**MECE 347 SYLLABUS (2020-2021 Fall)**

MECE 347 Electronics + Lab (3 2 4) (6 ECTS)

Lecturer: Dr. Nedim KARACA (IT Department)

Lab assistant: Hilal Bingöl (Room: L-325)

Course web site: <http://mece347.cankaya.edu.tr>

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| **Course Outline**  *List the topics covered within each week.* | |
| Week | Topic(s) |
| 1 | Frequency Response of RC networks |
| 2-3 | Frequency Response of BJT and FET amplifiers, Bode Plots |
| 4-5 | Differential and Operational Amplifiers (Op-Amp’s) |
| 6 | Op-Amp applications |
| 7-8 | Linear Digital Integrated Circuits (IC’s) |
| 9-10 | Analog-to-Digital and Digital-to-Analog Converters |
| 11-12 | Negative Feedback and Oscillators |
| 13 | Power Amplifiers, Regulators, Other semiconductor devices |
| 14 | Power Amplifiers, Regulators, Other semiconductor devices |

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| **Textbook**(s)  *List the textbook(s), if any, and other related main course materials.* | | | | |
| Author(s) | Title | Publisher | Publication Year | ISBN |
| R.L. Boylestadt, L. Nashelsky | Electronic Devices and Circuit Theory  10th edition | Prentice-Hall, Inc. | 2009 | 978-0-13-606463-3 |

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| **Reference Book**s  *List the reference books as supplementary materials, if any.* | | | | |
| Author(s) | Title | Publisher | Publication Year | ISBN |
| P. Horowitz, W. Hill | The Art of Electronics-3rd edition | Cambridge University Press. | 2015 | 0-521-37095-7 |
| F.H. Mitchell,JR, F.H. Mitchell, SR | Introduction to Electronics Design-2nd edition | Prentice-Hall, Inc. | 1992 | 0-13-473679-6 |
| Adel S. Sedra and Kenneth C. Smith | Microelectronic Circuits, 4 th Edition | Oxford University Press | 1998 |  |
| Jacobb Milman, Christos C. Halkias | Integrated Electronics  Analog and Digital Circuits and Systems | McGraw-Hill | 1972 |  |

**Grading Policy:**

20% Laboratory Applications: Attendance to the laboratory, performance, weekly lab reports, quiz, lab exam, lab project. All these sub items corresponding to grading of laboratory applications will be determined by Hilal Bingöl.

40% Final Exam

15 % Midterm Exam #1

15 % Midterm Exam #2

5 % Homework #1

5 % Homework #2