FUEL SCIENCE (FSC)

FSC 401: Introduction to Fuel Technology

3 Credits

An introduction to the scientific and engineering principles of fuel technology. For non-fuel science majors; fuel science majors will not receive credit.

Prerequisite: CHEM 112, PHYS 211

FSC 431: The Chemistry of Fuels

3 Credits

Nature and properties of fossil and other fuels, including aerospace, in relation to use; preparation of fuels; by-products; fuel analysis. F SC 431 The Chemistry of Fuels (3) The course deals with the formation, composition and properties of the principal naturally occurring fossil hydrocarbons (coal, petroleum, natural gas), and their refining, upgrading, and conversion chemistry. The objectives of this course are to equip students with a fundamental knowledge of the chemistry for the fossil hydrocarbon resources and their energy use for transportation and stationary fuels as well as their use as chemical feedstocks. It also helps to prepare students for the challenges, opportunities, and changes in the world of energy and resource-related enterprises. The primary emphasis is on petroleum, natural gas, coal, and liquid transportation fuels. This is a required course for the Energy Engineering Major.

Prerequisite: CHEM 210; EGEE 302 or equivalent

FSC 432: Petroleum Processing

3 Credits

A study of physical and chemical processes to convert crude oil into desired products with an outlook from present to future.

Prerequisite: CHEM 210
Cross-listed with: CHE 432

FSC 494: Research Project

1-12 Credits/Maximum of 12

Supervised student activities on research projects identified on an individual or small-group basis.

FSC 494H: Research Project

1-12 Credits/Maximum of 12

Supervised student activities on research projects identified on an individual or small-group basis.

Honors

FSC 496: Independent Studies

1-18 Credits/Maximum of 18

Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.