KTO KARATAY
ÜNİVERSİTESİ

KTO KARATAY UNIVERSITY FACULTY OF ENGINEERING

ERASMUS+ Course Catalogue

for the academic year 2019/2020 Fall / Spring Semester

KONYA, 2019-2020

(ALPHABETICAL) LIST OF COURSES WITH CODES

1. INS 222 - Basic Computer Sciences
2. INS 224 - Computer Aided Engineering Drawing
3. INS 422 - Dynamics
4. INS 324 - Engineering Materials
5. INS 424 - Fluid Mechanics
6. INS 322 - Hydrology
7. INS 122 - Probability and Statistics
8. INS 522 - Structural Analysis I
9. INS 622 - Structural Analysis II

FACULTY OF ENGINEERING- KTO KARATAY UNIVERSITY

Course Name: Probability and Statistics - CourseCode: INS 122

FACULTY: **Engineering Faculty**	CLASS TYPE: **Compulsory**
NUMBER OF HOURS: **42**	ECTS TYPE: **5**
SEMESTER: **Fall**	CLASS LEVEL: **Bachelor's Degree**
LANGUAGE OF INSTRUCTION: **English**	
PRELIMINARY REQUIREMENTS: **None**	
CONTENTS: **Importance of statistics in civil engineering, Set theory, Counting techniques: multiplication rule, permutation, repetitive permutation, combinations, repetitive combinations, Frequency analysis and estimating of parameters, Probability theory, Bayes theorem, Random experiment, sample space, Set algebra of events, Probability space, Probability distribution functions, Determination of continuous probability distribution models, Determination of discrete probability distribution models, Multi variable distribution, Joint probability distributions, Marginal distributions, conditional distributions, Hypotheses tests, One- and two- sample tests of hypotheses.**	
EFFECTS OF EDUCATION PROCESS: **Teaching the basic concepts of probability & statistics, introducing the basic probability distributions and their applications, teaching statistical data analysis techniques and applications.**	
LITERATURE (OPTIONAL): **Ross S., 2010, First Course in Probability, 8th edition, Prentice Hall. - Akdeniz F. , 2007, Olasılık ve İstatistik, Nobel Kitabevi.**	
TEACHING METHODS: **Face to face**	
ASSESSMENT METHODS: **Mid-terms: 1 (%40), Final Examination: 1 (%60)**	
LECTURER (NAME, EMAIL CONTACT): **Asist Prof. Dr. Ahmet ÇALIK (ahmet.calik@karatay.edu.tr)**	

FACULTY OF ENGINEERING- KTO KARATAY UNIVERSITY

Course Name: Basic Computer Sciences - Course Code: INS 222

FACULTY: **Engineering Faculty**	CLASS TYPE: **Compulsory**
NUMBER OF HOURS: **64**	ECTS TYPE: **4**
SEMESTER: **Spring**	CLASS LEVEL: **Bachelor's Degree**
LANGUAGE OF INSTRUCTION: **English**	
PRELIMINARY REQUIREMENTS: **None**	
CONTENTS: **Content Algorithm development, programming language use, the program commands.**	
EFFECTS OF EDUCATION PROCESS: **Algorithm building and structural programming.**	
LITERATURE (OPTIONAL): **Programming with Visual Basic, Memik Yanık, Yayınevi : Seçkin-Bilgisayar**	
TEACHING METHODS: **Face to face**	
ASSESSMENT METHODS: **Mid-terms: 1 (%40), Final Examination: 1 (%60)**	
LECTURER (NAME, EMAIL CONTACT): **Asist Prof. Dr. Süleyman Kamil AKIN (kamil.akin@karatay.edu.tr)**	

FACULTY OF ENGINEERING- KTO KARATAY UNIVERSITY

Course Name: Computer Aided Engineering Drawing - CourseCode: INS 224

FACULTY: **Engineering Faculty**	CLASS TYPE: **Compulsory**
NUMBER OF HOURS: **42**	ECTS TYPE: **5**
SEMESTER: **Spring**	CLASS LEVEL: **Bachelor's Degree**
LANGUAGE OF INSTRUCTION: **English**	
PRELIMINARY REQUIREMENTS: **None**	
CONTENTS: **Computer aided technical drawing, drawing creation and editing in CAD environment, geometric drawings, projection methods and views, perspective drawings, sectional views, measurement.**	
EFFECTS OF EDUCATION PROCESS: **To be able to read a given technical picture and teach it to be cured by a commonly used CAD program according to a desired cismin technical picture technical rules.**	
LITERATURE (OPTIONAL): **-**	
TEACHING METHODS: **Face to face**	
ASSESSMENT METHODS: **Mid-terms: 1 (%40), Final Examination: 1 (%60)**	
LECTURER (NAME, EMAIL CONTACT): **Asist Prof. Dr. Süleyman Kamil AKIN (kamil.akin@karatay.edu.tr)**	

FACULTY OF ENGINEERING- KTO KARATAY UNIVERSITY

Course Name: Hydrology - CourseCode: INS 322

FACULTY: **Engineering Faculty**	CLASS TYPE: **Compulsory**
NUMBER OF HOURS: **42**	ECTS TYPE: **4**
SEMESTER: **Fall**	CLASS LEVEL: **Bachelor's Degree**
LANGUAGE OF INSTRUCTION: **English**	
PRELIMINARY REQUIREMENTS: **None**	
CONTENTS: **Hydrological cycle. Measurement of basic meteorological events. Precipitation. Evaporation. Infiltration. Underground water. Overland flow and measuring techniques. Hydrograph analysis. Introduction to flood hydrology.**	
EFFECTS OF EDUCATION PROCESS: **To introduce students the main elements of hydrology.**	
LITERATURE (OPTIONAL): **-**	
TEACHING METHODS: **Face to face**	
ASSESSMENT METHODS: **Mid-terms: 1 (%40), Final Examination: 1 (%60)**	
LECTURER (NAME, EMAIL CONTACT): **Prof. Dr. Mehmet Faik SEVİMLİ (mehmet.faik.sevimli@karatay.edu.tr)**	

FACULTY OF ENGINEERING- KTO KARATAY UNIVERSITY

Course Name: Engineering Materials - CourseCode: INS 324

FACULTY: **Engineering Faculty**	CLASS TYPE: **Compulsory**
NUMBER OF HOURS: **42**	ECTS TYPE: **4**
SEMESTER: **Fall**	CLASS LEVEL: **Bachelor's Degree**
LANGUAGE OF INSTRUCTION: **English**	
PRELIMINARY REQUIREMENTS: **None**	
CONTENTS: **Atomic Structure, Atomic Arrangement, Crystal Structures, Internal Structure Defects: Amorphous Structure, Solid Solutions, Atomic Publication, Particle Limitations, Dislocations, Mechanical Properties: Stress, Deformation, Elasticity, Elastic and Plastic Behavior, Creep, Relaxation, Hardness, Thermal Properties of Materials: Thermal Conductivity, Heat Dissipation, Thermal Stresses, Acoustic Properties: Reverberation Time, Noise Control. Physical Properties of voids: Density, Specific Weight, Porosity, Volumetric Water Absorption, Capilarity, Permeability.**	
EFFECTS OF EDUCATION PROCESS: **Introducing the internal structure of objects which are valid for all materials by using disciplines of material science, physics, chemistry and mathematics, explaining relations between internal structures and properties, classifying the materials used in production in terms of developed basic principles and concepts.**	
LITERATURE (OPTIONAL): **M. S. Mamlouk, J. P. Zaniewski, "Materials of Civil and Construction Engineers", 2011.**	
TEACHING METHODS: **Face to face**	
ASSESSMENT METHODS: **Mid-terms: 1 (%40), Final Examination: 1 (%60)**	
LECTURER (NAME, EMAIL CONTACT): **Asist Prof. Dr. Süleyman Kamil AKIN (kamil.akin@karatay.edu.tr)**	

FACULTY OF ENGINEERING- KTO KARATAY UNIVERSITY

Course Name: Dynamics - CourseCode: INS 422

FACULTY: **Engineering Faculty**	CLASS TYPE: **Compulsory**
NUMBER OF HOURS: **42**	ECTS TYPE: **4**
SEMESTER: **Spring**	CLASS LEVEL: **Bachelor's Degree**
LANGUAGE OF INSTRUCTION: **English**	
PRELIMINARY REQUIREMENTS: **None**	
CONTENTS: **Kinematics of particles and rigid bodies: absolute motion, relative motion. Kinetics of particles: equations of motion, work-energy and impulse-momentum. Systems of particles. Kinetics of rigid bodies: Euler`s equation, plane motion of rigid bodies, kinetic energy of rigid bodies. Introduction to the dynamics of vibrating systems.**	
EFFECTS OF EDUCATION PROCESS: **The course provides engineering students firm foundations in the study of motion, forces that cause motion and their relationships for rigid bodies using Newton's Laws, energy and momentum principles and introduces systems governed by ordinary differential equations.**	
LITERATURE (OPTIONAL): **-**	
TEACHING METHODS: **Face to face**	
ASSESSMENT METHODS: **Mid-terms: 1 (%40), Final Examination: 1 (%60)**	
LECTURER (NAME, EMAIL CONTACT): **Prof. Dr. Atilla ÖZÜTOK (atilla.ozutok@karatay.edu.tr)**	

FACULTY OF ENGINEERING- KTO KARATAY UNIVERSITY

Course Name: Fluid Mechanics - CourseCode: INS 424

FACULTY: **Engineering Faculty**	CLASS TYPE: **Compulsory**
NUMBER OF HOURS: **64**	ECTS TYPE: **4**
SEMESTER: **Spring**	CLASS LEVEL: **Bachelor's Degree**
LANGUAGE OF INSTRUCTION: **English**	
PRELIMINARY REQUIREMENTS: **None**	
CONTENTS: **Introduction. Properties of Fluids. Pressure. Fluid Pressure. Buoyancy and Flotation. Dimensıonal analysis and similitude Basic equations in ıntegral form for a control volume. Basic equations in integral form for a control volume. Incompressible inviscid flow. Fundamentals of Fluid Flow. Flow in Closed Conduits.**	
EFFECTS OF EDUCATION PROCESS: **To introduce the basic principles of fluid mechanics.**	
LITERATURE (OPTIONAL): **Mechanics of Fluids, Potter M.C., Wiggert D.C., Brooks/Cole, California, 2002. - Fundamentals of Fluid Mechanics, Jack B. Evett & Cheng Liu, Mc Graw Hill. - Fundamentals of Fluid Mechanics, B. R. Munson, D. F. Young, T. H. Okiishi, 2003 John Wiley.**	
TEACHING METHODS: **Face to face**	
ASSESSMENT METHODS: **Mid-terms: 1 (%40), Final Examination: 1 (%60)**	
LECTURER (NAME, EMAIL CONTACT): **Prof. Dr. Mehmet Faik SEVİMLİ (mehmet.faik.sevimli@karatay.edu.tr)**	

FACULTY OF ENGINEERING- KTO KARATAY UNIVERSITY

Course Name: Structural Analysis I - CourseCode: INS 522

FACULTY: **Engineering Faculty**	CLASS TYPE: **Compulsory**
NUMBER OF HOURS: **64**	ECTS TYPE: **4**
SEMESTER: **Fall**	CLASS LEVEL: **Bachelor's Degree**
LANGUAGE OF INSTRUCTION: **English**	
PRELIMINARY REQUIREMENTS: **None**	
CONTENTS: **General introduction, statics of particles, rigid body statics, equivalent force systems, equilibrium, truss analysis, analysis of beams, friction and geometrical properties of the surfaces.**	
EFFECTS OF EDUCATION PROCESS: **To teach the theoretical aspects of engineering mechanics of rigid bodies in detail and with applications.**	
LITERATURE (OPTIONAL): **Statics, Hibbeler.**	
TEACHING METHODS: **Face to face**	
ASSESSMENT METHODS: **Mid-terms: 1 (%40), Final Examination: 1 (%60)**	
LECTURER (NAME, EMAIL CONTACT): **Asist Prof. Dr. Süleyman Kamil AKIN (kamil.akin@karatay.edu.tr)**	

FACULTY OF ENGINEERING- KTO KARATAY UNIVERSITY

Course Name: Structural Analysis II - CourseCode: INS 622

FACULTY: **Engineering Faculty**	CLASS TYPE: **Compulsory**
NUMBER OF HOURS: **64**	ECTS TYPE: **4**
SEMESTER: **Spring**	CLASS LEVEL: **Bachelor's Degree**
LANGUAGE OF INSTRUCTION: **English**	
PRELIMINARY REQUIREMENTS: **None**	
CONTENTS: **Acceptance, shear, moments and equilibrium principles of reactions, influence line, virtual work, moment field and Castigliano theorems and displacement account, hyperstatic systems, displacement and force and angle Stiffness method, moment distribution method (Cross) and analysis of structures by matrix method.**	
EFFECTS OF EDUCATION PROCESS: **Defining the solution principles of indeterminate systems.**	
LITERATURE (OPTIONAL): **Statics, Hibbeler.**	
TEACHING METHODS: **Face to face**	
ASSESSMENT METHODS: **Mid-terms: 1 (%40), Final Examination: 1 (%60)**	
LECTURER (NAME, EMAIL CONTACT): **Asist Prof. Dr. Süleyman Kamil AKIN (kamil.akin@karatay.edu.tr)**	