Basic data of the subject	
Academic Unit:	**University of Prizren „ Ukshin Hoti” Faculty of Life and Environmental Science Direction: Forestry and Environmental Sciences**
Department:	**Forestry and environmental sciences**
Program:	**Forestry and environmental sciences**
Course title:	**Forest Revitalization**
Level:	**Bachelor**
Course status:	**Compulsory**
Study year:	**Third year, first semester**
Number of hours per week:	**3+2**
Credit value – ECTS:	**6**
Time / location:	
Lecturer:	**Prof.Aoc.Dr. Mirvjena Kellezi**
Contact details:	**mkellezi@ubt.edu.al**
Course description	The forests and their importance. Degradation and causes of forest degradation. Revitalization of forests (Why, where, how to revitalize the forests). Revitalizing ecological functions. Revitalizing socio-economic values. Restoring the landscape to the previous forest state. Revitalization of different types of forests. Revitalization after disturbances (after fires, storms, risk from invasive-alien species management, erosion control, forest restoration in abandoned areas). Implementation of forest legislation.
Course objectives:	The main objective of this subject is to provide students with basic knowledge on forest revitalization. This is foreseen to be linked to practical experience in forest ecosystems in Kosovo in selected degraded forests but also in conserved forest areas.
Learning outcomes:	After successful completion of this course students will be able to: 1. Discuss about the importance of forest revitalization 2. Understand and know more about forest degradation 3. Understand why, where and how to revitalize the forests 4. Understand the revitalization of ecological functions and the revitalization of socio-economic values

	5. Understand the importance of revitalization after forest disturbances 6. To implement the acquired knowledge in theory and practice

Contribution on student load (must correspond with learning outcomes)			
Activity	**Hours**	**Days/week**	**Total**
Lectures	3	15	45
Exercise theoretical/laboratory	2	15	30
Practice work			
Contact with lecturer/consultations	8/semester	-	8
Field exercises			
Mid-terms, seminars	2/semester	-	2
Homework	6/semester	-	6
Individual time spent studying (at the library or home)	4	15	70
Final preparation for the exam	6/semester	-	6
Time spent in evaluation (tests, quiz, final exam)	6/semester	-	6
Projects, presentations, etc.	7/semester	-	7
Total			180 hours

Teaching methods	Lectures, discussions, laboratory exercises, outdoor research exercises, consultations, independent projects, homework assignments, colloquia, seminars. Assessments (I & II), exams.
Evaluation methods	First assessment: 10%, Second assessment: 10%, Seminars or other engagements: 10%, Final exam: 70%, Total: 100%.
Literature	
Basic Literature:	• Elliott, S. D., D. Blakesley and K. Hardwick (2013): Restoring Tropical Forests: a practical guide. Royal Botanic Gardens, Kew; 344 pp. • Mansourian,S., Vallauri, D., Dudley, N.. (2005): Forest restoration in Landscapes-Beyond planting trees. Springer. Printed in USA. Springeronline.com. 437 p. • Lamb, D., Gilmour, D. (2003): Rehabilitation and Restoration of Degraded forests. IUCN. Gland. Switzerland and Cambridge. UK and WWF, Gland, Switzerland. x+110 pp.

Additional Literature:	
Designed study plan:	
Week	**Lectures which will be held**
First week:	Introduction. Forests and their importance. What is revitalization? Definitions (invasive species, fragmentation and parcelization, conservation of habitat diversity, afforestation, reforestation, forest expansion, deforestation, forest degradation, succession, climax, erosion, abandoned terrain, marginal terrain).
Second week:	Introduction. Forests and their importance. What is revitalization? Definitions (invasive species, fragmentation and parcelization, conservation of habitat diversity, afforestation, reforestation, forest expansion, deforestation, forest degradation, succession, climax, erosion, abandoned terrain, marginal terrain). What is degradation? Deforestation. Measuring Degradation.
Third week:	What is degradation? Deforestation. Measuring Degradation.
Fourth week:	Addressing degradation. Biophysical aspects of degradation. Human well-being aspects. Ecological aspects. Socio-economic reasons.
Fifth week:	When and where to intervene? Ecological factors. Socio-economic factors.
Sixth week:	Approaches at the site level (micro-level). Preconditions. Species selection. Advices for planting trees. What it means to restore the forest in its entirety. Interventions for the biodiversity restoration. Passive restoration. Enrichment plantings. Direct seeding. Scattered tree plantings. Close-spaced plantings. Close-spaced planting using different species. Intensive ecological reconstruction after mining. Directing ecological successions. Distance from intact forests. Wildlife. Ecological surprises. Interventions providing biodiversity and productivity. Managing secondary forests. Agroforestry. Monoculture plantations. Monoculture plantations and buffer strips. Mixed species plantations. Encouragement of understorey development. How many species? Economic incentives for tree planting.
Seventh week:	Approaches at the site level (micro-level). Preconditions. Species selection. Advices for planting trees. What it means to restore the forest in its entirety. Interventions for the biodiversity restoration. Passive restoration. Enrichment plantings. Direct seeding. Scattered tree plantings. Close-spaced plantings. Close-spaced planting using different species. Intensive ecological reconstruction after mining. Directing ecological successions. Distance from intact

	forests. Wildlife. Ecological surprises. Interventions providing biodiversity and productivity. Managing secondary forests. Agroforestry. Monoculture plantations. Monoculture plantations and buffer strips. Mixed species plantations. Encouragement of understorey development. How many species? Economic incentives for tree planting.
Eighth week:	Approaches at the site level (micro-level). Preconditions. Species selection. Advices for planting trees. What it means to restore the forest in its entirety. Interventions for the biodiversity restoration. Passive restoration. Enrichment plantings. Direct seeding. Scattered tree plantings. Close-spaced plantings. Close-spaced planting using different species. Intensive ecological reconstruction after mining. Directing ecological successions. Distance from intact forests. Wildlife. Ecological surprises. Interventions providing biodiversity and productivity. Managing secondary forests. Agroforestry. Monoculture plantations. Monoculture plantations and buffer strips. Mixed species plantations. Encouragement of understorey development. How many species? Economic incentives for tree planting.
Ninth week:	Approaches at the site level (micro-level). Preconditions. Species selection. Advices for planting trees. What it means to restore the forest in its entirety. Interventions for the biodiversity restoration. Passive restoration. Enrichment plantings. Direct seeding. Scattered tree plantings. Close-spaced plantings. Close-spaced planting using different species. Intensive ecological reconstruction after mining. Directing ecological successions. Distance from intact forests. Wildlife. Ecological surprises. Interventions providing biodiversity and productivity. Managing secondary forests. Agroforestry. Monoculture plantations. Monoculture plantations and buffer strips. Mixed species plantations. Encouragement of understorey development. How many species? Economic incentives for tree planting.
Tenth week:	Approaches at the site level (micro-level). Preconditions. Species selection. Advices for planting trees. What it means to restore the forest in its entirety. Interventions for the biodiversity restoration. Passive restoration. Enrichment plantings. Direct seeding. Scattered tree plantings. Close-spaced plantings. Close-spaced planting using different species. Intensive ecological reconstruction after mining. Directing ecological successions. Distance from intact forests. Wildlife. Ecological surprises. Interventions providing biodiversity and productivity. Managing secondary forests. Agroforestry. Monoculture plantations. Monoculture plantations and buffer strips. Mixed species plantations.

	Encouragement of understorey development. How many species? Economic incentives for tree planting.
Eleventh week:	Forest landscape revitalization after fires. Revitalization of forests after violent storms. Managing the risk of invasive alien species in restoration. Erosion control. Restoring forests after land abandonment.
Twelfth week:	Forest landscape revitalization after fires. Revitalization of forests after violent storms. Managing the risk of invasive alien species in restoration. Erosion control. Restoring forests after land abandonment.
Thirteenth week:	Forest landscape revitalization after fires. Revitalization of forests after violent storms. Managing the risk of invasive alien species in restoration. Erosion control. Restoring forests after land abandonment.
Fourteenth week:	Forest landscape revitalization after fires. Revitalization of forests after violent storms. Managing the risk of invasive alien species in restoration. Erosion control. Restoring forests after land abandonment.
Fifteenth week:	Forest landscape revitalization after fires. Revitalization of forests after violent storms. Managing the risk of invasive alien species in restoration. Erosion control. Restoring forests after land abandonment.

Academic policies and rules of conduct:
Students are obliged to attend regular lectures, participate in field visits (excursion). Disconnection of mobile phones, timely access to the classroom and keeping quiet in the lesson are also mandatory.

Exercises

Designed study plan:	
Week	**Exercises which will be held**
First week:	Practice on forests and their importance. The concept of revitalization and other concepts taken during the lectures.
Second week:	Practice on degradation, deforestation and measuring degradation or various indicators to suggest that a forest is degraded.
Third week:	Practice on degradation, deforestation and measuring degradation or various indicators to suggest that a forest is degraded.
Fourth week:	Practice on interventions on smaller or larger surfaces. Ecosystems that can regenerate themselves or not and establishment of conditions for succession occurrence. Clarification of the terms "restoration", "rehabilitation" and

	"recuperation".Community decision-making on revitalization issues.
Fifth week:	Practice on the right moments when and where to intervene? Recognizing the pre-existing situation and the current situation. Ecological factors such as river stabilization or erosion. Socio-economic factors such as the choice of the most suitable areas for intervention based on the available finances.
Sixth week:	Practice on the right moments when and where to intervene? Recognizing the pre-existing situation and the current situation. Ecological factors such as river stabilization or erosion. Socio-economic factors such as the choice of the most suitable areas for intervention based on the available finances.
Seventh week:	Practical advices on tree planting. The right elements to maintain a healthy restoration. Passive restoration that can be achieved simply by protecting the site from further disturbances and allowing natural colonization. Different ways of human intervention to aid restoration. Subsidies for tree plantations.
Eighth week:	Practical advices on tree planting. The right elements to maintain a healthy restoration. Passive restoration that can be achieved simply by protecting the site from further disturbances and allowing natural colonization. Different ways of human intervention to aid restoration. Subsidies for tree plantations.
Ninth week:	Practical advices on tree planting. The right elements to maintain a healthy restoration. Passive restoration that can be achieved simply by protecting the site from further disturbances and allowing natural colonization. Different ways of human intervention to aid restoration. Subsidies for tree plantations.
Tenth week:	Concrete examples and demonstrations of various revitalization cases such as after fires, after heavy storms. Invasive species risk management. Erosion control. Restoration of forests in abandoned lands.
Eleventh week:	Concrete examples and demonstrations of various revitalization cases such as after fires, after heavy storms. Invasive species risk management. Erosion control. Restoration of forests in abandoned lands.
Twelfth week:	Intermediate exam on forest landscape revitalization after fires. Revitalization of forests after violent storms. Managing the risk of invasive alien species in restoration. Erosion control. Restoring forests after land abandonment.
Thirteenth week:	Course assignment on the revitalization of a forest area close to the residential area of each student, highlighting the causes

	of degradation, degree of degradation and rehabilitation methods.
Fourteenth week:	Course assignment on the revitalization of a forest area close to the residential area of each student, highlighting the causes of degradation, degree of degradation and rehabilitation methods.
Fifteenth week:	Course assignment on the revitalization of a forest area close to the residential area of each student, highlighting the causes of degradation, degree of degradation and rehabilitation methods.