COURSE DESCRIPTION FORM			
Course Code and Title	CE430 SPECIAL TOPICS (HYDRAULIC)		
Semester	8		
Catalog description	Providing additional knowledge for the students in a special field of hydraulic engineering. Enrolled students should have fundamental knowledge from compulsory hydraulic courses.		
Required reading	Akışkanlar Mekaniği ve Hidrolik Problemleri, C.Ilgaz, M.E. Karahan, A. Bulu, Çağlayan Kitapevi, 2000.		
Recommended reading	Hidrolik problemleri, Sığıner Aydeniz , Mutlu Sümer, Birsen Yayınevi, İstanbul, 1999		
ECTS	4		
Prerequisites and co-requisites	No prerequisite. Minimum 70% attendance compulsory		
Compulsory/Elective	Technical Elective Course		
Language of instruction	English		
Aim of course	Providing additional knowledge for the students in a special field of hydraulic engineering. Enrolled students should have fundamental knowledge from compulsory hydraulic courses.		
Learning outcomes of the course unit	Knowledge about investigation and preparing a scientific report in a special topic of hydraulic field. Apply fundamental hydraulic knowledge to real case problems Skills to apply following solution methods to different kinds of hydraulic problems		
Mode of delivery	The mode of delivery of this course is face to face.		
Course content	**1)** Introduction, history of topic, importance of topic and exemplification from actual cases **2)** Preparation of the necessary sub-information and equipment for the course (i.e. set-up necessary software, introduction, how to supply the necessary materials if an experimental study is to be carried out, determination of project topics and compose groups, informing students about their projects, announcement of project schedule, informing about project report writing formats, presentation formats etc.) **3)** Literature review **4)** Subject description **5)** Subject description **6)** Problem Solutions **7)** 1. Midterm **8)** Subject description **9)** Subject description **10)** Subject description **11)** Problem Solutions **12)** Project performance and presentations **13)** Project performance and presentations **14)** Project performance and presentations **15)** 2. Midterm + Problem Solutions		
Planned learning activities and teaching methods	3 lecture hours per week (3+0) Reading activity Web search and library use Project preparation Report and presentation preparation Midterm exam and required works Final exam and required works		
Assessment methods and criteria		Quantity	Percentage (%)

Mid-terms	2	60
Assignment	-	-
Exercises	-	-
Projects	-	-
Practice	-	-
Quiz	-	-
Contribution of In-term Studies to Overall Grade %		60
Contribution of Final Examination to Overall Grade (%)		40
Attendance	-	-

Workload

Efficiency	Total Week Count	Weekly Duration (in hour)	Total Workload in Semester
Theoretical Study Hours of Course Per Week	14	3	42
Practicing Hours of Course Per Week	14	0	0
Reading	7	1	7
Searching in Internet and Library	14	1	14
Designing and Applying Materials	14	0	0
Preparing Reports	6	1,5	9
Preparing Presentation	4	1	4
Presentation	4	1	4
Mid-Term and Studying for Mid-Term	2	7	14
Final and Studying for Final	1	6	6
Other	0	0	0
Total Workload:			100
Total Workload / 25:			4
ECTS:			4

Course's contribution to program

No	Program Learning Outcomes	1	2	3	4	5
1	Adequate knowledge in mathematics, science and engineering subjects pertaining to the relevant discipline; ability to use theoretical and applied knowledge in these areas in complex engineering problems.				X	
2	Ability to identify, formulate, and solve complex civil engineering problems; ability to select and apply proper analysis and modeling methods for this purpose.				X	
3	Ability to design a complex system, process, device or product under realistic constraints and conditions, in such a way as to meet the desired result; ability to apply modern design methods for this purpose.		X			
4	Ability to devise, select, and use modern techniques and tools needed for analyzing and solving complex problems encountered in civil engineering practice; ability to employ information technologies and to use at least one computer programming language effectively.				X	
5	Ability to design and conduct experiments, gather data, analyze and interpret results for investigating			X		

		complex civil engineering problems or discipline specific research questions.					
	6	Ability to work efficiently in intra-disciplinary and multi-disciplinary teams.					X
	7	Ability to work individually.					X
	8	Ability to communicate effectively in Turkish, both orally and in writing; ability to write effective reports and comprehend written reports.			X		
	9	Knowledge of English of B1 level according to Common European Framework of Reference.			X		
	10	Prepare design and production reports, make effective presentations, and give and receive clear and intelligible instructions.			X		
	11	Recognition of the need for lifelong learning; ability to access information, to follow developments in science and technology, and to continue to educate him/herself.				X	
	12	Consciousness to behave according to ethical principles and professional and ethical responsibility.					X
	13	Knowledge on standards used in civil engineering practice.				X	
	14	Knowledge about business life practices such as project management, risk management, and change management.					X
	15	Awareness in entrepreneurship, innovation; knowledge about sustainable development.					X
	16	Knowledge about the global and social effects of engineering practices on health, environment, and safety, and contemporary issues of the century reflected into the field of engineering.					X
	17	Awareness of the legal consequences of engineering solutions.					X
Name of lecturer and contact information	All lecturers in Hydraulic Section e-mail: insaat@gazi.edu.tr						