AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title		Dynamics of Machinery						
Course Code		BSM439		Couse Level		First Cycle (Bachelor's Degree)		
ECTS Credit	5	Workload	125 *(Hours)*	Theory	2	Practice	2	Laboratory	0
Objectives of the Course		The objectives of the lecture are to develop the capacity to predict the effects of force and motion. In lectures, different applications of engineering systems are solved in order that students understand subjects and apply his knowledge rapidly.						
Course Content		Kinematics of particles: o Linear motion, curvilinear motion, o Relative motion, o Motion in different coordinate systems • Kinetics of particles: o Force, mass and acceleration, o Newton's second law, o Work and energy, o Impulse and momentum • Plane kinematics of rigid bodies: o Rectilinear translation, curvilinear translation, o fixed axis rotation, o Plane motion, rotation centre. • Vibration and time response						
Work Placement		N/A						
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Problem Solving				
Name of Lecturer(s)								

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	70

Recommended or Required Reading

1	öğretim elemanı ders notları

Week	Weekly Detailed Course Contents	
1	Theoretical	Kinematics of particles: Linear motion, curvilinear motion, relative motion, motion in different coordinate systems
2	Theoretical	Kinematics of particles: Linear motion, curvilinear motion, relative motion, motion in different coordinate systems
3	Theoretical	Kinematics of particles: Linear motion, curvilinear motion, relative motion, motion in different coordinate systems
4	Theoretical	Kinematics of particles: Linear motion, curvilinear motion, relative motion, motion in different coordinate systems
5	Theoretical	Kinematics of particles: Linear motion, curvilinear motion, relative motion, motion in different coordinate systems
6	Theoretical	Kinetics of particles: Force, mass and acceleration, Newton's second law, work and energy, impulse and momentum
7	Intermediate Exam	midterm exam
8	Theoretical	Kinetics of particles: Force, mass and acceleration, Newton's second law, work and energy, impulse and momentum
9	Theoretical	Kinetics of particles: Force, mass and acceleration, Newton's second law, work and energy, impulse and momentum
10	Theoretical	Plane kinematics of rigid bodies: Rectilinear translation
11	Theoretical	Plane kinematics of rigid bodies: Rectilinear translation
12	Theoretical	Plane kinematics of rigid bodies: Rectilinear translation
13	Theoretical	Plane kinematics of rigid bodies: Rectilinear translation
14	Final Exam	final exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	4	4	112
Midterm Examination	1	0	7	7

Final Examination	1	0	6	6
		Total Workload (Hours)		125
		[Total Workload (Hours) / 25*] = **ECTS**		5

*25 hour workload is accepted as 1 ECTS

Learning Outcomes	
1	Learn basic concepts and principles concerning the topics of Dynamics
2	Learn kinematics of particles: Straight, velocity, acceleration and time relations at linear motion
3	Learn kinematics of particles: Straight, velocity, acceleration and time relations at linear motion
4	Plane kinematics of rigid bodies: Rectilinear translation
5	Kinetics of particles: Force, mass and acceleration, Newton's second law, work and energy, impulse and momentum