

ME 410 : Energy Conversion and Cogeneration Systems

The course introduces various types of energy conversion and cogeneration systems. These include; advanced steam power plants, gas turbine power plants, nuclear power plants, co-generation and tri-generation, internal combustion engine, and renewable energy conversion systems. The student will learn how to do an analysis for any energy conversion system. Moreover, students will learn about the regeneration, binary, supercritical, and other advanced steam power cycles. In addition, this course teaches student how to design components of the power conversion system such as boilers, condensers, steam turbines, compressors, combustors, gas turbines, and others. The knowledge about the nuclear power plants and recent technologies is covered as well in this course. Furthermore, the course gives an introduction to the power generation using the new and renewable energy sources as well as energy storage and economy of energy.

Credits 3

Lab Hours 0

Lecture Hours 3

Tutoring Hours 0

Prerequisite Courses

ME 307

Corequisites

none