

SYLABUS

The basic data of the subject	
Academic unit:	Faculty of Engineering and Informatics
The title of the subject:	Basics of metalworking
Level:	Bachelor
The status of the subject:	Mandatory
Year of study:	III
Number of hours per week:	4
ECTS:	5
Time / location:	
Professor:	Mr.sc.Binaze Jashari
Contact:	binaze.jashari@ushaf.net
Discription of the subject:	<p>Introduction; Fundamentals of Metalworking Theory. Temperatures during cutting. Measuring temperatures during cutting processing. Tools for cooling and lubrication during cutting work. Materials for metalworking instruments. Knife geometry and its impact on the cutting process. Durability and wear of metalworking tools. Quality of work surface. Taylor relation. Turning works. Basic movements of machine tools. Freezing works. Retrieval works. Automation in the mechanical industry. Numerical Directional Machines - CNC and its functions. CNC machine programming. Plastic deformation processing theory. Overview of basic operations on metal working with deformation. Working modes during deformation. The process of working with stamping and drilling in presses. Choosing the machine. Methods of rational use of material. Forging in molds. Forging machines. Wire processing.</p>
Objectiv of the subject:	Introduce students to metalworking with the basics of machining, tools and equipment needed.
Expected learning outcome:	<p>Upon completion of this course the student will be able to:</p> <ul style="list-style-type: none"> • Know what is scrap metal processing, setting the processing mode, what are the machine tools for scrap metal processing, etc. • Deformation processing.Design the technological process for machining detail from semi-finished to finished seamTo determine the quality of surfaces with scrap • Know the basics of metal deformation with plastic deformation,

	<ul style="list-style-type: none"> Be able to determine the most economical method of processing between cutting and plastic deformation when preparing for the manufacture of any product. 		
Contribution to the student's workload (which should correspond to the student's learning outcomes)			
Activity	Hours	Days/week	Total
Lectures	2	15	30
Theoretical/laboratory exercises	2	15	30
Practical work	1	15	15
Contacts with the professor/consultations	1	8	8
Other exercises	-	-	-
Test/ seminars	2	2	4
Homework	1	15	15
Student study time (in library or at home)	2	15	30
Final preparation for examination	1	15	15
Time spent on assessment (tests, quiz, final exam)	1	1	1
Projects, presentations	1	2	2
Total			150 orë
Teaching methodology:	<i>Literature, project and seminars</i>		
Methods of assessment:	<i>Activity and seminar work: 20 pike</i> <i>Exam I: 40 Pike</i> <i>Exam II: 40 Pike</i> <i>Total: 100 points</i> <i>Evaluation of the final exam, estimated at 80% of success, with a further building of the grade final with the other high criteria highlighted.</i>		
Literature:			
Basic literature:	Zijadin Krasniqi; Përpunimi me prerje I, Universiteti i Kosovës, Prishtinë, 1985		
Additional literature:	1. Prof. Dr. Adnan Bodinaku , Teknologjia mekanike 2 (pjesa e parë), Punimi me heqje ashkle , shtëpia botuese e librit universitar Tiranë, 2004. 2. Prof. Dr. Adnan Bodinaku , Teknologjia mekanike 2 (pjesa e dytë), Punimi me heqje ashkle , shtëpia botuese e librit universitar Tiranë, 2005. 3. Zijadin Krasniqi; Përpunimi me prerje I, Universiteti i Kosovës, Prishtinë, 1985. 4. K.Krammer; Schneldkramik, Diamant und Bornitrid zur Gusswerkstoffbearbeitung, Ind. Anzeiger, 1977, 99,Nr.46. 5. Tanush Hajnaj; Përpunimi plastik i metaleve , Universiteti i Tiranës, Fakulteti i Inxhinjerisë, Tiranë, 1978.		
Designed lesson plan:			
Week	Lecturers		
First week:	Introduction;		

Second week:	Fundamentals of Metalworking Theory.
Third week:	Metalworking machines
Fourth week:	Forms of shingles. Mechanism of forming shingles.
Fifth week:	Measurement of shear forces.
Sixth week:	Students practice in the factory
Seventh week:	Materialet për instrumente metalprerëse
Eighth week:	Students practice in the factory
Ninth week:	Tools for cooling and lubrication during cutting work
Tenth week:	Materials for metalworking instruments
Eleventh week:	Durability and wear of metalworking tools. Quality of work surface.
Twelfth week:	Turning works. Basic machine tool movements.
Thirteenth Week:	Numerical Directional Machines - CNC and its functions. CNC machine programming.
Fourteenth Week:	Occupational protection during metal working
Fifteen week:	Plastic deformation processing theory

Academic Policies and Rules of Conduct:

Regular attendance, keeping calm and active engagement in dialogue during lectures and exercises is mandatory.