

MM 560 Design of Control Systems				MECHANICAL ENGINEERING DEPARTMENT					
Semester	Methods of Education							Credits	
	Lecture	Recit.	Lab.	Project/Field Study	Homework	Other	Total	Credit	ECTS credit
1,2	21	21				146	188	3	7.5
Language	Turkish								
Compulsory / Elective	Optional								
Prerequisites	MM 403 (basic introductory undergraduate course in Automatic Control Systems)								
Course Contents	Review of essentials of : time domain analysis, root locus method, and frequency response. Design with PD-, PI-, PID-, phase-lead-, phase-lag-, lead-lag-, notch filter- controllers. Design of robust systems. Minor-loop control. State feedback control and pole placement via state feedback.								
Course Objectives	Teaching of (Mat-Lab. and/or CC assisted)applications of classical methods for design of conventional controllers (compensators) in time- and frequency-domain.								
Learning Outcomes and Competences	Getting equipped with basic understanding of, and competence in designing conventional controllers using classical methods in both domains.								
Textbook and /or Reference	1. Kuo, B. C.(1995).Automatic Control Systems, Prentice-Hall, ISBN 0-13-312174-7. 2. Ogata, K.(1997). Modern Control Engineering, Prentice-Hall, ISBN 0-13-261389-1.								
Assessment Criteria					If any, mark as (X)		Percentage (%)		
	Midterm Exams				X		30		
	Quizzes								
	Homeworks				X		10		
	Projects								
	Term Paper								
	Laboratory Work								
	Other								
	Final Exam				X		60		
Instructors									
Week	Subject								
1	Introduction/Scope of the course/objectives and Policy.								
2	Time Domain Analysis of Control Systems.								
3	Time Domain Analysis of Control Systems.								
4	Time Domain Analysis of Control Systems.								
5	Time Domain Analysis of Control Systems.								
6	Time Domain Analysis of Control Systems.								
7	Time Domain Analysis of Control Systems.								
8	Frequency Domain Analysis of Control Systems.								
9	Frequency Domain Analysis of Control Systems.								
10	Frequency Domain Analysis of Control Systems.								
11	Frequency Domain Analysis of Control Systems.								
12	Frequency Domain Analysis of Control Systems.								
13	Frequency Domain Analysis of Control Systems.								
14	State Feedback Control Introduction.								