

Midstream Petroleum Engineering, M.S.

Degree Offered

- Master of Science, Midstream Petroleum Engineering (M.S.)

Nature of the Program

The goals and objectives of the Midstream Petroleum Engineering program are to train graduate students to gain core competency for implementing practical solutions to real-world problems relative to designing, monitoring, and maintaining petroleum transportation, storage, and processing facilities. Students in the program will learn to perform detailed analysis of transportation, storage and processing facilities in order to optimize their performance.

The online master's degree and certificate program will make it possible for engineering students and current engineers to obtain the degree while stationed anywhere in the United States and the world. The Department plans to offer two consecutive asynchronous courses each semester, and each course is designed to be completed in eight weeks.

Admissions for 2025-2026

To be eligible for admission into the Master of Science in midstream petroleum engineering degree program, a candidate must fulfill the following requirements

- B.S. degree in engineering from an ABET-accredited or internationally-recognized engineering program or equivalent with a minimum GPA of 3.0 (on a 4.0 scale).
- A statement of purpose.
- At least one recommendation letter from the an academic or professional reference
- International applicants must meet the WVU requirement of English language proficiency.

Major Code: 3078

Curriculum in Master of Science in Midstream Petroleum Engineering

The 30-hour online program consists of 10 courses that collectively expose students to oil and natural gas midstream engineering operations. Formal coursework concludes with a capstone course (MPGE 685) that requires students to take the knowledge and skills built in the previous nine courses and apply them to a real-world midstream petroleum engineering problem.

Program Requirements

Only courses with grades of "A", "B", or "C" can be used to meet the coursework requirements. To be in good standing, a regular student must maintain at least a cumulative GPA of 3.0 grade point average throughout the time enrolled in the program. Students whose cumulative GPA falls below 3.0 will be placed on academic probation. If their GPA is not brought up to 3.0 by the end of the following semester, the student will be suspended from the program. Students who are suspended from the program will not be allowed to enroll in program courses for one year.

Curriculum Requirements

Code	Title	Hours
A minimum cumulative GPA of 3.0 is required.		
Required Courses		
MPGE 610	Introduction to Midstream Petroleum Engineering	3
MPGE 620	Design and Monitoring of the Petroleum Transportation Facilities	3
MPGE 640	Fundamentals of the Natural Gas Processing	3
MPGE 650	Design and Operation of Underground Storage Facilities	3
MPGE 685	Midstream Petroleum Engineering Capstone Project	3
Elective Courses		
MPGE 615	Design and Operation of the Production Facilities	
MPGE 625	Natural Gas Control and Measurements	
MPGE 626	Pipeline Integrity Assessment	
MPGE 630	Health, Safety, and Environmental Regulations in Midstream Operations	
MPGE 645	Natural Gas Fractionation	
MPGE 655	Introduction to Carbon Capture and Storage	
MPGE 680	Midstream Project Economic Analysis	

MPGE 693	Special Topics
MPGE 695	Independent Study

Total Hours

30

Major Learning Outcomes

MIDSTREAM PETROLEUM ENGINEERING

Upon completion of the degree program, the student will be able to:

1. Apply engineering solutions to design, monitor, and maintain midstream facilities for natural gas, oil, and other fuels.
2. Perform detailed analysis and optimize the operation of the facilities for transportation, storage, and processing of the natural gas, oil, and other fuels.