**NEAR EAST UNİVERSİTY**

**Faculty of Engineering**

Department of Food Engineering

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| *Course Code* | ***FDE 403*** | *Course Title* | **Process Control** | |
| *Academic Year* | ***2015-2016*** | ***Fall*** | *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 System.  **Week** 3. Definition of control objectives  **Week** 4. The main characteristics of second order system.  **Week** 5. Transfer function, impulse an transient functions.  **Week** 6. Open and Closed loop systems  **Week** 7. Block Diagrams.  **Week** 8. Signal flow graph.  **Week** 9. Analysis of the Control Systems.Routh-Hurwitz criterion  **Week** 10. Types and selection of controllers  **Week** 11. Types and selection of control schemes  **Week** 12. Frequency Response Analysis.  **Week** 13.State-space models. Industrial automatic controller.  **Week** 14. Design of the control systems. Process control of selected  food engineering operations |
| *Textbook(s)/*  *Required Reading* | Control systems engineering Prof. Dr Fakhreddın Mamedov  Nıcasıa 1999. |
| *Recommended Reading* | Control systems engineering Norman S.Nise California  State Polytechnic University,Pomona 1995 |
| *Grading Critersi* | *Midterm exam 35%*  *Quız 20%*  *Final exam 45%* |