Course Syllabus

MEH-213 Fall-2015

ELECTRONICS-II (A/B)
Monday 13:00-14:50(A) / Tuesday 09:00-10:50(B) / Thursday 15:00-16:50(A/B)
Tuesday 18:50-20:35(A) / Tuesday 19:45-21:30(B)
Wednesday 19:45-21:30(B) / Friday 17:00-18:45(A)

Instructors:
Dr. Ali TANGEL 1011, Engineering Building B (262)303-3357, atangel@kocaeli.edu.tr
Dr. Anıl Çelebi 1008, Engineering Building B (262)303-3354, anilcelebi@kocaeli.edu.tr

Office Hours (Ali Tangel): TBA
Office Hours (Anıl Çelebi): TBA

Reference Books:

Course Prerequisites: Basic Electric Circuits

Schedule:

Building Blocks of Integrated Circuit Amplifiers (2,5 Weeks)
- Basic Gain Cell, Reading: Ch. 7.2, 11 pages
- Amplifiers with Cascode Topology, Reading: Ch. 7.3, 20 pages
- Integrated Circuit Biasing, Reading: Ch. 7.4-7.5, 20 pages

Power Amplifiers(1 Week)
- Classification of Output Stages, Class A, Class B and Class AB Output Stages, Reading: Ch. 11.1-11.4, 17 pages
- Biasing Class AB Output Circuit, Reading: Ch. 11.5, 4 pages

Differential and Multistage Amplifiers(3,5 Weeks)
- MOS Differential Pair and small signal operation, Reading: Ch. 8.1-8.2, 24 pages
- BJT Differential Pair, Reading: Ch. 8.3, 17 pages
- Differential Amplifier with Active Load, Reading: Ch. 8.5, 16 pages
- Multistage Amplifiers, Reading: Ch. 8.6, 15 pages

Frequency Response(2 Weeks)
- LF Response of CS and CE Amplifiers, Reading: Ch. 9.1, 12 pages
- HF Model of the MOSFET and BJT, Reading: Ch. 9.2, 10 pages
- HF Response of CS and CE Amplifiers, Reading: Ch. 9.3, 10 pages
- HF Response of the CG and Cascode Amplifiers, Reading: Ch. 9.6, 10 pages
Feedback (2/3 Weeks)
- General Feedback Structure and Negative Feedback, **Reading**: Ch. 10.1-10.2, 9 pages
- Four Basic Feedback Topologies, **Reading**: Ch. 10.3, 8 pages
- Series – Shunt Feedback Configuration, **Reading**: Ch. 10.4, 10 pages
- Series – Series Feedback Configuration, **Reading**: Ch. 10.5, 11 pages
- Shunt – Shunt Feedback Configuration, **Reading**: Ch. 10.6, 8 pages
- Shunt – Series Feedback Configuration, **Reading**: Ch. 10.7, 7 pages
- Loop Gain, Stability, Effect of Feedback on Poles, **Reading**: Ch. 10.9-10.12, 6 pages

Oscillators/Digital Integrated Circuits (2 Week)

**Grading Policy**:

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