

Chemical Engineering (CHEN)

CHEN 5303 Advance Topics in Chem Eng 1-3 SCH (1-3)

One or more advanced topics. May be repeated for a maximum of 6 semester hours when topic changes.

CHEN 5305 Graduate Research Project 3 SCH (3)

Designed for project option students and requires completion of research project. Prerequisite: departmental approval. May be repeated for a maximum of 6 semester hours.

CHEN 5306 Thesis 3 SCH (3)

Designed for thesis option students. The course requires completion of thesis research. Prerequisite: departmental approval. May be repeated for maximum of 6 semester hours.

CHEN 5308 Transport Processes 3 SCH (3-0)

An advanced and unified treatment of fluid mechanics and heat transfer, stressing the fundamental equations of momentum and energy transport and their applications in chemical engineering.

CHEN 5309 Separation Process 3 SCH (3-0)

A basic understanding of the concepts underlying the solution, behavior and computation of separation processes is stressed. Both staged and continuous separation methods are considered. (Credit may not be obtained in both CHEN 5309 and NGEN 5309.)

CHEN 5331 Simulatn and Analy of Chem Eng 3 SCH (3-0)

Analytical and numerical techniques for the simulation and analysis of processes and equipment employed in the chemical and petroleum industries.

CHEN 5333 Chem and Catalytic Reaction En 3 SCH (3-0)

Analysis of various interactions between physical and chemical rate processes and their influences on the design and control of chemical reactors.

CHEN 5334 Biochemical Engineering 3 SCH (3-0)

Kinetics of microbial growth and enzyme-catalyzed reactions, mass transfer in bioprocess systems, design and analysis of biological reactors and the recovery of products from such operations.

CHEN 5336 Rheology 3 SCH (3-0)

The study of non-Newtonian fluid flow behavior. Designed to provide a comprehensive understanding of theoretical as well as practical aspects of the flow of non-Newtonian fluids. (Credit may not be obtained in both CHEN 5336 and NGEN 5336.)

CHEN 5360 Advanced Nat Gas Processes 3 SCH (3-0)

Study of the latest processes that are utilized in the natural gas industry. It includes analysis, design and optimization of various natural gas processes with considerations of economics, environmental and safety aspects. (Credit may not be obtained in both CHEN 5360 and NGEN 5360.)

CHEN 5361 Advd Proc Dynamics and Control 3 SCH (3-0)

Fundamentals of modern process control theory are covered and applied to control applications in the chemical and petroleum industries. (Credit may not be obtained in both CHEN 5361 and NGEN 5361.)

CHEN 5371 Adv Chem Eng Thermodynamics 3 SCH (3-0)

The general equations of multicomponent-multiphase systems, with application to phase equilibria and chemical reaction equilibria. Prerequisite: CHEN 3371.

CHEN 5401 Advance Probs in Chem Eng 1-4 SCH (1-4)

Individual or group research on advanced problems conducted under the supervision of a faculty member. Maximum credit 8 semester hours.