

**Department: Chemical and Natural Gas Engineering**  
**Program: MSc Natural Gas Engineering**

Skill Set	Professional Application	Delivery of Skill Set Courses, extracurricular activities, etc. in which the skill set is introduced (I), reinforced (R), or mastered (M)
Core Skill: Verbal, written, and presentation Communications	All jobs require being Proficient in oral, written, and presentation communication skills. Graduate students are expected to write research papers and present them in professional societies' conferences.	Communication skills are developed in various courses through oral and written communications. In a few courses research component requires verbal and written reports.
Core Skill: Team Player	In today's world no body works alone. In any project engineers have to work with others to achieve their outcomes. Most projects are multidisciplinary, which requires engineers from different disciplines work closely together.	In many courses assignments are given that require teamwork. In a few courses teams are formed for lengthy research projects.
Discipline-based Skill: Computer and Digital Technology	All processes in all industries, such as drilling rigs, oil and gas production operations are fully equipped with instrumentations and using computers for data acquisition and simulations. Petroleum engineers have to be able to work with these technologies every day.	Computer based assignments are given in many courses. Advanced process technology simulators such as HYSYS and Petrel are taught and are used in projects. In some classes such as advanced reservoir engineering, all assignments need sophisticated software such as the one by Schelumberger to solve it
Discipline-based Skill: Oil and gas production operations and design	Oil and gas production and operation processes and design are the responsibility of natural gas and petroleum engineers, in operations such drilling and field processing of oil and gas.	In many courses that the graduate students have to take all aspects of oil and gas production and operations are discussed in depth. They also have to perform research and carry out design of a major project possibly in a team.
Discipline-based Skill: Creativity and skillful in research methodology	Companies that hire graduate students with MSc degrees, expect higher creativity and research capabilities. As technologies are changing rapidly. For companies to stay competitive, they have to research the new technologies, which requires special research capabilities.	Graduate students have research components in most of their graduate course works. They take thesis or project for their main research, where they spend at least one semester for project and two semesters for thesis. In case of thesis students have to defend their proposal and their final findings.