

## SYLLABUS

Basic data of the subject			
Faculty:	Faculty of Engineering and Informatics		
Title of the subject:	Engineering Materials I		
Level:	Bachelor		
Course Status:	Core		
Year of studies:	I		
Number of hours per week:	3		
Value of Credits - ECTS:	5		
Time / location:			
Course lecturer:	Fatmir Cerkini		
Contact details:	Fatmir.cerkini@ushaf.net		
<b>Course Description</b>			
	<i>This course will introduce students to the basics of engineering materials such as metals, their characteristics and how they are applied in design and manufacturing.</i>		
<b>Objectives of the course:</b>			
	<i>The purpose of this course is to provide students with information about the materials used in engineering, starting from the characteristics of materials, processing to their use. It will also explain how to choose the materials used in the industry.</i>		
<b>Expected learning outcomes:</b>			
	<p><i>Upon successful completion of this subject, student will be able to:</i></p> <ul style="list-style-type: none"> <li>• <i>recognize the properties of engineering materials</i></li> <li>• <i>distinguish between metal materials and evaluate them.</i></li> <li>• <i>make the choice of materials depending on the type of construction and place of use</i></li> <li>• <i>give assessments of their properties and characteristics</i></li> </ul>		
Contribution to the student load (which must correspond with learning outcomes)			
Activity	Hour	Day/Week	In total
Lectures with lab tutorials	3	15	45
Internship			
Contacts with teacher / consultations	1	7	7
Field exercises			
Midterm, seminars and projects.	2	2	4
Homework	1	5	5
Self-learning time student (at the library or at home)	3	15	45
Final preparation for the exam	2	8	16
Time spent on evaluation (tests, quiz and final exam)	2	1	2
Projects and presentations.			

<b>Total</b>			<b>124</b>
<b>Teaching methodology:</b>	<p><i>The course lasts 15 weeks with 3 hours of lectures and/or weekly individual and group exercises. The exercises will be held in the form of individual and group work in which concrete examples will be discussed. Active participation is extremely important, so students are encouraged to regularly attend lectures and exercises and contribute to the discussions that take place in the lectures. Lectures, Exercises, individual work, discussions and group work</i></p>		
<b>Assessment methods:</b>	<p><i>The student can be evaluated in one of two ways shape of the assessment given below:</i></p> <ol style="list-style-type: none"> <li><i>1. Form 1: Assessment with colloquia and project</i></li> <li><i>2. Form 2: Evaluation by exam final.</i></li> </ol> <p><i>Form 1:</i>  <i>In the first form of assessment "Assessment with colloquiums and seminar work", the student is assessed in four activities that are carried out during the lectures:</i></p> <ol style="list-style-type: none"> <li><i>1. Colloquium 1 (35%), individual assessment</i></li> <li><i>2. Colloquium 2 (35%), individual evaluation</i></li> <li><i>3. Class activity (10%), individual assessment</i></li> <li><i>4. Project (20%), individual or group assessment.</i></li> </ol> <p><i>Additional clarification:</i>  <i>If the student in each activity above reaches the maximum points, then he will be rated with 100 points.</i>  <i>Students who pass the exam according to form 1 of the assessment, are released from the obligation to take the final exam.</i>  <i>Only if the student is not satisfied with the grade achieved according to form 1, then he can take the final exam to received higher rating.</i></p> <p><i>Form 2:</i>  <i>In the second form of evaluation, "Evaluation with the final exam", the student will undergo the exam which is held after the completion of the course lectures, and is organized in the exam deadlines, determined by the University senate. Through the final exam, the student can achieve a maximum of 80% of the total of 100 points. The rest of the 20% points must be completed by individual or group work in the Project, an activity carried out during the lectures.</i>  <i>In Colloquium 1, Colloquium 2 and Final Exam, the assessment of students will be done through an assessment form, which must be completed individually by the student. The evaluation form will contain questions distributed proportionally with the lectures conducted during the semester, the course material.</i>  <i>The subjective questions will be of the type of written task that will be used to evaluate the student's understanding</i></p>		

	<p>and abilities to apply the knowledge gained in the analysis, synthesis and evaluation of the problem, from the responses prepared by the student to the question presented.</p> <ul style="list-style-type: none"> <li>• Activity in the class - means the student's engagement in dealing with the issues discussed in the class, during the lectures.</li> <li>• Project (30%), individual or group assessment: it is an activity in which students apply the acquired knowledge in a concrete project. It is carried out by only one student or in a group of 2 or 3 students who are obliged to carry out the activity, document it and present it to the subject professor. For the form of realism and documentation of the activity, all members of the group will be evaluated with the same point (10%), while the evaluation of the presentation skills of the activity is individual and includes 10%.</li> </ul> <p>Rating:  91-100 points - graded 10 (ten)  81-90 points - graded 9 (nine)  71-80 points - grade 8 (eight)  61-70 points - graded 7 (seven)  51-60 points - grade 6 (Six)</p>
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Literature	
<b>Basic Literature:</b>	1. Prof.dr. Hysni Osmani, <i>Materialet Mekanike, Pjesa e parë, FIM, Prishtinë</i>
<b>Additional Literature:</b>	2. Prof.dr. Hysni Osmani, <i>Materialet Mekanike, Pjesa e dytë, FIM, Prishtinë</i>

Designed learning plan	
Week:	Lectures and exercises to be held
<b>Week one:</b>	<i>Introduction; Metal technology</i>
<b>Week two:</b>	<i>Metals and their properties</i>
<b>Week three:</b>	<i>Evidence of destruction</i>
<b>Week four:</b>	<i>Evidence without destruction</i>
<b>Week five:</b>	<i>Basics of metallography</i>
<b>Week six:</b>	<i>Equilibrium diagrams</i>
<b>Week seven:</b>	<i>Equilibrium diagram for the carbon-iron bonding system</i>
<b>Week eight:</b>	<i>Types of iron-carbon bonds</i>
<b>Week nine:</b>	<i>Classification and use of iron-carbon bonds</i>
<b>Week ten:</b>	<i>Colored metals and their alloys</i>
<b>Week eleven:</b>	<i>Basics of thermal and chemical-thermal treatment of steel</i>
<b>Week twelve:</b>	<i>Non-metallic materials</i>
<b>Week thirteen:</b>	<i>Corrosion and corrosion protection</i>
<b>Week fourteen:</b>	<i>Metal processing methods</i>
<b>Week fifteen:</b>	<i>Summary</i>

Academic policies and rules of conduct
Regular attendance of lectures and exercises is necessary, as well as active participation with discussion and solution of tasks. Not impeding the progress required for learning using mobile phones turned off or in silent mode.

