SYLLABUS

The basic course information:	
Academic unit:	**Faculty of Engineering and Informatics**
Title of the subject:	**Machine Elements**
Level:	**Bachelor**
Course Status:	**Core**
Year of studies:	**II**
Number of hours per week:	**4**
Value of Credits - ECTS:	**6**
Time / location:	**Cabinet**
Course lecturer:	**Flamur Salihu**
Contact details:	**flamur.salihu@ushaf.net**
Course description:	*This course will provide students with the basic knowledge and concepts of calculating tolerances, loads, stresses and the safety factors of various mechanical elements using different methods of solving practical problems in engineering.*
Objectives of the course:	*The aim of the course is to prepare students with the basic and advanced principles of use, calculation and construction of various machine parts based on their analytical calculations and constructive choices.*
Learning outcomes:	*After the completion of this module, student will be able to:* • *know the concept of machine elements tolerances, the loads that operate as well as the safety factors of various machine elements,* • *understand the calculation of tolerances, stresses, loads and safety factors of various machine elements (bolts, belt drives; chain drives, gear transmitters, shafts etc.),* • *choose the right methods for calculating machine elements,* • *apply appropriate theoretical methods in solving practical problems.*

Contribution to the student load (which must correspond with learning outcomes)			
Activity	Hour	Day/week	In total
Teaching (Lectures and exercises)	4	15	60
Internship			
Contacts with teacher / consultations	1	3	3
Field exercises			
Midterm, seminars and projects.		15	15
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)		3	3
Projects and presentations.			
Total			**150**

Teaching methodology:	*Lectures combined with exercises*

Assessment methods:	*First assessment 30%* *Second assessment 30%* *Third assessment 30%* *Seminar papers (design assignments) 10%* ***Or through final exam*** *Final exam 90 %* *Seminar papers (design assignments) 10%*

Literature	
Basic Literature:	1. *Dr sc Nijazi IBRAHIMI, DETALET E MAKINAVE I, Prishtinë 2004.* 2. *Dr sc Nijazi IBRAHIMI DETALET E MAKINAVE II/1 and 2, Prishtinë 2006.* 3. *Dr sc Sadullah AVDIU, PRAKTIKUMI I DHE II, Prishtinë 2003.* 4. *Dr sc Nijazi IBRAHIMI, DETALET E MAKINAVE I dhe II, Përmbledhje e detyrave te zgjidhura, Prishtinë, 2007.*
Supplementary Literature:	5. *Nieman: Maschinenelemente, Band I & II.* 6. *Jashari I., Pllana G.: Detalet e makinave.*

Designed learning plan:	

Week	**Lectures and exercises to be held**
Week one:	*The main dimensions of machine elements. Tolerances. Position of tolerances fields. Types of fits.*
Week two:	*Carrying capacity of machine elements and machine elements loaded with static loads. Numerical exercises (tolerances).*
Week three:	*Mechanical elements Joints (power screw). Bolted connections. Numerical exercises (Bolted connections).*
Week four:	*Rivets joints. Springs. First (I) assessment (Held after the fourth week)*

Week five:	*Transmitters. Friction transmitters. Belt transmitters. Chain transmitters.*
	Numerical exercises (belts and chains).
Java e six:	*Gear transmitter (introduction) The law of gearing*
Week seven:	*Spur and helical gear pairs. Standard profile. Chordal dimension and chordal dimension teeth. Contact ratio.*
Week eight:	*Numerical exercises (Torque power and number of rotation of gear transmitters. Contact ratio).*
Week nine:	*Analysis of forces on gears.*
Week ten:	*Shafts. Axes. Preliminary and final calculation of shafts.*
	Second (II) assessment (Held after the tenth week)
Week eleven:	*Types of shafts fits (press fits, channels and keys).*
Week twelve:	*Bearings (Calculation and bearing selection)*
Week thirteen:	*Couplings.*
	Numerical exercises (Calculation of shafts).
Week fourteen:	*Numerical exercises (Calculation of shafts and bearings).*
Week fifteen:	*III (third) assessment.*

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.