Code #EN20 (2014)

**Bulletin Change Transmittal Form**

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**1.Contact Person** (Name, Email Address, Phone Number)

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**2.Proposed Change**

Change Prerequisite PHYS 2034 for ENGR 2423 Electric Circuits to Corequisite for ENGR 2423 Electric Circuits I.

**3.Effective Date**

Fall 2015

**4.Justification**

ENGR 2423 Electric Circuits I is an introductory course in electrical engineering. ENGR 2423 can be offered with PHYS 2034 as a corequisite.

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**COLLEGE OF ENGINEERING**

The frequency of course offering is indicated following each course description. If not otherwise indicated, the course will be scheduled for each enrollment period. **The university reserves the right to change course scheduling when circumstances dictate such changes.**

**Engineering (ENGR)**

**ENGR 1402. Concepts of Engineering** An introduction to the various engineering disciplines. Topics include conservation principles, elementary measurement techniques, teamwork, and an introduction to technical practices. Prerequisite, 21 Math ACT or C or better in MATH 1023 or higher MATH. Fall, Spring.

**ENGR 1412. Software Applications for Engineers** An introduction to software applications used by the various engineering disciplines. Technical word processing and the use of spreadsheets as a mathematics tool are developed. Accepted practices of data presentation and an introduction to presentation graphics are covered. Prerequisite, 21 Math ACT or C or better in MATH 1023 or higher MATH. Fall, Spring.

**ENGR 2401. Applied Engineering Statistics** The practical application of statistical principles as they apply to scientific and engineering topics, with focus on solving engineering problems in various disciplines such as civil, electrical, and mechanical engineering. Lecture one hour per week. Corequisite, MATH 2214. Fall, Spring.

**ENGR 2403. Statics** Principles of vector analysis, static equilibrium, analysis of structures, fric­tion, internal forces, center of gravity, moment of inertia, and product of inertia. Prerequisite, C or better in MATH 2204 and ENGR 1402. Fall, Spring, Summer.

**ENGR 2411. Mechanics of Materials Laboratory** Material will be tested in the laboratory consis­tent with topics covered in Mechanics of Materials course, which will include strain measurement testing machines and properties of materials. Laboratory two hours per week. Corequisite, ENGR 2413. Fall, Spring.

**ENGR 2413. Mechanics of Materials** Stress and deformation of members in tension, compres­sion, torsion, and bending. Allowable stress, combination loading, stress and strain transformation, and beam deflection techniques introduced. Prerequisites, C or better in ENGR 1412 and ENGR 2403. Fall, Spring, Summer.

**ENGR 2421. Electric Circuits I Laboratory** Basic experimentation consistent with the theory in ENGR 2423. Prerequisites, C or better in ENG 1013 and ENGR 1402. Corequisites, ENGR 2401 and ENGR 2423. Fall, Spring.

**ENGR 2423. Electric Circuits I** The fundamental laws of circuit theory applied to resistive net­works, network topology, mesh currents and node voltages, network theorems, one terminal and two terminal pair resistive networks. Time response functions of RL and RC circuits and introduction to steady state AC analysis. Prerequisite~~s~~, C or better in ENGR 1412. ~~and PHYS 2034.~~ Corequisites, MATH 2214 and PHYS 2034. Fall, Spring, Summer.

**ENGR 3423. Dynamics** Kinematics and kinetics of particles and of rigid bodies, work and energy, impulse and momentum, special topics. Prerequisite, C or better in PHYS 2034, MATH 2214, and ENGR 2403. Fall, Spring, Summer.

**ENGR 3433. Engineering Economics** Fundamental concepts of engineering economy, manage­ment, and basic business concepts. Prerequisites, junior standing or consent of instructor. Fall, Spring, Summer.

**ENGR 3443. Engineering Thermodynamics I** Engineering thermodynamics involves studies in the area of properties of substances, work and heat, the first and second laws of thermodynamics, entropy, ideal gases, availability, irreversibility, and efficiency. Prerequisites, C or better in CHEM 1013 and ENGR 2403. Fall, Spring, Summer.