EECE322-01: 자동제어공학개론

Introduction to Automatic Control

Introduction

Kim, Jung Hoon

Introduction to Automatic Control (EECE322-01)

- Class objective:
  - ✓ To provide the students with the basic concepts of control theory **mainly in frequency domain**
  - ✓ To assist the students in studying various **control system design techniques** as well as general industrial applications

- Prerequisite:
  - ✓ EECE233: Signals and systems (recommended)
  - ✓ MATH300: Applied linear algebra
  - ✓ MATH310: Complex variables

- Textbook and References
  - ✓ **G. F. Franklin, J. D. Powell, A. Emami-Naeini, "Feedback Control of Dynamic Systems," 7th edition, Pearson. 2014.**
  - ✓ **F. Golnaraghi, B. Kuo, "Automatic Control Systems," 9th edition, John Wiley & Sons, Inc. 2009.**

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Main topics:

1. Introduction
2. Models of control systems
3. Response of control systems
4. Analysis of feedback systems
5. Root locus analysis and design
6. Frequency response analysis

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- Grading

✓ Mid-term (25%), Final-term (25%), Homework (15%), Quiz(15%)
Attendance (10%), Experiment (10%)

- Note that these percentages are approximate and meant as a guideline. The percentages will be confirmed based on the performance of students after the mid-term

✓ Please use the **Electronic Attendance System**

✓ Students should complete the **homework on schedule**.

✓ **Please do not copy others' homework solutions.**
- Discovery of such copying is likely to result in high penalties, directly affecting your final grades.

✓ Any question will be welcome during the office hours **(11:00-12:00, Tue., Thu.)**
- LG Research Building. #309
- TA: 박해연 (phyeon@postech.ac.kr)

Date	Day	Lecture No.	ETC.
9/3	Tue.	1	
9/5	Thu.	2	
9/10	Tue.	3	
9/12	Thu.	No	Thanksgiving Day
9/17	Tue.	4	
9/18	Wed.	5	Makeup Lesson (19:00~20:15)
9/19	Thu.	6	
9/24	Tue.	7	
9/26	Thu.	8	
10/1	Tue.	9	
10/2	Wed.	10	Quiz 1 (19:00~20:15)
10/3	Thu.	No	National Foundation Day
10/8	Tue.	11	
10/10	Thu.	12	
10/15	Tue.	13	
10/17	Thu.	14	
10/24 (or 10/22)	Thu. (or Tue.)	15	Mid-term Exam
10/29	Tue.	16	
10/31	Thu.	17	
11/5	Tue.	18	
11/6	Wed.	19	Makeup Lesson (19:00~20:15)
11/7	Thu.	20	
11/12	Tue.	21	
11/14	Thu.	22	
11/19	Tue.	23	
11/20	Wed.	24	Quiz 2 (19:00~20:15)
11/21	Thu.	25	
11/26	Tue.	26	
11/28	Thu.	27	
12/3	Tue.	28	
12/5	Thu.	29	
12/19 (or 12/17)	Thu. (or Tue.)	30	Final-term Exam

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- Lecturer
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    LG Research Building #309
  - Education: B. E., M. E. and Ph. D. in Electrical Engineering, Kyoto University
  - Research interests: Control theory, control applications

    *Mathematical control theories to analyze and design various complex systems

    *Control algorithms to operate various practical systems such as robots, helicopter, and so on