

Module Title and Purpose	<p><b>Module Title, Code:</b></p> <p><b>APPLIED METALLURGY</b> <b>30 – MEA-813</b></p> <p><b>Obligatory professional</b></p> <hr/> <p><b>Aims/Goals of the Module</b></p> <p>Achieving the level of knowledge that the student with the acquisition of this case may project, execute and supervise the execution of infrastructural facilities.</p>
Module Delivery	<p><b>Contents</b></p> <p>The properties of steel alloys and carbon. Production and design procedure. Introduction to engineering properties of steel. Resistance to hardness. Fatigue properties (fatika) of metallic material. General information on the types and qualities of steel. Methods of testing and quality documentation. High quality steels in accordance with Eurocode 3. Weld ability of steel construction. Durability of steels based on the fracture mechanics. Description of tests of steel. Welding practices. Hardness testing and implementation in determining the mechanical characteristics of welds. Properties. Selection of groups of high-quality steel. Analysis based on sustainability fracture mechanics.</p> <hr/> <p><b>Literature</b></p> <p>[1] McGannon, H. E. The Making, Shaping and Treating of Steel, 1985.</p> <p>[2] Brockenbrough, R. L. Metallurgy Chapter 1.1, Constructional Steel Design, an International Guide, 1992.</p> <p>[3] Eurocode 3</p> <p>[4] Engineering Metallurgy - Applied Physical Metallurgy (6th Edition), Higgins, Raymond A., Elsevier, 1993</p> <hr/> <p><b>Teaching and Learning Methods:</b> Lectures, classroom exercises with groups of 20 students, consultations and two mid-term tests.</p> <p><b>Total Contact Hours:</b> 28+28+3=59 Hours</p> <p><b>Range of other Learning Methods:</b> Other forms of learning realized with visits to workshops and mid-term tests.</p> <p><b>Total Study Hours:</b> 66 Hours</p> <p><b>Total contact and study hours:</b> 125 Hours</p>
	<p><b>Module Learning Outcomes :</b></p>

Module Assessment	Students are trained to recognize the metals and their combination in order to obtain steels with different resistance based on the required tests.
	<b>Assessment Methods:</b> Participation in lectures, mid-term test 1, 2 mid-term test written examination, oral examination  <b>Number, type and method of evaluation :</b> Participation 10%, Mid-term test 1 20% , Mid-term test 2 20% , Written Exam 30% , Oral Exam 20%, Total 100%
Module Management	<b>Credit Points and Duration</b>  5 ECTS, One semester, (IV)
	Contact Person
Compiled by:	<b>H. Çadraku</b>
Date	