Petroleum Reservoir Systems

Degree Offered

• Professional Masters in Petroleum Reservoir Systems (Non-Thesis)

Program Description

The Professional Masters in Petroleum Reservoir Systems (PMPRS) is a coursework-based (non-thesis) degree designed for individuals who have petroleum industry experience and are interested in deepening their knowledge across the disciplines of geology, geophysics, and petroleum engineering.

Teaching assistant and research assistant positions are not available for PMPRS students.

Enrollment is open for Fall and Spring semesters. The degree typically takes 3 semesters (1.5 years) to complete. Students may apply to the program through any of the three participating departments: the Department of Geophysics, the Department of Geology and Geological Engineering, or the Department of Petroleum Engineering.

Program Requirements

The Professional Masters in Petroleum Reservoir Systems (PMPRS) (Non-Thesis) degree is designed for individuals who have petroleum industry experience and are interested in increasing their knowledge across the disciplines of geology, geophysics, and petroleum engineering.

Teaching assistant and research assistant positions are not available for PMPRS students.

Enrollment is open for Fall and Spring semesters. The degree typically takes 3 semesters (1.5 years) as no summer courses are available. Students may enroll part-time.

The PMPRS program requires a minimum of 30 credit hours. Up to 9 credit hours may be at the 400 level. All other credits toward the degree must be 500 level or above.

(A) 1 course (3.0 hours) selected from the following:

- GPGN/PEGN419 INTRODUCTION TO FORMATION EVALUATION AND WELL LOGGING 3.0
- GPGN/PEGN519 ADVANCED FORMATION EVALUATION 3.0

(B) 2 courses (6.0 hours) selected from the following:

- GEGN/GPGN/PEGN503 INTEGRATED EXPLORATION AND DEVELOPMENT 3.0
- GEGN/GPGN/PEGN504 INTEGRATED EXPLORATION AND DEVELOPMENT 3.0
- GEOL609 ADVANCED PETROLEUM GEOLOGY 3.0

(C) 3 additional courses (9.0 hours) must consist of one course each from the 3 participating departments

(D) The remaining 4 courses (12.0 hours) may consist of graduate courses from any of the three participating departments or other courses approved by the committee. Up to 6 hours may consist of independent study, including an industry project.

Prerequisites

Students must possess one of the three backgrounds below in order to apply for the program.

Geology and Geological Engineering:

• General Geology
• Structural Geology
• Mineralogy
• Petrology
• Stratigraphy
• Chemistry (2 semesters)
• Mathematics (2 semesters of calculus)
• An additional science course (other than geology) or advanced mathematics
• Physics (2 semesters)

Geophysics and Geophysical Engineering:

• Physics (2 semesters)
• Mathematics (at least 2 semesters of Calculus, 1 semester of Differential Equations)
• Applied Geophysics (GPGN314, or course work or professional equivalent)
• Geophysical Computing/Computational Geophysics
• Stratigraphy
• Structural Geology

Petroleum Engineering:

• Rock properties
• Reservoir fluid properties
• Drilling engineering
• Structural geology or sedimentology/stratigraphy
• Petroleum production
• Reservoir engineering
• Chemistry (2 semesters)
• Mathematics (3 semesters of calculus; 1 semester of differential equations)
• Physics (2 semesters)
• Fluid mechanics
• Thermodynamics
• Mechanics of materials
• Statics

Director and Professor

Stephen A. Sonnenberg, Charles Boettcher Distinguished Chair in Petroleum Geology

Professors

Jennifer L. Miskimins, Professor and Head of Petroleum Engineering

Ali C. Tura, Professor of Geophysics