

# MIDSTREAM PETROLEUM ENGINEERING PROGRAM

**KASHY AMINIAN , PROFESSOR**

**SAMUEL AMERI, CHAIR**

**PETROLEUM & NATURAL GAS ENGINEERING DEPARTMENT**

**WEST VIRGINIA UNIVERSITY**

# WVU PETROLEUM AND NATURAL GAS ENGINEERING PROGRAMS

## ON CAMPUS

BS-PETROLEUM & NATURAL GAS ENGINEERING

MS-PETROLEUM & NATURAL GAS ENGINEERING

PHD-PETROLEUM & NATURAL GAS ENGINEERING

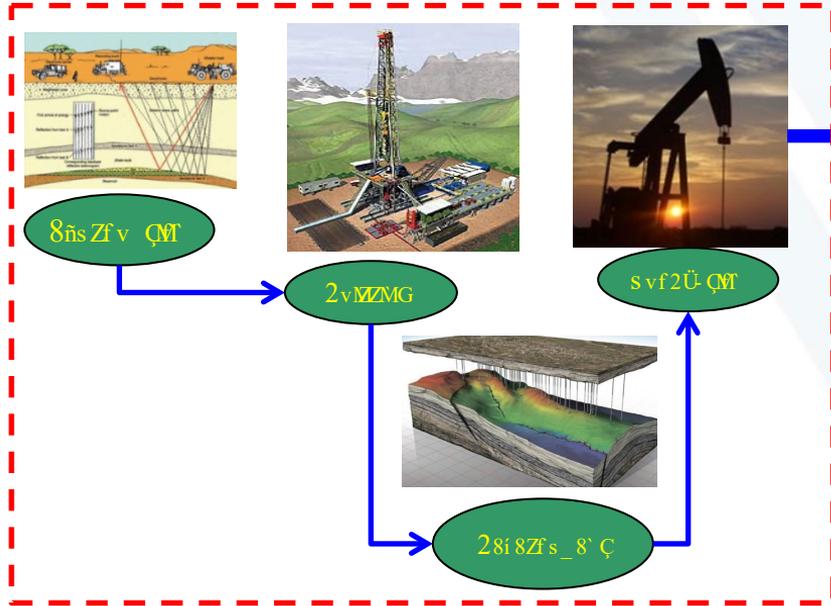
## OLINE

MS-MIDSTREAM PETROLEUM ENGINEERING

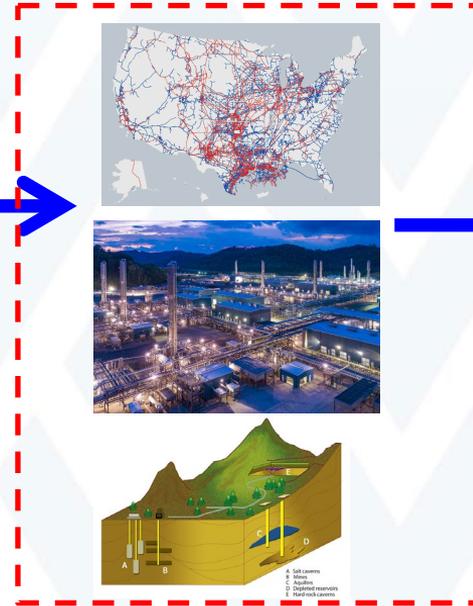
CERTIFICATE -MIDSTREAM PETROLEUM ENGINEERING

# DELIVERING CRITICAL ENERGY AND PRODUCTS

## UPSTREAM (E&P)



## MIDSTREAM



## DOWNSTREAM



# Midstream Petroleum Engineering, M.S.

BENJAMIN M. STATLER COLLEGE OF ENGINEERING AND MINERAL RESOURCES



The one-of-a-kind M.S. in Midstream Petroleum Engineering program offered by the Benjamin M. Statler College of Engineering and Mineral Resources, you're at the heart of the action, managing the vital processes that transport, store, and distribute oil and gas resources. From designing pipelines to optimizing transportation logistics, each day brings new challenges and rewards. Join this essential sector and shape the future of energy delivery. Embrace a field where your expertise drives efficiency, sustainability, and global connectivity.

# PROGRAM OVERVIEW

**FIRST-OF-ITS-KIND PROGRAM:** THE ONLY DEDICATED MIDSTREAM ENGINEERING MASTER'S DEGREE IN THE COUNTRY, FOCUSED ON REAL-WORLD ENERGY INFRASTRUCTURE CHALLENGES.

**FLEXIBLE ONLINE FORMAT:** BUILT FOR WORKING PROFESSIONALS, THIS FLEXIBLE PROGRAM DELIVERS INDUSTRY-RELEVANT TRAINING TO HELP YOU LEAD IN THE EVOLVING ENERGY SECTOR.

**INDUSTRY-RELEVANT CURRICULUM:** LEARN TO DESIGN, MONITOR, AND OPTIMIZE MIDSTREAM SYSTEMS USING ADVANCED ANALYSIS AND ENGINEERING TECHNIQUES.

# MS IN MIDSTREAM PETROLEUM ENGINEERING

## OBJECTIVES

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.



# MS IN MIDSTREAM PETROLEUM ENGINEERING

## MAJOR LEARNING OUTCOMES

UPON COMPLETION OF THE DEGREE PROGRAM, THE STUDENT WILL BE ABLE TO:

- APPLY ENGINEERING SOLUTIONS TO DESIGN, MONITOR, AND MAINTAIN MIDSTREAM OIL AND NATURAL GAS FACILITIES .
- PERFORM DETAILED ANALYSIS AND OPTIMIZE THE OPERATION OF THE OIL AND NATURAL GAS TRANSPORTATION, STORAGE, AND PROCESSING FACILITIES .



# MS IN MIDSTREAM PETROLEUM ENGINEERING

## ADMISSION REQUIREMENTS

- B.S. DEGREE IN ENGINEERING WITH A GRADE POINT AVERAGE OF 3.0 OR HIGHER (ON A 4.0 SCALE).
- A RECOMMENDATION LETTER FROM AN ACADEMIC OR PROFESSIONAL REFERENCE
- DEMONSTRATED PROFICIENCY IN ENGLISH.\*

\* INTERNATIONAL STUDENTS

# MS IN MIDSTREAM PETROLEUM ENGINEERING CURRICULUM

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 COURSES AND APPLY THEM TO A REAL-WORLD MIDSTREAM PETROLEUM ENGINEERING PROBLEMS.



# MS IN MIDSTREAM PETROLEUM ENGINEERING CURRICULUM

## REQUIRED COURSES(15 CR. HRS.)

- ▣ MPGE 610 – FUNDAMENTALS OF MIDSTREAM PETROLEUM ENGINEERING
- ▣ MPGE 620 – DESIGN AND MONITORING OF THE TRANSPORTATION FACILITIES
- ▣ MPGE 640 – FUNDAMENTALS OF THE NATURAL GAS PROCESSING
- ▣ MPGE 650 – DESIGN AND OPERATION OF THE STORAGE FACILITIES
- ▣ MPGE 685 – MIDSTREAM PETROLEUM ENGINEERING CAPSTONE PROJECT

# MS IN MIDSTREAM PETROLEUM ENGINEERING CURRICULUM

## ELECTIVE COURSES(15 CR. HRS.)

- ▣ MPGE 630 – HEALTH, SAFETY, AND ENVIRONMENTAL REGULATIONS
- ▣ MPGE 655 – CARBON CAPTURE AND SEQUESTRATION
- ▣ MPGE 680 – PROJECT ECONOMIC ANALYSIS
- ▣ MPGE 593 – SPECIAL TOPICS
- ▣ MPGE 695 – INDEPENDENT STUDY
- ▣ EMGT 501 – ENGINEERING AND SYSTEM MANAGEMENT

# Midstream Petroleum Engineering Graduate Certificate

BENJAMIN M. STATLER COLLEGE OF ENGINEERING AND MINERAL RESOURCES



The Midstream Petroleum Engineering Graduate Certificate program is designed to provide you with hands-on expertise to tackle real-world challenges in the oil and gas sector. Focused on optimization methodologies, you will master the art of enhancing efficiency across transportation, storage, and processing infrastructures. Backed by esteemed faculty and cutting-edge resources, you will thrive in an encouraging educational setting that nurtures both personal and professional development.

- **Master Essential Skills:** Gain core competency in applying engineering solutions to midstream oil and natural gas facilities.
- **Optimize Operations:** Learn how to perform analyses to enhance the efficiency of midstream oil and natural gas operations.
- **Thrive with Support:** Experience personalized guidance from industry-leading faculty and leverage state-of-the-art resources.

# MIDSTREAM PETROLEUM ENGINEERING CERTIFICATE OBJECTIVES

TRAIN GRADUATE STUDENTS TO GAIN CORE COMPETENCY FOR APPLICATION OF ENGINEERING SOLUTIONS RELATIVE TO REAL-WORLD PROBLEMS IN THE MIDSTREAM OIL AND NATURAL GAS INDUSTRY.



# MIDSTREAM PETROLEUM ENGINEERING CERTIFICATE

## MAJOR LEARNING OUTCOMES

UPON COMPLETION OF THE CERTIFICATE PROGRAM, THE STUDENT WILL BE ABLE TO:

- APPLY ENGINEERING SOLUTIONS TO MONITOR AND MAINTAIN MIDSTREAM OIL AND NATURAL GAS FACILITIES .
- PERFORM ANALYSIS FOR OPTIMIZATION OF MIDSTREAM OIL AND NATURAL GAS OPERATIONS.

# MIDSTREAM PETROLEUM ENGINEERING CERTIFICATE ADMISSION REQUIREMENTS

- B.S. DEGREE IN ENGINEERING  
OR
- B.S. DEGREE WITH EXPERIENCE
- GRADE POINT AVERAGE 3.0 OR HIGHER.
- ONE RECOMMENDATION LETTER.
- DEMONSTRATED PROFICIENCY IN ENGLISH.\*

\* INTERNATIONAL STUDENTS

# MIDSTREAM PETROLEUM ENGINEERING CERTIFICATE CURRICULUM

THE 12-HOUR ONLINE PROGRAM CONSISTS OF 4 COURSES THAT COLLECTIVELY EXPOSE STUDENTS TO OIL AND NATURAL GAS MIDSTREAM ENGINEERING OPERATIONS.

REQUIRED COURSE (3 CR. HRS.)

MPGE 610 – FUNDAMENTALS OF MIDSTREAM PETROLEUM ENGINEERING

ELECTIVE COURSES (9 CR. HRS.)