

Natural Gas Engineering (NGEN)

NGEN 5303 Advncd Topics in Nat Gas Engin **1-3 SCH (1-3-0)**

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

NGEN 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.

NGEN 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.

NGEN 5309 Separation Process **3 SCH (3-0)**

Advanced treatment of the theory and methods associated with the solution, behavior and computation of both staged and continuous separation processes. Prerequisite: CHEN 4389 or equivalent. (Credit may not be obtained in both CHEN 5309 and NGEN 5309.)

NGEN 5312 Pressure Transient Analysis **3 SCH (3-0)**

Methods of analysis of pressure transient data obtained from well testing for the purpose of determining in situ reservoir characteristics and conditions.

NGEN 5325 Nat Gas Prod and Distribution **3 SCH (3-0)**

Theory, design and methods of gas well testing and production. Distribution topics include pipeline and compressor design and flow measurement. Prerequisite: NGEN 4375.

NGEN 5327 Nat Gas Drilling Engineering **3 SCH (3-0)**

Drilling equipment and methods, drilling fluids, completion of wells including casing and cementing design. Prerequisite: NGEN 3393.

NGEN 5336 Polymer Rheology **3 SCH (3-0)**

The study of non-Newtonian fluid flow behavior, including both theoretical and practical aspects of non-Newtonian fluid flows and their applications. Prerequisite: CHEN 5308. (Credit may not be obtained in both CHEN 5336 and NGEN 5336.)

NGEN 5360 Adv Chem & Natural Gas Proc **3 SCH (3-0)**

Study of key processes that are utilized in the chemical & natural gas industry, including analysis, design methods and optimization with a consideration of process economics, environmental and safety aspects. (Credit may not be obtained in both CHEN 5360 and NGEN 5360.)

NGEN 5363 Advanced Reservoir Engineering **3 SCH (3-0)**

Phase relations of hydrocarbon systems, material balance methods, flow in reservoirs and displacement of gas. The application of computers to reservoir engineering.

NGEN 5387 Quantitative Well Log Analysis **3 SCH (3-0)**

Theory of special well-logging techniques and applications.

NGEN 5401 Advanced Probs in Nat Gas Engi **1-4 SCH (1-4)**

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