

# Stackable Certificate Programs, Petroleum and Geosystems Engineering

Stackable graduate certificates are available to degree-seeking and non-degree-seeking graduate students. Some stackable certificates may be awarded following completion of program requirements, while others require simultaneous awarding of the graduate certificate and a graduate degree.

See the [Stackable Certificates section](#) of this catalog for additional information and policies related to stackable certificates.

The graduate program for this catalog section offers the following stackable certificate programs. To see a full list of graduate certificates offered at the University, please see the [Graduate Study](#) section of the *Graduate Catalog*.

## Petroleum Engineering: Data Analytics

The Petroleum Engineering: Data Analytics graduate stackable certificate is designed primarily for the working petroleum engineer who wants to master the ability to use analytics on the massive amounts of data being made available in the industry to better inform decision-making. The program requires completion of nine semester credit hours of coursework and is available to degree-seeking and non-degree-seeking students. All courses required for program completion are offered in an asynchronous online format in accordance with University policies that govern non-formula-funded (Option III) programs.

| Requirements |                                                                                                             | Hours |
|--------------|-------------------------------------------------------------------------------------------------------------|-------|
| PGE 383      | Special Topics in Petroleum and Geosystems Engineering (Topic 63: Subsurface Machine Learning)              | 3     |
| PGE 383      | Special Topics in Petroleum and Geosystems Engineering (Topic 64: High Performance Computing for Engineers) | 3     |
| PGE 383      | Special Topics in Petroleum and Geosystems Engineering (Topic 66: Data Analytics and Geostatistics)         | 3     |
| Total Hours  |                                                                                                             | 9     |

## Petroleum Engineering: Fundamentals

The Petroleum Engineering: Fundamentals graduate stackable certificate is designed primarily for non-petroleum engineers working in the oil and gas industry that desire a solid understanding of the fundamentals of the industry, including reservoir engineering, drilling, and production. The program requires completion of nine semester credit hours of coursework selected from the list below. The program is available to degree-seeking and non-degree-seeking students. All courses required for program completion are offered in an asynchronous online format in accordance with University policies that govern non-formula-funded (Option III) programs.

| Requirements                   |                      | Hours |
|--------------------------------|----------------------|-------|
| Nine hours from the following: |                      | 9     |
| PGE 381                        | Drilling Engineering |       |

|                    |                                                                                                    |
|--------------------|----------------------------------------------------------------------------------------------------|
| PGE 381L           | Advanced Petrophysics                                                                              |
| PGE 382            | Basic Geological Concepts for Engineers                                                            |
| PGE 383            | Special Topics in Petroleum and Geosystems Engineering (Topic 35: Advanced Production Engineering) |
| PGE 388            | Advanced Reservoir Engineering                                                                     |
| <b>Total Hours</b> |                                                                                                    |
| <b>9</b>           |                                                                                                    |

## Petroleum Engineering: Unconventional Resources

The Petroleum Engineering: Unconventional Resources graduate stackable certificate is designed primarily for the working petroleum engineer who desires additional expertise and tools to understand and evaluate unconventional oil and gas reservoirs. The program requires completion of nine semester credit hours of coursework and is available to degree-seeking and non-degree-seeking students. All courses required for program completion are offered in an asynchronous online format in accordance with University policies that govern non-formula-funded (Option III) degree programs.

| Requirements |                                                                                                                      | Hours |
|--------------|----------------------------------------------------------------------------------------------------------------------|-------|
| PGE 383      | Special Topics in Petroleum and Geosystems Engineering (Topic 32: Hydraulic Fracture Design and Evaluation)          | 3     |
| PGE 383      | Special Topics in Petroleum and Geosystems Engineering (Topic 33: Advanced Drilling and Well Completion)             | 3     |
| PGE 383      | Special Topics in Petroleum and Geosystems Engineering (Topic 65: Formation Evaluation of Unconventional Reservoirs) | 3     |
| Total Hours  |                                                                                                                      | 9     |