

Syllabus

Basic data of the subject			
Academic unit:	Faculty of Engineering and Informatics		
Title of the subject:	CAD/CAM		
Level:	Bachelor		
Course Status:	Core		
Year of studies:	II		
Number of hours per week:	4		
Value of Credits - ECTS:	6		
Time / location:			
Course lecturer:	Muhamet Ymeri		
Contact details:	Muhamet.Ymeri@ushaf.net		
Course Description			
	<i>With the development of production technology, the approach of CAD professionals to CAD applications in CAM software has evolved.</i>		
Objectives of the course:			
	<i>Introduction of application possibilities of computers in production with an emphasis on programming CNC machine tools. Adoption of fundamentals of programming in systems CAD / CAM.</i>		
Expected learning outcomes:			
	<p><i>Upon successful completion of this subject, student will be able to:</i></p> <ul style="list-style-type: none"> • <i>Compile and select a constructing task theoretically</i> • <i>Start working independently on computer task constructive</i> • <i>Compile manufacturing operations for processing a detail in CNC machines</i> • <i>The interconnect technology with CAD CAM</i> 		
Contribution to the student load (which must correspond with learning outcomes)			
Activity	Hour	Day/Week	In total
Lectures with lab tutorials	4	15	60
Internship			
Contacts with teacher / consultations	2	4	8
Field exercises			
Midterm, seminars and projects.	18		18
Homework			
Self-learning time student (at the library or at home)	3	15	45
Final preparation for the exam	15		15
Time spent on evaluation (tests, quiz and final exam)	1		1
Projects and presentations.	1		1
Total			150

Teaching methodology:	Lectures combined with case studies
Assessment methods:	Final Exam 50% Assignment 50%
Literature	
Basic Literature:	1. Prof. dr. Shaban A. Buza, <i>Sistemet CAD/CAM – ligjerata të autorizuara</i> , Prishtinë 2009 2. Stark, J., <i>Managing CAD/CAM Implementation, Organisation and Integration</i> , McGraw Hill, 1998.
Additional Literature:	1.. Altintas, Y.: <i>Manufacturing Automation</i> , Cambridge University Press, Cambridge 2000. 2. R. Cebalo: <i>Obradni sustavi, Vedograf, Zagreb 2000.</i>
Ratio between theory and practice	60% Theory 40% Practical work

Designed learning plan	
Week:	Lectures and exercises to be held
Week one:	<i>Introduction to CAD and CAM.</i>
Week two:	<i>CAD systems. Components of CAD systems. Production supported by computers - CAM.</i>
Week three:	<i>NC and CNC machines. The key elements of CNC machines, measuring systems, drives, and computers command. Characteristics of CNC computer command.</i>
Week four:	<i>Programming of CNC machines. Programming by hand. Programming systems CAD / CAM.</i>
Week five:	<i>Practical work in the Laboratory.</i>
Week six:	<i>CAD modelling taking into account the generation of NC Programs.</i>
Week seven:	<i>The integration of CAD and CAM systems.</i>
Week eight:	<i>The interfaces of systems CAD / CAM.</i>
Week nine:	<i>Application of systems CAD / CAM design and manufacture of complex Parts.</i>
Week ten:	<i>Tool path generation for faster processing of prototypes.</i>
Week eleven:	<i>Manipulation with working parts and tools</i>
Week twelve:	<i>Programmable Controllers</i>
Week thirteen:	<i>Robots and manipulators.</i>
Week fourteen:	<i>Practical work in the Laboratory</i>
Week fifteen:	<i>Presentation of seminar papers</i>

Academic policies and rules of conduct
<i>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.</i>