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	**Mechanics II**
Level	**Bachelor**
Course Status	**Core**
Year of studies	**II, Semester III**
Number of hours per week	**3**
Value of Credits - ECTS	**5**
Time / location	
Course lecturer	
Contact details	
Course Description	*This course deals with the motion of the point and the body, the velocity and acceleration of the point and the rigid body or system of bodies (mechanisms) and the laws of motion under the action of forces, the causes that cause this motion and the consequences arising from this motion.*
Objectives of the course	*The aim of this course is to provide students with basic knowledge in the field of kinematics and dynamics, such as point motion, trajectory, velocity and acceleration of point and body Forces, energy, work, power, etc., and the relationship between them.*
Expected learning outcomes	*Upon successful completion of this subject, student will be able to* • *know the general laws of point dynamics and material system.* • *understand kinetic energy, work, amount of movement and force pulse* • *understand the motion of the point, its trajectory as well as the speed and acceleration of the point presented in different coordinate systems.* • *calculate the angular velocities and accelerations of the links as well as the velocities and accelerations of their characteristic points of a planar mechanism.*
Prerequisites	*To pass the Mechanics I exam*

Contribution to the student load (which must correspond with learning outcomes)			
Activity	Hour	Day/Week	**In total**
Lectures with lab tutorials	3	15	45
Internship			
Contacts with teacher / consultations	1	5	5
Field exercises			
Midterm, seminars and projects.	2	6	12

Homework	2	3	6
Self-learning time student (at the library or at home)	1	22	22
Final preparation for the exam	2	10	20
Time spent on evaluation (tests, quiz and final exam)	1	15	15
Projects and presentations.	3	15	45
Total	**125**		

Teaching methodology	*Lectures and exercises combined with case studies and class discussions, as well as active collaboration in student teams*
Assessment methods	*Final exam graded with 100% grade. The exam consists of tasks and theoretical questions.*
The ratio of theory and practice	70% theory with exercises and 30% laboratory work.
Literature	
Basic Literature	1. *Dr. sc. F. Jagxhiu Mekanika pjesa II/Kinematika, Prishtinë.* 2. *Dr.sc. Ahmet Geca DINAMIKA, Prishtinë.*
Additional Literature	3. *Prof.Asoc.Dr. Ahmet Shala, Ushtrime* 4. *Thanas Gaçe Mekanika teorike III (Dinamika), Tiranë, 1984. Dr. sc. Xh. Perjuci Mekanika Teknike, Prishtinë.* 5. *Dr. sc. F. Krasniqi - Dr. sc. A. Shala Kinematika - Përmbledhje detyrash (seminarike), Prishtinë.*

Designed learning plan	
Week	**Lectures and exercises to be held**
Week one	*Introduction to Mechanics 2*
Week two	*The movement of the point according to the Descartes coordinate and its trajectory*
Week three	*Speed and point acceleration according to straight angle coordinates*
Week four	*Movement, speed and acceleration according to natural and polar coordinates*
Week five	*The linear and curved line motion of the point*
Week six	*Rigid body kinematics, body movement around the stationary axis*
Week seven	*Translatory movement of the lower body. Speed and acceleration pole. Special cases of speed poles*
Week eight	*The complex motion of the point. Understanding the displacement and absolute motion. Understanding speed and relative acceleration and shifting. Theorem on the collection of velocities and accelerations when the displacement motion is translator.*
Week nine	*Introduction to Dynamics*
Week ten	*The dynamics of free and non-free material points*

Week eleven	*Direct oscillations of a point*
Week twelve	*Dallamber's principle of free and not free points*
Week thirteen	*The impulse of force, the amount of motion of a point and its laws, the moment of the amount of motion, and its laws.*
Week fourteen	*The force and force of the concrete case and the kinetic energy of the point*
Week fifteen	*The relative motion of the material point*

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.