

FALL 2009 UW-Platteville Fox Valley Engineering Courses

EE 1210 **3 credits** **Lec MW 7:00-8:18 PM** **Lab Wed 8:30-9:22 PM** **1847** **Popovich, S.**
Circuit Modeling I **Pre-requisite: Calculus I**

Voltage, current, resistance and impedance. Opamps, Phasors, Ohm's law, Kirchoff's laws, superposition, and Thevenin's and Norton's theorems applied to the modeling of zero-order networks and to sinusoidal steady-state analysis.

EE 4610 **4 credits** **Lec Tues/Thurs 6:15-8:29PM** **Lab Tues/Thurs 8:30-9:24** **1811** **Popovich, S.**
Communications Systems **Pre-req: EE 2200, EE 3020, EE 3770**

Analysis and design of amplitude, angle, and pulse code modulation systems.

ME 2630 **3 credits** **Lec 1 Tues/Thurs 6:15 – 7:33 PM** **1826** **Bayraktar, T.**
Thermodynamics

Basic concepts and definitions, ideal gases, properties of real substances. Conservation of mass principle. First law of thermodynamics for closed and open systems. Second law of thermodynamics, entropy and availability. **Prerequisite:** CHE 165, PHY201 **Co:** MAT 223/234

ME 3030 **3 credits** **Lec 1 Tues/Thurs 4:30-5:48 PM** **1847** **Zampaloni, M.**
Dynamical Systems

Mathematical modeling and response of various dynamic systems including mechanical, electrical, hydraulic and pneumatic systems; first order and second order systems; multiple degrees of freedom; Laplace transforms with applications; transient and steady-state response; transfer functions, sinusoidal transfer functions and block diagrams. **Prerequisite:** MEC 202 and MAT 271

ME 3230 **3 credits** **Lec 1 Tues/Thur 6:15-7:33 PM** **1708** **Durkin, B.**
Manufacturing Processes

Primary manufacturing processes including casting, rolling, and forging. Secondary processes. Overview of materials and testing. Design for manufacturing. Mechanics and economics of metal cutting, economics of process planning, principles of machine tool design. Machine tools. Automation, flexible manufacturing systems, computer numerical control. **Prerequisite:** ME 3040

ME 3330 **3 credits** **Lec 1 MW 7:00-8:18 PM** **1826** **Zampaloni, M.**
Design of Machine Elements

Design, sizing, and detailing of machine elements including gears, belts, pulleys, and shafts, and selection of bearings and fasteners to meet specified objectives. Stress tensors, static and fatigue stress analysis, failure analysis, and safety and reliability. Introduction to finite element method. Design projects. **Prerequisite:** ME 3040 and one of better in MEC 203 Strength of Material

ME 3720 **3 credits** **Lec 1 MW 4:30-6:48 PM** **1847** **Bayraktar, T.**
Mechanical Systems Lab.

Introduction to engineering laboratory equipment, experimental procedures, report writing, automated data acquisition, and statistical analysis. Emphasis is on the experimental analysis of mechanical systems, including topics such as vibration, strain gauges, and dc motors, along with the electronics used to instrument and measure these systems. **Co requisite:** ME 3030

ME 3830 **2 credits** **Lec 1 Tues 7:40-9:24 PM** **1826** **Boulanger, P.**
Mechanisms and Machines (formerly Theory of Machines)

Introduction to mechanisms. Analysis and synthesis of mechanical systems. Study of motion, velocity, and acceleration related to linkages, cams, and gears. Machine dynamics. **Prerequisite:** MEC 202 Dynamics

ME 4730 **2 credits** **Lec 1 MW 7:00-8:18PM** **1708** **Bayraktar, T.**
Thermo-Fluid Systems Design

Concepts of thermal systems; design of energy system components; modeling and simulation of thermal systems; application of principles in thermal science to an open-ended design project. **Prerequisite:** ME 3630 ME 3640

ME 4980* **3 credits** **Lec 1 Tues/Thurs 4:45-6:03PM** **1847** **Iselin, J.**
Computational Fluid Dynamics

*Denotes streaming video delivery mode. This class does not meet face-to-face.

ME 4930 **3 credits** **Lec 1 MW 4:30-6:18PM** **1826** **Zampaloni, M.**
Senior Design

Team-based projects, primarily from industry. Open to graduating seniors only. **Pre-req:** ME 3230, ME 3830, ME 3730, ME 4730