

Master of Science in Petroleum and Natural Gas Engineering

Mandatory Common Courses (10 Credits must be taken)

Code	Number	Course Title	Credit-hours
PGE	510	Theory of fluid flow through porous media	3
PGE	520	Advanced drilling engineering	3
PGE	530	Advanced petroleum production engineering	3
PGE	546	Graduate seminar	1

Mathematics Courses (6 Credits must be taken)

Code	Number	Course Title	Credit-hours
MATH	503	Probability and mathematical statistics	3
MATH	505	Numerical linear algebra	3
MATH	506	Ordinary and partial differential equations	3
MATH	507	Advanced operation research	3

Specialized Courses (Reservoir Engineering - 9 Credits must be taken)

Code	Number	Course Title	Credit-hours
PGE	512	Water flooding	3
PGE	513	Tertiary oil recovery	3
PGE	515	Reservoir simulator development	3
PGE	516	Advanced natural gas technology	3
PGE	518	Advanced well test analysis	3
PGE	543	Advanced petroleum economics	3
PGE	545	Advanced topics in petroleum engineering	3

Specialized Courses (Production Engineering - 9 Credits must be taken)

Code	Number	Course Title	Credit-hours
PGE	516	Advanced natural gas technology	3
PGE	531	Advanced well stimulation technology	3
PGE	532	Multiphase flow in conduits	3
PGE	543	Advanced petroleum economics	3
PGE	545	Advanced topics in petroleum engineering	3

Specialized Courses (Drilling Engineering - 9 Credits must be taken)

Code	Number	Course Title	Credit-hours
PGE	521	Advanced drilling fluids engineering	3
PGE	531	Advanced well stimulation technology	3
PGE	541	Oil exploration	3
PGE	543	Advanced petroleum economics	3
PGE	544	Rock mechanics	3
PGE	545	Advanced topics in petroleum engineering	3