SYLLABUS

Basic data of the subject	
University	**University of Applied Sciences in Ferizaj**
Academic unit	**Faculty of Engineering and Informatics**
Program	**Industrial Engineering with Informatics**
Title of the subject:	**Applied Software**
Level:	**Bachelor**
Course Status:	**Core**
Year of studies:	**I, Semester I**
Number of hours per week:	**3**
Value of Credits - ECTS:	**5**
Time / location:	
Course lecturer:	
Contact details:	
Course Description	*This course will introduce students to the use of MathCad software and their application to solving engineering problems. Also, this course will teach students Microsoft Office basics in Word, Excel and Power Point.*
Objectives of the course:	*The aim of this course is to provide students with sufficient knowledge of contemporary software used in engineering – Mathcad and Microsoft office Word, Excel and Power Point. The right orientation of the student to acquire expert current software (update versions). The material elaborated in this course is a continuation of computer work experience as well as a good basis for facilitating the use of software in subsequent studies.*
Expected learning outcomes:	*Upon successful completion of this course, student will be able to:* • *know the concepts of working with application software Mathcad,* • *understand the necessary software commands in Mathcad,* • *develop the necessary skills to solve mathematical problems using software Mathcad,* • *apply application software to solve various engineering problems,* • *use Microsoft Office – Word, Excel and Power Point*
Prerequisites	*N/A*

Contribution to the student load (which must correspond with learning outcomes)			
Activity	**Hour**	**Day/Week**	**In total**
Lectures	3	15	45
Internship			
Contacts with teacher / consultations	1	5	5
Field exercises			

Midterm, seminars and projects.	2	2	4
Homework			
Self-learning time student (at the library or at home)	3	15	45
Final preparation for the exam	3	8	24
Time spent on evaluation (tests, quiz and final exam)	1	2	2
Projects and presentations			
Total			**125**

Teaching methodology:	*Lectures and exercises combined with case studies and class discussions, as well as active collaboration in student teams.*
Assessment methods:	*The student can choose to be assessed one of the two forms of assessment, given below:* *1. Form 1: Assessment with colloquia and project* *2. Form 2: Evaluation with the final exam.* *Form 1:* *In the first form of assessment "Assessment with colloquiums and project" the student is assessed in four activities that are carried out during the lectures:* *1. Test 1 (35%), individual assessment* *2. Test 2 (35%), individual evaluation* *3. Class activity (10%), individual assessment 4. Project (20%), group assessment.* *If the student is not satisfied with the assessment achieved according to form 1, then he can undergo the assessment according to form 2 to obtain a higher assessment.* *Form 2:* *Through the final exam, the student can achieve a maximum of 70% of the points from the total of 100 points.* *The rest of the 20% points must be completed by group work in the Project, an activity carried out during the lectures.* *In Test 1, Test 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 5 tasks through which the student's learning outcomes will be evaluated.* *Activity in the class means the student's engagement in dealing with the issues discussed in the class, during the lectures.* *Project (20%), group assessment: it is an activity in which students apply the acquired knowledge in a concrete project. It is carried out in groups of 3 or 4 students who are obliged to carry out the activity, document and present it to the subject professor.* *Rating:* *91-100 points - evaluated with a grade of 10 (ten)* *81-90 points - evaluated with a grade of 9 (nine)* *71-80 points - evaluated with a grade of 8 (eight)* *61-70 points - evaluated with grade 7 (seven)* *51-60 points - evaluated with grade 6 (six)*

	0-50 points - The student repeats the exam.
Literature	
Basic Literature:	1. *Ahmet Shala, Software-t aplikativë, Prishtinë 2004-2012* 2. *Ahmet Shala: Përmbledhje detyrash të zgjidhura nga Mekanika teknike II, Prishtinë, 2007* 3. *ECDL (MS Word, MS Excel, MS Access, MS Power Point, MS Outlook)*
Additional Literature:	1. *User Guide for MathCad & Matlab 2010*

Designed learning plan	
Week:	**Lectures and exercises to be held**
Week one:	*Introduction to subject and syllabus*
Week two:	*Installing MATHCAD* *Arithmetic actions with scalars* *Basic trigonometric functions* *The natural logarithm and the one with an arbitrary base*
Week three:	*Operations with complex numbers* *Actions-operations with units*
Week four:	*Solving equations and systems of equations* *Solving the linear equation with one unknown* *Solving the quadratic equation* *Solving the system of equations* *Solving inequalities*
Week five:	*Vector operations*
Week six:	*Test 1*
Week seven:	*Matrix operations*
Week eight:	*Graphical representations of functions* *Functions with one variable* *Functions that vary in specific intervals by argument* *Graph of parametric functions* *Functions with two variables*
Week nine:	*Derivatives and Integrals,* *Electrical circuits in MathCAD*
Week ten:	*Word processing software - Microsoft Word*
Week eleven:	*Spreadsheets Software - Microsoft Excel*
Week twelve:	*Presentation programs - Microsoft Power Point*
Week thirteen:	*Study visits to a company*
Week fourteen:	*Test II*
Week fifteen:	*Case Summary. Exam preparation*

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.