**NEAR EAST UNİVERSİTY**

 FACULTY OF ENGINEERING

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| *Course Code* | **ME308/EE324** | *Course Title* | **Control Systems** |
| *Academic Year* | ***2015-20116*** | ***Spring*** | *Course Credit* | *3* |

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|  | *E-mail* | *Office* | *Tel* |
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| *Assistant(s)* |  |  |  |  |

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| *Course objectives* | In this course students learn basic of modern control systems engineering such as the fundamental concepts of a Control System, Laplace transfer to find input-output relationship of control systems. The mathematical modeling of the electrical, liquid-level and mechanical systems, transfer transient functions and block diagram of control systems, analysis of stability and errors of a control system |
| *Weekly Schedule* | **Week** 1. Introduction to process control principles**Week** 2. Modeling of the Control System. **Week** 3. Modeling of Electrical Systems.**Week** 4.The main characteristics of second order system. Transfer  function, impulse an transient functions.**Week** 5. Laplace transform.**Week** 6.Modeling of the liquid-level and Thermal systems**Week** 7. Mechanical Systems.**Week** 8.Modeling Mechanical Rotational and Electromechanical  systems**Week** 9. Block Diagram Representation of Control Systems**Week** 10. Analysis of the Control Systems. Routh-Hurwitz criterion.**Week** 11. Nyquist Stability Criterion.**Week** 12. Frequency Response Analysis.**Week** 13.Steady-state Error Analysis **Week** 14. Design of the control systems.  |
| *Textbook(s)/**Required Reading* | Control systems engineering Prof. Dr Fakhreddın MamedovNıcasıa 1999. |
| *Recommended Reading* |  Control systems engineering Norman S.Nise CaliforniaState Polytechnic University,Pomona 1995 |
| *Grading Critersi* | *Midterm exam 35%**Quız 20%* *Final exam 45%* |