Course Title-Course Code: CE 560 HYDRAULIC STRUCTURES	Name of the Programme:CIVIL ENGINEERING

Semester	Teaching Methods							Credits	
	Lecture	Recite	Lab.	Field Study	H W	Other	Total	Credit	ECTS Credit
1-2	42	0	0	0	56	90	188	3	7.5

Language	Turkish
Compulsory / Elective	Elective
Prerequisites	-
Course Contents	Spillways (Sharp-crested spillways, overflow (ogee crested) spillways and ve sluice gates that behave as spillways, Venturi channel, Parshall channel, shaft spillways, siphon spillways, side channel spillways) Sluice Gates (Sharp-edged, radial, clapperred, sector sluice gates and hydraulics of the free surface or submerged flows, contraction and discharge coefficients, overflow control structures that have orifice flows) Hydraulic Jump and Stilling Basins (Planar hydraulic jump, stilling basins, stilling basins with positive and negative sills, stilling basins with chute blocks and baffle piers, chute stilling basins; 3-dimensional hydraulic jump, submerged hydraulic jump, stilling basins with transition, stilling basins after a steep-sloped channel, special stilling basin types (deflector-edged, round-edged , cell type and strike through stilling basins)) The Change of the Flow Regimes (Transition from subcritical to supercritical flows, transition from supercritical to subcritical flows, hydraulic jump, the characteristics of hydraulic jump)
Course Objectives	Introduction to the hydraulics of control structures in open channels flows.
Learning Outcomes and Competences	Gaining practical solutions for the hydraulics of open channel flow control structures.
Textbook and /or References	Bollrich G., Preissler G., Technische Hydromechanik, Band 1, Verlag für Bauwesen, 1992. (in German) Chow V. T., Open Channel Hydraulics, Mc Graw Hill, 1959. Henderson F. M., Open Channel Flow, Macmillan Comp., 1971. Morris H. M., Wiggert J. M., Applied Hydraulics in Engineering, John Wiley & Sons, New York, 1971. Naudascher E., Hydraulik der Gerinne und Gerinnebauwerke, Springer Verlag, 1987. (in German) Rössert R,.Hydraulik im Wasserbau, Oldenburg Verlag, 1988. (in German) Schröder R. C. M., Technische Hydraulic, SpringerVerlag, 1994. (in German) Schröder R. C., Euler G., Schneider F. K., Knauf D., Grundlagen des Wasserbaues, Werner Verlag, 1994. Sümer B. M., Ünsal İ., Bayazıt M., Hydraulics, Birsen Yayınevi, İstanbul, 1983. (in Turkish) Vischer D. L., Dam Hydraulics, John Willey & Sons, New York, 1992. USBR, Design of Small Dams, United States Bureau of Reclamation

Assessment Criteria		*If any,mark as (X)*	Percent (%)
	Midterm Exams	X	30
	Quizzes		-
	Homeworks	X	10
	Projects		-
	Term Paper		-
	Laboratory Work		-
	Other		-
	Final Exam	X	60

Instructors	Prof. Dr. Tülay ÖZBEK