Basic data of the subject	
Academic Unit:	**Life and Environmental Sciences Faculty**
Course title:	**Measurement of forest areas**
Program:	**Forestry and Environmental Sciences**
Level:	**Bachelor**
Course status:	**Selective**
Study year:	**Second year, second semester**
Number of hours per week:	**2+1**
Credit value – ECTS:	**3**
Time / location:	**To be announced**
Lecturer:	**Prof. Asoc. Dr. Bashkim Thaqi**
Contact details:	**bashkim.thaci@ushaf.net**
Course description:	The course provides knowledge on the measurement of forest areas involves assessing the extent and characteristics of forested land. Various methods and technologies are employed for this purpose, depending on the scale and precision required. This process includes many different aspects which may include, goals, concepts, instruments, methodologies as well as other issues related to the measeruement of the fores areas.
Course objectives:	The measurement of forest areas is an essential aspect of forestry and natural resource management. Courses on this topic typically have specific objectives aimed at equipping students with the knowledge and skills needed to accurately measure and assess forested areas.
Learning outcomes:	After completing this course, students will be able to: • Identify the general forest areas within the territory they manage, • Solve eventual problems of forest measurements, even in terrains with more complex configuration,

	• Evaluate the most advanced methods of forest measurements, using current technologies, • Analyze and compare the results obtained from different methods of forest measurements. • To organize trainings and skills in the field, for technicians and other workers in the forestry sector, • To plan activities related to the Forest Inventory and the design of management plan

Contribution on student load (must correspond with learning outcomes)			
Activity	**Hours**	**Days/week**	**Total**
Lectures	2	15	30
Exercise theoretical/laboratory			
Practice work	1	5	5
Contact with lecturer/consultations	1	5	5
Field exercises	2	10	10
Mid-terms, seminars	1	-	1
Homework	-	-	-
Individual time spent studying (at the library or home)	1	10	10
Final preparation for the exam	1	10	10
Time spent in evaluation (tests, quiz, final exam)	1	4	4
Projects, presentations, etc.			
Total			**75 hours (3 ECTS)**

Teaching methods :	Lectures, discussions, consultations, technical exercises, formula solutions, independent projects, colloquia, exams.
Evaluation methods:	First grade (colloquium): 10%, Seminars or other commitments: 10%, Final exam: 80%: Total 100%.
Literature	
Basic Literature:	1. 1. Manual of management plans drawn up by the group of Norwegian foresters for Kosovo. 2. "Forest Measurements" by Thomas Eugene Avery and Harold Burkhart 3. "Introduction to Forestry and Natural Resources" by Donald L. Grebner et al. 4. "Remote Sensing and GIS for Ecologists" by Paul A. Racine

Additional Literature:	"Forest Management" by Sokol Abazi

Designed study plan:		
Week	**Lectures**	**Exercises**
First week:	Introduction to Forest Measurement:	Overview of Forest Measurement
Second week:	Historical Perspective on Forest Measurement	Importance of Accurate Measurement in Forest Management
Third week:	GIS (Geographic Information System	exercises for using GIS
Fourth week:	Ground Surveys field Sampling	Forest inventory ground measurements to collect data on tree species, age, height, diameter at breast height (DBH), and density
Fifth week:	Transect Sampling	Systematic sampling along transects
Sixth week:	Forest Inventory Methods	Historical Perspective on Forest Measurement
Seventh week:	Advanced Techniques in Forest Measurement	3D Forest Mapping Terrestrial Laser Scanning
Eighth week:	Sustainable Forest Management	Principles of Sustainable Forest Management Forest Certification Systems
Ninth week:	Satellite Imagery: Remote sensing satellites capture images of the Earth's surface,	Satellite data can be processed to estimate forest cover, density, and changes over time.
Tenth week:	Colloquia	Colloquia
Eleventh week:	Challenges and Solutions in Forest Measurements:	Variability in measurement data

Twelfth week:	Global Forest Monitoring and Conservation	Ethical and legal practices in Forest measurements and Forest monitoring
Thirteenth week:	Future Directions and Research Opportunities	Interdisciplinary approaches
Fourteenth week:	Exercises related to the use of images to create a link with other data sources for accurate forest mapping.	Exercises related to the use of images to create a link with other data sources for accurate forest mapping.
Fifteenth week:	Practical Applications and Fieldwork	Field Exercises in Forest Measurement
Academic policies and rules of conduct:		
Regular and active participation of students in lectures, exercises (practical part) and in seminar work. Keeping quiet in lecture, disabling mobile phones, timely access to the classroom, etc.		