



“FOREST ERGONOMY” SYLLABUS

Basic data of the subject	
Academic Unit:	University “Ukshin Hoti” Prizren
Course title:	Forest Ergonomy
Program:	Forestry and Environmental Sciences
Level:	Bachelor
Course status:	Oblicative (O)
Study year:	Second year, first semester
Number of hours per week:	3+2
Credit value – ECTS:	5
Time / location:	To be announced
Lecturer:	Prof. Ass.dr.Ylli Kortocçi
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Course description:	<p>In the module of forest ergonomics are treated topics that come to the aid of preparing students as future technicians of the sustainable forest management and environment in general. The most important topics are: Goals and introduction of forest ergonomics, which treat the subject of the module study and argumentation of ergonomics division as a separate subject of forest sciences in Europe and Albania. In this topic are given the definitions of the most commonly used terms. Also, in this module is created the possibility to acquire the necessary knowledge about human work physiology, for muscle contraction and blood circulation. They gain knowledge about man’s performance at physical and mental work, demands, skills, and capabilities at work performance, as well.</p> <p>Further, students gain comprehensive theoretical knowledge on workers nutrition, the production and consumption of energy in the human body, as necessary concepts to understand performance and daily productivity of the worker. Also, a special attention is paid to the study of the factors influencing the performance of work in the forestry field, where the priority is given to the physical and technological factors.</p> <p>Another important aspect is the work study, which is divided into the study of work performing methods and work measurement. For this field of ergonomic study is given priority to the accuracy and scientific analysis of the data collected by concrete measurements</p> <p>Safety and health in forestry work is the most important object of the study of ergonomics module. Safe use of tools and forest machineries in accordance with the rules in force, not only increases incomes for workers but also protects them from possible accidents in which the majority of cases are fatal, and</p>

	<p>it protects forest environment from damages. Students are prepared to be able after graduation to train workers in performing their work and using of tools and forest machines in the safest way.</p> <p>Also, a particular interest is paid to safety at work in wood cutting operations and the practical use of cutting tools such as professional and non-professional chainsaws. Operations of delimiting, debarking and cross-cutting of timber are treated in an integrated way, not only on the side of safety at work but also from economical and technical point of view by implementing new techniques for carrying out their work.</p> <p>Accidents at work and the ergonomic checklist of work performance are studied and reported in accordance with the relevant indicators. At the end of the module are treated the duties and responsibilities of the labor inspectorate, employers, employees, contractors and producers.</p>
<p>Course objectives:</p>	<p>Through the program of the module " Ergonomics & safety in forestry work", students will gain necessary information and skills:</p> <ul style="list-style-type: none"> ✓ physiology of human work (muscles, breathing and circulation); ✓ Physical performance and fatigue of the worker; ✓ Energy balance (energy metabolism and energy for work); ✓ Classification of works ✓ Design and work study ✓ The basic rules of safety and health in forestry work. ✓ The way the study of accidents and ergonomic checklist.
<p>Learning outcomes:</p>	<p>After completing this course, students should be able to:</p> <ul style="list-style-type: none"> ✓ Describe the physiology of human work (muscles, breathing and blood circulation); ✓ Explain the physical performance and fatigue of the worker; ✓ Calculate the energy balance (metabolic energy and energy for work); ✓ Choose the food and nutrition of the worker; ✓ Classify diseases and their risk



	✓ Propose the main rules of safety and health at work.		
Contribution on student load (must correspond with learning outcomes)			
Activity	Hours	Days/week	Total
Lectures	3	10	30
Exercise theoretical/laboratory	2	8	16
Practice work	2	5	10
Contact with lecturer/consultations	1	15	15
Field exercises	2	10	20
Mid-terms, seminars	2	1	2
Homework	-	-	-
Individual time spent studying (at the library or home)	1	1	15
Final preparation for the exam	1	10	10
Time spent in evaluation (tests, quiz, final exam)	1	5	5
Projects, presentations, etc.	2	1	2
Total			125 orë
Teaching methods :	Lectures, discussions, laboratory exercises, expeditions consultations, seminars, independent projects, homework assignments, colloquium, course assignments, exams		
Evaluation methods:	First assessment (colloquium): 15%, Seminars or other engagements: 10%, Regular attendance: 5%, Final exam: 70%, Total: 100%.		
Literature			
Basic Literature:	<ol style="list-style-type: none"> 1. Mine V. Leksionet e ergonomise 2014 (detyruar) 2. Mine V. “Siguria dhe Shendetet ne Punimet Pyjore” 2002 (ILO Kod Praktik) (detyruar) 3. S. Baldini, A. Cioe, R. Picchio. “Sicurezza ed Antinfortunistica nei Cantieri Forestali e di Manutenzione del Verde Urbano. Valutazione dei Rischi”. Roma 2002 4. KORTOÇI, Y., KELLEZI, M. (2012): Shfrytezimi i pyjeve te ahut te Shqiperise me nje silvikulture te qendrushme. 		
Additional Literature:	<ol style="list-style-type: none"> 1. Mine V. ‘Ergonomia & siguria ne pune (2012) (detyruar) 2. “Work Physiology” Stokholm 1986. 		

	<p>3. Guide – Lines on Ergonomic Study in Forestry (ILO – 1989)</p> <p>4. Ergonomics in Forestry (ILO – 1995)</p> <p>5. S. Baldini, A. Cioe, R. Picchio. “Sicurezza ed Antinfortunistica nei Cantieri Forestali e di Manutenzione del Verde Urbano. Valutazione dei Rischi”. Roma 2002</p> <p>6. Luciano Martarello, Arturo Millesi, Renzo Rey, Nevio Yeullaz, Giancarlo Zorzetto -</p> <p>7. Struttura forestazione e sentieristica - Regione Autonoma Valle d’Aosta (Quart).</p> <p>8. Ruggero Marazzato, Tiziano Martin - Settore Gestione Proprietà Forestali Regionali e</p> <p>9. Vivaistiche - Regione Piemonte (Vercelli).</p> <p>10. Giuseppe Salvo - Dipartimento Agricoltura, Turismo e Cultura - Servizio Politiche della</p>
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Designed study plan:		
Week	Lectures	Exercises
<i>First week:</i>	Ergonomic, goal development and its relation to other sciences.	Applied Ergonomics.
<i>Second week:</i>	Blood circulation, heart rate & respiration process.	Blood circulation and its regulation during physical exercises.
<i>Third week:</i>	Muscles and their contraction. Muscle fatigue.	Muscle Activation.
<i>Fourth week:</i>	Physical performance, execution of work.	Factors affecting human performance.
<i>Fifth week:</i>	The energy spent, job classification.	Work classification.
<i>Sixth week:</i>	Workers’ Nutrition.	Food categories. Methods of assessment of food intake and energy.
<i>Seventh week:</i>	Physical, technological and biological factors affecting the work.	Climate, noise and vibrations. Prevention measures from noise and vibrations.



<i>Eighth week:</i>	Human resource development. Staffing/Staffing/staff selection.	Historical development of the role of staff. Staffing and interviewing.
<i>Ninth week:</i>	Design and organization of work.	Definition of work design. Physical and physiological considerations in work design.
<i>Tenth week:</i>	Exercises of professional (occupational) diseases in forestry works	Work measuring and the influencing factors. The study of work performance.
<i>Eleventh week:</i>	The study of factors affecting forest work study.	Methods of work study. Methods of measuring the working time.
<i>Twelfth week:</i>	Work study and calculation of size of the survey and determination of new working standard.	Professional (occupational) diseases in forestry works.
<i>Thirteenth week:</i>	Silviculture interventions. Forest harvesting. Extraction. High-risk operations.	Protective methods in: silviculture interventions, forest harvesting, extraction.
<i>Fourteenth week:</i>	Work clothing and personal protective equipment.	Work clothing and personal protective equipment in forest operations.
<i>Fifteenth week:</i>	First aid, emergency rescue and occupational health services.	First aid, emergency rescue and occupational health services.

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.