# PETROLEUM ENGINEERING, PHD

**Requirements for Students Matriculating in or before Academic Year 2022-2023.** Learn more about Graduate College Academic Regulation 7.0 (http://catalog.okstate.edu/graduate-college/#70).

**Total Hours:** 68

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PETE 5313</td>
<td>Advanced Drilling Modeling and Simulation</td>
<td>3</td>
</tr>
<tr>
<td>PETE 5333</td>
<td>Advanced Production and Flow Assurance</td>
<td>3</td>
</tr>
<tr>
<td>PETE 5373</td>
<td>Advanced Well Stimulation</td>
<td>3</td>
</tr>
<tr>
<td>PETE 6813</td>
<td>Research Methods in Petroleum Engineering</td>
<td>3</td>
</tr>
</tbody>
</table>

**Hours Subtotal** 12

Three hours from:

- PETE 6010 Petroleum Engineering Seminar

**Degree Program Guided Electives:** 21

**Petroleum Engineering (CEAT)**

- PETE 5210 Special Topics in Petroleum Engineering
- PETE 5303 Petroleum Geomechanics
- PETE 5343 Advanced Reservoir Engineering
- PETE 5363 Petroleum Economics and Investments
- PETE 5413 Advanced Well Design and Operational Analysis
- PETE 5513 Directional Drilling
- PETE 5613 Advanced Well Completions
- PETE 5990 Special Problems in Petroleum Engineering 1
- PETE 6110 Advanced Topics in Petroleum Engineering

**Chemical Engineering (CEAT)**

- CHE 5123 Advanced Chemical Reaction Engineering
- CHE 5373 Process Simulation
- CHE 5733 Neural Networks
- CHE 5743 Chemical Engineering Process Modeling

**Geology (CAS)**

- GEOL 5023 Petroleum Geology
- GEOL 5133 Structural Styles in Oil and Gas Exploration
- GEOL 5353 Advanced Well Log Analysis
- GEOL 5483 Petroleum Water Management
- GEOL 6133 Unconventional Petroleum Reservoirs
- GEOL 6283 Geology of Shales
- GEOL 6503 Rock Fractures

**Mathematics (CAS)**

- MATH 5063 Calculus of Several Variables
- MATH 5023 Advanced Linear Algebra
- MATH 5233 Partial Differential Equations
- MATH 5263 Introduction to Partial Differential Equations
- MATH 5553 Numerical Analysis for Linear Algebra

- MATH 5563 Finite Element Methods for Partial Differential Equations
- STAT 5013 Statistics for Experimenters I

**Mechanical Engineering (CEAT)**

- MAE 5233 Advanced Fluid Dynamics I
- MAE 5253 Multiphase Flow
- MAE 5563 Finite Element Methods
- MAE 5573 Continuum Mechanics

**Hours Subtotal** 24

**PETE 6000 Doctoral Thesis** 32

**Total Hours** 68

1 A maximum of 3 credit hours of PETE 5990 may be counted toward the guided electives requirement.

2 6 hours of PETE 5000 may be substituted for PETE 6000 or 6 Hours of other coursework may be substituted for PETE 6000 at the discretion of Petroleum Graduate Coordinator.

## Graduate College Doctor of Philosophy (PhD) Requirements

Learn more about Graduate College 2022-2023 Doctor of Philosophy (PhD) Degree Program Requirements (http://catalog.okstate.edu/graduate-college/). Check the General Graduate College academic regulations for minimal GPA, language proficiency and other general requirements.