

PRE-ENGINEERING (PENG)

PENG 211 | Statics | 3 cr

Discusses vectors, equilibrium of a particle, resultants of force systems, equilibrium of rigid bodies in two and three dimensions, structural analysis, friction, centroids, and moments of inertia. Required for the pre-engineering articulation agreement with UW-Milwaukee.

Prerequisites: MATH 221 with a grade of C or better, concurrent registration in MATH 222.

Offered: Spring.

PENG 212 | Dynamics | 3 cr

Covers motion and the laws of motion in different dimensions of space using various orthogonal curvilinear coordinates; relative motion; work and energy; conservative forces and potential energy; conservation of linear and angular momentum; and rigid body motion. Required for the pre-engineering articulation agreement with UW-Milwaukee.

Prerequisites: MATH 222 with a C or better, PENG 211; concurrent registration in Math 223.

Offered: Fall.

PENG 214 | Electrical Circuits I | 3 cr

Covers circuit laws and analysis, restrictive circuits, energy storage, AC circuits and power, three-phase circuits, and computer-aided analysis. Required for the pre-engineering articulation agreement with UW-Milwaukee.

Prerequisites: PHYS 202 with a grade of C or better.

Offered: Fall.

PENG 215 | Materials Science and Engineering | 4 cr

Introduces materials science and engineering. Covers the structure and basic properties of various engineering materials, including metals and alloys, ceramics, plastics, and composite materials. Includes laboratory work.

Prerequisites: CHEM 101, MATH 222 and PHYS 202.

Offered: Fall.

PENG 216 | Engineering Drawing and Computer Aided Design | 3 cr

Covers fundamentals of computer aided design (CAD), solid modeling, engineering drawings, dimensioning and specifications.

Prerequisites: MATH 112 and 113; or MATH 114.

Offered: Spring.