# PETROLEUM ENGINEERING, PHD

Requirements for Students Matriculating in or before Academic Year 2021-2022: 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>
<tr>
<td>PETE 6010</td>
<td>Petroleum Engineering Seminar</td>
<td>3</td>
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**Hours Subtotal:** 12

**Degree Program Guided Electives:** 21

## Petroleum Engineering (CEAT)

- PETE 5110
- 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
- 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

**Hours Subtotal:** 24

- PETE 6000: Doctoral Thesis

**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.

**Statistics (CAS)**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>STAT 5013</td>
<td>Statistics for Experimenters I</td>
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**Mechanical Engineering (CEAT)**

<table>
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<tr>
<td>MAE 5233</td>
<td>Advanced Fluid Dynamics I</td>
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<tr>
<td>MAE 5253</td>
<td>Multiphase Flow</td>
</tr>
<tr>
<td>MAE 5563</td>
<td>Finite Element Methods</td>
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<tr>
<td>MAE 5573</td>
<td>Continuum Mechanics</td>
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</tbody>
</table>

**Total Hours:** 68

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**Graduate College Doctor of Philosophy (PhD) Requirements**

Learn more about Graduate College 2021-2022 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.