

# Mechanical Engineering Curriculum Changes

**Effective Fall 2009**

1. The following courses are added as required:
  - **ME 160 *Solid Modeling***
    - Course description: Communication of form and layout of real world objects, solid modeling of objects. Engineering drawing layouts, orthogonal projections, dimensioning, tolerancing and standard drawing symbols, principles of detail design drawings and assembly drawings, and manufacturability. Use of computer graphics and production of drawings.
    - Credit hours: 2
    - Offering: fall and spring semesters
    - Prerequisite: ENGR120 *Graphical Communications and Spatial Analysis* and MA165 *Analytical Geometry and Calculus I*
  - **ME 331 *System Dynamics***
    - Course description: Mathematical modeling and response analysis of dynamic systems with mechanical, electrical, fluid/thermal, and electromechanical components used in modern control systems. Concepts of analogous systems; transfer function and block diagram; state-space formulation; time-domain and frequency-domain analysis.
    - Credit hours: 3
    - Offering: fall semesters
    - Prerequisite: ME251 *Dynamics* and MA363 *Differential Equations*
  - **ME 333 *Automatic Control Systems***
    - Course description: Analysis and design of control systems, from modeling and computer solutions to stability and performance issues with an orientation toward electrical and mechanical systems. Classical control system concepts are emphasized but an introduction to modern techniques is also provided.
    - Credit hours: 3
    - Offering: fall and spring semesters
    - Prerequisite: ME331 *System Dynamics*
2. The following courses are no longer required:
  - ME 371 *System Dynamics and Introduction to Control* (4 credit hours)
  - ME 387 *Electronics and System Engineering through Robotics* (3 credit hours)
  - ME 388 *Electronics and System Engineering through Robotics Lab* (1 credit hour)
3. Changes in Mechanical Engineering Technical Electives:
  - ME 322 *Heat Transfer Lab* is no longer prerequisite to ME421 *Heating and Air Conditioning I*.
  - ME 387 *Electronics and System Engineering through Robotics* is added to Technical Electives Group 2.
  - ECE 483 *Digital Control Systems-Analysis and Design* is moved to Technical Electives Group 1 from Group 2.
4. The total number of credit hours for graduation remains the same (126 credit hours)