Evrak Tarih ve Sayısı: 02/07/2024-143398

Name of the school / Conservatory / Faculty/ Institute
Courses Thought in English for Exchange Students

No	Degree (Associate, Bachelor,	Department	Lecturer's title and name	Code	Course name	Compulsory or elective	Academic year	ECTS	Term	Course content (Please provide a web link if applicable)	Medium of instructions	Learning outcome (please provide a web link if applicable)	Education type (face to face or online)	Requires and corequirities (please provide a web link if applicable)	Recommended or required reading (please provide a web link if applicable)	Planned learning activities and teaching methods (please provide a web link if	Assesment methds and criteria
1	Master	Civil Engineering	Dr. Müzeyyen Balçıkanlı Bankir		Special Purposed Concretes	Elective	2021-2022		Spring/Fall	Self-compacting concrete, roller compacted concrete, fiber concrete, waste rubber concrete, shotcrete, pre-stressed concrete, reactive powder concrete	English	Students who successfully complete this course: 1) They will learn the stress-strain relationship of concrete. 2) They will be able to comprehend shrinkage in concrete. 3) They will be able to calculate the elasticity modulus of concrete. 4) Will learn about creep and its effects on concrete. 5) They will learn about fatigue and its effects on concrete.	Face to Face	Literature research	Concrete Technology	Laboratory studies, Reporting techniques, presentation	Presentation, exam and reports
2	Master	Civil Engineering	Dr. Hasan Güzel	INM3-0529	Hydrodynamics I	Compulsory	2021-2022	8	Fall	Hydrostatics. Continuity, momentum, moment of momentum and energy equations with control volume approach. Continuity and momentum equations with differential approach in cartesian, cylindirical and streamline coordinates. Some exact solutions for Navier-Stokes equations. Theory of turbulent flow.	English	The students will acquire knowledge on, 1) Detailed fluid statics 2) Differential equations of fluid statics 3) How to describe fluid motions 4) Mathematical models of fluid motion 5) Kinematics and stress-strain rate relationships in fluid 6) Relationships among momentum, energy and the Bernoulli equation	Face to Face	Literature research	1) Lamb, H.,Hydrodynamics, 1995, Cambridge Mathematical library 2) Çengel, Y.A. ve Cimbala, J.M., Akışkanlar Mekaniği, 2008 3) Hughes, W.F. and Brighton J.A. Fluid Dynamics, 1991. Mc-Graw Hill 4) Ferziger, J.H and Peric, M.,Computational Methods for Fluid Dynamics, 1999, Springer 5) Papanastasiou, T.C., Applied Fluid Mechanics, 1994, Prentice Hall.	Reporting techniques, presentation	Presentation, exam and reports
4	Master	Civil Engineering	Prof. Dr. Selahattin Kocaman	INS 5277	Computational Hydraulics	Compulsory	2021-2022	8	Fall	Essentials of the programming, Finite element method, Finite difference method, Finite volume method, Ordinary differential equations, Partial differential equations, Solution of the equations used in free surface flows, Solution of the equations used in pipe flows.	English	Students who successfully complete this course will learn; the essentials of the computational hydraulics	Face to Face	Literature research	Popescu, I. (2014). Computational Hydraulics: Numerical Methods and Modelling, IWA Publishing, London, UK, ISBN: 9781780400440	Reporting techniques, presentation	Presentation, exam and reports
5	Master	Civil Engineering	Prof. Dr. Selahattin Kocaman	INS 5284	Open Channel Flow Hydraulics	Compulsory	2021-2022	8	Spring	Differences between open channel and pipe flows, uniform and non-uniform flows, flow regimes, hydraulic jump, Manning equation, calculation of the optimal cross section	English	Students who successfully complete this course will learn; the essentials of the open channel flow hydraulics	Face to Face	Literature research	Moglen G.E. (2015), Fundamentals of Open Channel Flow, CRC Press, ISBN: 9781466580060	Reporting techniques, presentation	Presentation, exam and reports
6	Master	Civil Engineering	Assoc. Prof. Dr. Hilmi Coşkun	INS 5303	Construction Techniques and systems	Compulsory	2021-2022	8	Fall	Building elements and their functions; loads; foundations; reinforced concrete structures; prestressed reinforced concrete structures; steel structures; special systems, economical considerations.	English	Students will learn; advantages and disadvantages of different structural systems; critical details for structural performance, and construction methods and processes.	Face to Face	Lecture notes		In-class lectures and case study presentations	Exams and presentations
7	Master	Civil Engineering	Assoc. Prof. Dr. Hilmi Coşkun	INS 5304	Temporary Structures	Compulsory	2021-2022	8	Spring	Legal issues; site safety; cofferdams; retaining walls; water removal from construction sites; underpinning; scaffolding; concrete formwork, support in steel structures	English	Student will learn the systems and design of temporary facilities necessary for building the main structure.	Face to Face	Lecture notes	1. Formwork for Concrete, Mary K. Hurd 2. Handbook of Temporary Structures in Construction, Robert T. Ratay	In-class lectures and case study presentations	Exams and presentations