Aydın Adnan Menderes University
Electrical and Electronics Engineering Department

EE 485 – CONTROL SYSTEM DESIGN (2022-2023 Fall)

Instructor

Dr. M. Mine ÖZYETKİN

Schedule

Wednesday 09:30 - 12:15

Textbook

1. Modern Control Engineering, Katsuhiko Ogata, Fifth edition, Prentice Hall
2. Automatic Control Systems, Farid Golnaraghi and Benjamin C. Kuo, 9th Edition, Wiley&Sons

Reference Books

1. Modern Control Systems, Richard C. Dorf, and Robert H. Bishop, Twelfth edition, Prentice Hall

Grading

Grading will be as follows:

40% Midterm Exam +70% (Final Exam/Homework+Presentation)

Attendance is mandatory. A Student has to attend 70% of the lectures in a semester. If a student does not attend more than 30% of the lectures,it fails and it is not permitted to enter the final examination.

Do not forget, to be successful final score must be greater than or equal to 55

Course Outline: Some basic course headlines are listed as follows:

1. **Control Systems Design by the Root-Locus Method**
2. **Lag compensation (Design the by Root locus)**
3. **Lag-Lead compensation (Design the by Root locus)**
4. **Control systems analysis and design by the frequency response method**
5. **Lag compensation (Design by the frequency response)**
6. **Lag-Lead compensation (Design by the frequency response), Comparison of Lead, Lag, and Lag–Lead Compensation**
7. **Design with the PD controller**
8. **Design with the PI controller**
9. **Design with the PID controller**
10. **PID Controllers and Modified PID controllers, Tuning rules for PID controllers**