>	Cultivated species and cultivation areas		
<i>Fifth week:</i>	The cultivation and wild harvest, and their impact on product quality and the environment		

<i>Sixth week:</i>	The main agro-environmental factors affecting the production and quality of raw material:
<i>Seventh week:</i>	Harvest and first processing and their influence on the quality of final product
<i>Eighth week:</i>	Good agricultural and collection practices for medicinal plants (GACP)
<i>Ninth week:</i>	The organization of the production supply chain
<i>Tenth week:</i>	Examples of cultivation of medicinal and aromatic plants. Project.
<i>Eleventh week:</i>	Examples of cultivation of medicinal and aromatic plants. Project.
<i>Twelfth week:</i>	Biological aspects of natural active compounds present in plants
<i>Thirteenth week:</i>	The use of medicinal and aromatic plants in modern medicine
<i>Fourteenth week:</i>	The use of medicinal and aromatic plants in cosmetics
<i>Fifteenth week:</i>	Project presentations.

<b>Academic Policies and Code of Conduct</b>
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<p>Tools used during class must be cleaned and stored away at the end of class.  Mobile/smart phones, and other electronic devices (e.g. iPods) must be turned off (or on vibrate) and hidden from view during class time.  Laptop and tablet computers are allowed for quiet use only; other activities such as checking personal e-mail or browsing the Internet are prohibited.</p>
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**Course Title: INFORMATION SCIENCE AND COMMUNICATION**

<b>Course Basic Information</b>	
<b>Academic Unit:</b>	Faculty of Agriculture and Veterinary
<b>Course title:</b>	Information science and communication
<b>Level:</b>	MSC.
<b>Course status:</b>	Elective
<b>Year of Study:</b>	First year/Second Semester
<b>Number of classes per week:</b>	1+1
<b>ECTS/Credits:</b>	3
<b>Time / location:</b>	Classroom /According to the timetable
<b>Lecturer:</b>	Prof.dr.
<b>Contact details:</b>	
<b>Course description:</b>	<p>The course introduces students to UA Information Science and Communication in different fields of agriculture (food, nutrition, biotechnology...) and life-sciences, databases in other scientific fields (market/trade, social information), theses databases, citation databases, etc.</p> <p>Information Science and Communication aims the increasing knowledge of students regarding the role and main principles of the Information Science and Communication.</p>
<b>Course goals:</b>	<p>The objective of course is to introduces students to UA Information Science and Communication in different fields of agriculture and life-sciences.</p>
<b>Expected Learning outcomes:</b>	<p>Upon completion of this course, student should be able to:</p> <ul style="list-style-type: none"><li>- Describe the concept of the Information Science and Communication.</li><li>- Describe the Characteristics of scientific and technical information.</li><li>- Describe the main digital library catalogues.</li><li>- Know the electronic journals and full-text databases.</li><li>- Know the bibliographic data editing in text processors;</li></ul>



<b>Student Workload (should be in compliance with student's Learning Outcomes)</b>			
<b>Activity</b>	<b>Hours</b>	<b>Day/week</b>	<b>Total</b>
Lectures	1	15	15
Theory/Lab work/ Exercise	1	15	15
Practice work	1	10	10
Consultation with teacher	1	6	6
Field work			
Test, seminar paper	1	4	4
Homework	1		8
Self-study (library or home)			7
Preparation for final exam			2
Assessment time (test, quiz, final exam)			2
Projects, presentations, etc.	1	4	4
<b>Total</b>			<b>75</b>
<b>Teaching methods:</b>	The teaching methodology is based on a lecture, exercises, evaluation tests (2) and work seminar.		
<b>Assessment methods:</b>	<p>Student evaluation is based on student's attendance of lectures and their participation in theoretical and practical lectures, success on mid-evaluation, final exam.</p> <p>Attendance  (90-100% = 5 points; 80-90% = 4 points; 70-80% = 3 points &lt;70% = dropout      5</p> <p>Activates  -Theory and -Practical work                      5  Colloquium class                                      25  Written works (home works)                      20  Final exam    45</p>		
<b>Primary Literature:</b>	<ol style="list-style-type: none"> <li>1. Baeza-Yates R., Ribeiro-Neto B. Modern information retrieval: the concepts and technology. - 2nd ed. -</li> <li>2. Harlow, Addison Wesley (2011). 913 p. ISBN 978-0-321-41691-9. (selected chapters).</li> <li>3. Blanchett H., Powis C., Webb J. A guide to teaching information literacy: 101 practical tips London, Facet (2012). 262 p. ISBN 978-1-85604-659-6. (selected chapters).</li> </ol>		
<b>Additional literature:</b>	<ol style="list-style-type: none"> <li>1. Materials for lectures and exercises (script) prepared by teacher which will be submitted to students at the end of each lecture.</li> <li>2. Scientific articles that can be found on the</li> </ol>		

	Internet pages of scientific journals.
<b>Designed teaching plan:</b>	
<b>Week</b>	<b>Title of lecture</b>
<i>Week one:</i>	Introduction to the course content and aims
<i>Week two:</i>	Characteristics of scientific and technical information
<i>Week three:</i>	Specific databases in different fields of agriculture (food, nutrition, biotechnology...) and life-sciences, databases in other scientific fields (market/trade, social information), these databases, citation databases.
<i>Week four:</i>	Database structure and principles of advanced search syntax.
<i>Week five:</i>	Main world digital library catalogues.
<i>Week six:</i>	Digital library catalogues.
<i>Week seven:</i>	Statistical databases, databases for patents and intellectual, property, databases of standards, legislation.
<i>Week eight:</i>	Midterm exam.
<i>Week nine:</i>	Document types and formats.
<i>Week ten:</i>	Internet and advanced retrieval techniques on the web.
<i>Week eleven:</i>	Electronic journals and full-text databases.
<i>Week twelve:</i>	Characteristics of scientific language, classifications.
<i>Week thirteen:</i>	Bibliographic data editing in text processors.
<i>Week fourteen:</i>	Synthesis of texts according to scientific principles (IMRAD), compilation of personal bibliographies, written projects/seminars.
<i>Week fifteen:</i>	Interpretation of information.

<b>Academic Policies and Code of Conduct</b>
<p>Tools used during class must be cleaned and stored away at the end of class.</p> <p>Mobile/smart phones, and other electronic devices (e.g. iPods) must be turned off (or on vibrate) and hidden from view during class time.</p> <p>Laptop and tablet computers are allowed for quiet use only; other activities such as checking personal e-mail or browsing the Internet are prohibited.</p>

**Course Title: URBAN BEEKEEPING**

<b>Course Basic Information</b>	
<b>Academic Unit:</b>	Faculty of Agriculture and Veterinary
<b>Course title:</b>	Urban beekeeping
<b>Level:</b>	MSC.
<b>Course status:</b>	Elective
<b>Year of Study:</b>	First year/Second Semester
<b>Number of classes per week:</b>	1+1
<b>ECTS/Credits:</b>	3
<b>Time / location:</b>	Classroom /According to the timetable
<b>Lecturer:</b>	Prof.dr.
<b>Contact details:</b>	
<b>Course description:</b>	<p>The lectures starts by a part of fundamentals in biology of honey bees, emphasizing the development of sociality and beekeeping management, how to start and maintain an apiary, types of beehives, where to install an apiary, inspections of beehives, best management practices, hive management in spring, summer, autumn and winter, migratory beekeeping, how to prevent swarming, honey harvesting, how to raise queens, how to produce new nucleus colonies. Course also provides with the current bee diseases, pests and predators, with special emphasis on biological control. The practical part provides instruction to bee morphology and physiology, identification of glands, grafting larvae into artificial queen cell cups, quantification of Varroa infestation and acaricide treatments.</p>
<b>Course goals:</b>	<p>The purpose of the course is to provide a broad overview of bee biology, beekeeping and research frontline in apiculture. The most common types of honey are examined. Excursions to research bee centres and apiaries are planned.</p>
<b>Expected Learning outcomes:</b>	<p>After successfully completing the module, the student will be able to:</p> <ul style="list-style-type: none"><li>- Have basic knowledge of bee morphology and physiology;</li><li>- Associate apiculture with local agriculture</li></ul>



	London, UK.
<b>Additional Literature:</b>	1. Dadant C.P., Dadant C.C., Dadant M.G., Dadant J.C. (eds.) The Hive and The Honeybee. Dadant and Sons, Inc. Hamilton, USA. 2. Sammataro D., Avitabile A. 2011. The Beekeeper's Handbook, 4th edition. Cornell University Press, USA.
<b>Designed teaching plan:</b>	
<b>Week</b>	<b>Title of lecture</b>
<i>First week:</i>	Beehives, Beekeeping, Langstroth Hive Discussion of course syllabus and course materials
<i>Second week:</i>	Components of the Modern Beehive
<i>Third week:</i>	Protective clothing for working with bees Tools for working with bees
<i>Fourth week:</i>	Installing Package Bees
<i>Fifth week:</i>	Assembling Frames, Wax foundation, Wiring The frame, Embedding the wire
<i>Sixth week:</i>	Setting up an Apiary Location
<i>Seventh week:</i>	Understanding Honeybee Behavior Bee Culture
<i>Eighth week:</i>	Understanding the Life Cycle of the Honeybee and Colony Organization Types of Honeybees
<i>Ninth week:</i>	Fall and Winter Management
<i>Tenth week:</i>	Spring & Summer Management Overwintered Hives
<i>Eleventh week:</i>	Bee Pests, Parasite and Diseases Brood diseases, Symptoms of brood disease
<i>Twelfth week:</i>	What is a Varroa Mite, and how did they end up here (in the US and in my hive).
<i>Thirteenth week:</i>	Integrated Pest Management (IPM) Proper use of medications
<i>Fourteenth week:</i>	Identifying & Controlling Honeybee Diseases
<i>Fifteenth week:</i>	Project presentations.

<b>Academic Policies and Code of Conduct</b>
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**Course Title: PLANT PROTECTION IN URBAN AGRICULTURE**

<b>Course Basic Information</b>	
<b>Academic Unit:</b>	Faculty of Agriculture and Veterinary
<b>Course title:</b>	Plant protection in urban agriculture
<b>Level:</b>	MSC.
<b>Course status:</b>	Elective
<b>Year of Study:</b>	First year/Second Semester
<b>Number of classes per week:</b>	1+1
<b>ECTS/Credits:</b>	3
<b>Time / location:</b>	Classroom /According to the timetable
<b>Lecturer:</b>	Prof.dr.
<b>Contact details:</b>	
<b>Course description:</b>	The course includes the classification and life - history of selected species of pest groups; the damage induced; the crop loss assessment. Special emphasizes will be given to the principal measures of pest control with examples from pest problems occurring in the Urban Agriculture. Finally there will be introduction of Integrated Pest management (IPM) relevance in Urban Agriculture.
<b>Course goals:</b>	This course aims to introduce to the students the major pest groups of economic crops and the principal measures for their control.
<b>Expected Learning outcomes:</b>	The successful completion of this course will enable students to: <ul style="list-style-type: none"><li>- be familiar with general classes of insects, diseases and weeds in urban agriculture,</li><li>- know how to determine the pests, diseases and weeds in urban agriculture,</li><li>- recognize the morphology, anatomy, biology and ecology of pests, diseases and weeds in urban agriculture,</li><li>- know the ways of causing damages to urban agricultural crops, determine the most appropriate measures for the prevention and management of these pests in crops,</li><li>- apply the gained knowledge into the</li></ul>

		praxis.									
<b>Student Workload (should be in compliance with student's Learning Outcomes)</b>											
<b>Activity</b>	<b>Hours</b>	<b>Day/week</b>	<b>Total</b>								
Lectures	1	15	15								
Theory/Lab work/ Exercise	1	15	15								
Practice work	1	10	10								
Consultation with teacher	1	6	6								
Field work	1	6	6								
Test, seminar paper	1	2	2								
Homework	1	6	6								
Self-study (library or home)			7								
Preparation for final exam			2								
Assessment time (test, quiz, final exam)			2								
Projects, presentations, etc.	1	4	4								
<b>Total</b>			<b>75</b>								
<b>Teaching methods</b>		The teaching methodology is based on a lecture, exercises, evaluation tests (2) and work seminar.									
<b>Assessment methods</b>		<p>Student evaluation is based on student's attendance of lectures and their participation in theoretical and practical lectures, success on mid-evaluation, final exam.</p> <p>Attendance (90-100% = 5 points; 80-90% = 4 points; 70-80% = 3 points &lt;70% = dropout. 5</p> <p>Activates</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 80%;">-Theory and -Practical work</td> <td style="text-align: right;">5</td> </tr> <tr> <td>Colloquium class</td> <td style="text-align: right;">25</td> </tr> <tr> <td>Written works (home works)</td> <td style="text-align: right;">20</td> </tr> <tr> <td>Final exam</td> <td style="text-align: right;">45</td> </tr> </table>		-Theory and -Practical work	5	Colloquium class	25	Written works (home works)	20	Final exam	45
-Theory and -Practical work	5										
Colloquium class	25										
Written works (home works)	20										
Final exam	45										
<b>Primary Literature:</b>		<ol style="list-style-type: none"> <li>1. Strange, R. (2003): Introduction to Plant Pathology. John Wiley &amp; Sons Ltd. The Atrium, Southern Gate, Chichester, West Sussex PO19 8SQ, England.</li> <li>2. Schowalter, T. (2006): Insect Ecology. Academic press publication. United States of America.</li> <li>3. Zimdahl, R. L. (2007): Fundamentals of Weed Science. Third edition. Elsevier, USA.</li> </ol>									

<b>Additional Literature:</b>	1.Trigiano, R., Windham, M. & Windham, A. (2004): Plant Pathology. Concepts and Laboratory Exercises. Boca Raton London New York Washington, D.C.
<b>Designed teaching plan:</b>	
<b>Week</b>	<b>Title of lecture</b>
<i>First week:</i>	Introduction in plant protection in urban agriculture.
<i>Second week:</i>	The classes of the main pests (Insects, mites, nematodes, diseases and weeds) in Urban Agriculture
<i>Third week:</i>	The morphology, anatomy and biology of the insects in urban agriculture
<i>Fourth week:</i>	Main pests of vegetables in urban agriculture
<i>Fifth week:</i>	Main pests in orchards and vineyards in urban agriculture
<i>Sixth week:</i>	Plant disease triangle, inoculation and infection stages
<i>Seventh week:</i>	Main diseases of vegetables in urban agriculture
<i>Eighth week:</i>	Main diseases of orchards and vineyards in urban agriculture
<i>Ninth week:</i>	Main weeds flora in urban agriculture
<i>Tenth week:</i>	Weed Management in urban agriculture
<i>Eleventh week:</i>	Plant protection measures in urban agriculture
<i>Twelfth week:</i>	Cultural, mechanical, physical and biological control of pests, pathogens and weeds in urban agriculture
<i>Thirteenth week:</i>	Plant Protection Products and their composition
<i>Fourteenth week:</i>	Integrated Pest Management in urban agriculture
<i>Fifteenth week:</i>	National and EU Legislation regarding plant protection in General

### **Academic Policies and Code of Conduct**

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**Course Title: URBAN AGRICULTURE PRODUCTION SYSTEMS**

<b>Course Basic Information</b>	
<b>Academic Unit:</b>	Faculty of Agriculture and Veterinary
<b>Course title:</b>	Urban agriculture production systems
<b>Level:</b>	MSC.
<b>Course status:</b>	Elective
<b>Year of Study:</b>	First year/Second Semester
<b>Number of classes per week:</b>	1+1
<b>ECTS/Credits:</b>	3
<b>Time / location:</b>	Classroom /According to the timetable
<b>Lecturer:</b>	Prof.dr.
<b>Contact details:</b>	
<b>Course description:</b>	The course enables students to understand basic concepts and definitions related to production systems and their application in urban agriculture. The course enables students to develop knowledge and skills related to the sustainable use of resources, and the production and marketing of a range of plants and their products. Plant production systems are a fundamental component of agriculture, which has never been more important than nowadays. Places of urban agriculture have numerous benefits: they cultivate healthier lifestyles, strengthen communities, teach stewardship, and provide economic opportunities.
<b>Course goals:</b>	The purpose of the course is to introduce a whole farm approach, such as agroecology and holistic management, to urban agriculture, explore sustainable growing methods for higher yield production per unit area, and develop business and entrepreneurial skills.
<b>Expected Learning outcomes:</b>	After successfully completing the module, the student will be able to: <ul style="list-style-type: none"> <li>- Identify and understand urban agriculture production systems;</li> <li>- Understand the basic concepts of urban agriculture and production systems;</li> <li>- Identify and understand the application of</li> </ul>

	<p>productions systems in urban agriculture;</p> <ul style="list-style-type: none"> <li>- Understand the goals, the main steps, and challenges in application of production systems in urban agriculture.</li> <li>- Understand to read, analyze, and discuss research literature dealing with urban agriculture production systems</li> </ul>		
<b>Student Workload (should be in compliance with student's Learning Outcomes)</b>			
<b>Activity</b>	<b>Hours</b>	<b>Day/week</b>	<b>Total</b>
Lectures	1	15	15
Theory/Lab work/ Exercise	1	15	15
Practice work	1	10	10
Consultation with teacher	1	6	6
Field work	1	6	6
Test, seminar paper	1	2	2
Homework	1	6	6
Self-study (library or home)			7
Preparation for final exam			2
Assessment time (test, quiz, final exam)			2
Projects, presentations, etc.	1	4	4
<b>Total</b>			<b>75</b>
<b>Teaching methods</b>	The teaching methodology is based on a lecture, exercises, evaluation tests (2) and work seminar.		
<b>Assessment methods</b>	<p>Student evaluation is based on student's attendance of lectures and their participation in theoretical and practical lectures, success on mid-evaluation, final exam.</p> <p>Attendance  (90-100% = 5 points; 80-90% = 4 points; 70-80% = 3 points &lt;70% = dropout.  5</p> <p>Activates  -Theory and -Practical work           5  Colloquium class                           25  Written works (home works)           20  Final exam                                   45</p>		
<b>Primary Literature:</b>	1. Charlie W. Leshner, Jr. Urban Agriculture: A Literature Review, 2006. United States Department of Agriculture, Alternative Farming Systems Information Center,		

	National Agricultural Library.
<b>Additional Literature:</b>	1. Mohamed Samer. 2016. Urban Agriculture Published by ExLi4EvA,
<b>Designed teaching plan:</b>	
<b>Week</b>	<b>Title of lecture</b>
<i>First week:</i>	Organization of the course, introduction to teaching environment, literature, grading.
<i>Second week:</i>	History of urban agriculture
<i>Third week:</i>	Introduction of urban Production Systems
<i>Fourth week:</i>	Introduction to agricultural challenges, societal issues, environmental issues, economic challenges
<i>Fifth week:</i>	Urban soils and management impacts on the environment
<i>Sixth week:</i>	Plant production principles
<i>Seventh week:</i>	Plant production practices
<i>Eighth week:</i>	Best management practices in plant protection
<i>Ninth week:</i>	Best management practices in plant nutrition
<i>Tenth week:</i>	Examples of implementation for urban agriculture production systems. Project.
<i>Eleventh week:</i>	Examples of implementation for urban agriculture production systems. Project.
<i>Twelfth week:</i>	Knowledge and management of plant production systems
<i>Thirteenth week:</i>	Sustainable production
<i>Fourteenth week:</i>	Plant health
<i>Fifteenth week:</i>	Project presentations.

<b>Academic Policies and Code of Conduct</b>
<p>Tools used during class must be cleaned and stored away at the end of class.</p> <p>Mobile/smart phones, and other electronic devices (e.g. iPods) must be turned off (or on vibrate) and hidden from view during class time.</p> <p>Laptop and tablet computers are allowed for quiet use only; other activities such as checking personal e-mail or browsing the Internet are prohibited.</p>

## Second year (third semester)

**Course Title: INTERNSHIP**

<b>Course Basic Information</b>	
<b>Academic Unit:</b>	Faculty of Agriculture and Veterinary
<b>Course title:</b>	Internship
<b>Level:</b>	MSC.
<b>Course status:</b>	Mandatory
<b>Year of Study:</b>	Second year/Third Semester
<b>Number of classes per week:</b>	2+6
<b>ECTS/Credits:</b>	12
<b>Time / location:</b>	Classroom /According to the timetable
<b>Lecturer:</b>	Prof.dr.
<b>Contact details:</b>	
<b>Course description:</b>	Students will carry out practical work in field of crop production, plant protection, food technology, livestock, veterinary, agribusiness, in companies, farms, research or consulting institutions, governmental institution and experience the daily work situation. Specific knowledge of the respective area of work/research will be acquired; social abilities like work organization, teamwork, interdisciplinary work, and flexibility will be practiced. This provides students opportunity to explore career interests while applying knowledge and skills learned in the classroom in respective institution.
<b>Course goals:</b>	To offer students practical work in fields mentioned above, and experiences the daily work situation. Internships are very important to give students new teaching experiences that will benefit them after graduation.
<b>Expected Learning outcomes:</b>	After completing of the course student will be able to: <ol style="list-style-type: none"> <li>1. to obtain a practical knowledge</li> <li>2. to obtain knowledge for management of situations in practice</li> <li>3. to learn how to address the problems in practice</li> <li>4. to improve skills in daily work at respective institution</li> <li>5. to acquire knowledge of the respective institution in which the</li> </ol>

	internship is done		
<b>Student Workload (should be in compliance with student's Learning Outcomes)</b>			
<b>Activity</b>	<b>Hours</b>	<b>Day/week</b>	<b>Total</b>
Lectures	2	15	30
Theory/Lab work/ Exercise			
Practice work	8	15	120
Consultation with teacher	1	15	15
Field work	1	30	30
Test, seminar paper	1	6	6
Homework	1	30	30
Self-study (library or home)			40
Preparation for final exam			10
Assessment time (test, quiz, final exam)			6
Projects, presentations, etc.	2	6	12
<b>Total</b>			<b>300</b>
<b>Teaching methods:</b>	Supervisor will assist the student in identifying an appropriate institution, also to conduct both a midterm and final evaluation and discuss with the student for his work development. Supervisor also will check the student participation at respective institution. The student will practice the specific knowledge in related fields and practice, social skills in organisation work, team work, interdisciplinary work and flexibility.		
<b>Assessment methods:</b>	The students should be able to work in group; for development of creative and critic thoughts also in presenting of gained knowledge during the practical work. Student evaluation is made by giving the percentages of participation of each evaluation during exercises in final evaluation. Internship time verification 5% Midterm and final evaluation report: 50% Evaluation: 10% Presentation 10% Final exam 25% Total 100%		

<b>Design teaching plan:</b>	
<b>Week</b>	<b>Internship</b>
<i>First week:</i>	Practical work

<i>Second week:</i>	Practical work
<i>Third week:</i>	Practical work
<i>Fourth week :</i>	Practical work
<i>Fifth week :</i>	Practical work
<i>Sixth week :</i>	Practical work
<i>Seventh week :</i>	Practical work
<i>Eighth week:</i>	Midterm evaluation report
<i>Ninth week:</i>	Practical work
<i>Tenth week:</i>	Practical work
<i>Eleventh week:</i>	Practical work
<i>Twelfth week :</i>	Practical work
<i>Thirteenth week:</i>	Practical work
<i>Fourteenth week:</i>	Final evaluation report
<i>Fifteenth week:</i>	Presentation and final exam

<b>Academic Policies and Code of Conduct</b>
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<p>Tools used during class must be cleaned and stored away at the end of class.  Mobile/smart phones, and other electronic devices (e.g. iPods) must be turned off (or on vibrate) and hidden from view during class time.  Laptop and tablet computers are allowed for quiet use only; other activities such as checking personal e-mail or browsing the Internet are prohibited.</p>
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**Course Title: PROBLEM BASE LEARNING (PBL)**

<b>Course Basic Information</b>	
<b>Academic Unit:</b>	Faculty of Agriculture and Veterinary
<b>Course title:</b>	Problem base learning (PBL)
<b>Level:</b>	MSC.
<b>Course status:</b>	Mandatory
<b>Year of Study:</b>	Second year/Third Semester
<b>Number of classes per week:</b>	2+10
<b>ECTS/Credits:</b>	18
<b>Time / location:</b>	Classroom /According to the timetable
<b>Lecturer:</b>	Prof.dr.
<b>Contact details:</b>	
<b>Course description:</b>	The whole implementation of the PBL process is led and worked out by the students themselves. The teacher has only a tutoring/coaching role, where in most cases is an observer. Besides, students need to get involved in tasks in each step, additional engagement is also required from students. Each student should be tasked to experience being a moderator of group discussion, either in the problem brainstorming discussion or in the discussion of literature sources, or in both cases. Furthermore, each student should experience also the role of taking notes in the tasks related to steps 2-3. The teacher should enlist and guide the sources of literature, which at least is the basis for research and reading for the related learning topic. Students should be also encouraged to further search additional literature sources in order to maximally be able to achieve the developed learning goals.
<b>Course objectives:</b>	To offer students practical work in fields mentioned above, and experiences the daily work situation. PBL are very important to give students new teaching experiences that will benefit them after graduation.
<b>Expected results:</b>	After completing of the course student will be able to: <ol style="list-style-type: none"><li>1. Familiarized with the problem</li><li>2. Brainstorming /Identification of key learning needs / Structuring ideal</li></ol>

	3. Formulating the learning aims/goals
	4. Individual learning and research
	5. Discussing and evaluating information
<b>Student Workload (should be in compliance with student's Learning Outcomes)</b>	
<b>Activity</b>	<b>Hours</b> <b>Day/week</b> <b>Total</b>
Lectures	2                      15                      30
Theory/Lab work/ Exercise	
Practice work	10                      15                      150
Consultation with teacher	1                      30                      30
Field work	5                      15                      75
Test, seminar paper	4                      7                      28
Homework	2                      15                      30
Self-study (library or home)	
Preparation for final exam	
Assessment time (test, quiz, final exam)	
Projects, presentations, etc.	2                      8                      16
<b>Total</b>	
	<b>450</b>
<b>Teaching methodology:</b>	The five steps approach is realized in two sessions of work among the students and the teacher over the week, with a few days in between. During the first session, the students and the teacher go through the first three steps. In the fourth step students read, consult and research sources of literature (mostly individual learning, or learning in pairs or groups) to better understand problem solving approaches. The second session includes the fifth step, and relates to the discussion among students and knowledge sharing from read and researched literature sources to bring solutions to the problem.
<b>Evaluation methods:</b>	A variety of assessment methods could take place for the evaluation of student's learning progress. The key assessment techniques may be, for example, the individual observation of students regarding their regular engagement in PBL process, tasks and duties (with quality and quantity of engagement). Furthermore, a 360 degree evaluation approach could be used, through which the student peer evaluation is encouraged. The teacher may also conduct final



	evaluations in a written exam format, which could be and essay format to certain questions, or a detail report on certain problem(s) to be examined, and/or a presentation of certain work to have been previously developed. In any of the cases, the teacher should make sure that the assessment methodology is adequately selected and combined in order to assess student's progress towards achieving the learning outcomes for the course.
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<b>Design of study plan:</b>	
<b>Week</b>	<b>Problem base learning</b>
<i>First week:</i>	Practical work
<i>Second week:</i>	Practical work
<i>Third week:</i>	Practical work
<i>Fourth week :</i>	Practical work
<i>Fifth week :</i>	Practical work
<i>Sixth week :</i>	Practical work
<i>Seventh week :</i>	Practical work
<i>Eighth week:</i>	Midterm evaluation report
<i>Ninth week:</i>	Practical work
<i>Tenth week:</i>	Practical work
<i>Eleventh week:</i>	Practical work
<i>Twelfth week :</i>	Practical work
<i>Thirteenth week:</i>	Practical work
<i>Fourteenth week:</i>	Final evaluation report
<i>Fifteenth week:</i>	Presentation and final exam

<b>Academic Policies and Code of Conduct</b>
<p>Tools used during class must be cleaned and stored away at the end of class.            Mobile/smart phones, and other electronic devices (e.g. iPods) must be turned off (or on vibrate) and hidden from view during class time.            Laptop and tablet computers are allowed for quiet use only; other activities such as checking personal e-mail or browsing the Internet are prohibited.</p>