

# PETROLEUM ENGINEERING - BS

## Program Requirements

The freshman year is identical for degrees in electrical engineering, mechanical engineering, and petroleum engineering. The freshman year is slightly different for chemical engineering in that students take CHEM 119 or CHEM 107/CHEM 117 and CHEM 120. It is recognized that many students will change the sequence and number of courses taken in any semester. Deviations from the prescribed course sequence, however, should be made with care to ensure that prerequisites for all courses are met.

### First Year

Fall		Semester Credit Hours
CHEM 107 & CHEM 117	General Chemistry for Engineering Students and General Chemistry for Engineering Students Laboratory <sup>1,2</sup>	4
ENGL 104	Composition and Rhetoric <sup>1</sup>	3
ENGR 102	Engineering Lab I - Computation <sup>1</sup>	2
MATH 151	Engineering Mathematics I <sup>1,3</sup>	4
University Core Curriculum ( <a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/</a> ) <sup>1,4</sup>		3
<b>Semester Credit Hours</b>		<b>16</b>
Spring		Semester Credit Hours
ENGR 216/PHYS 216	Experimental Physics and Engineering Lab II - Mechanics <sup>1</sup>	2
MATH 152	Engineering Mathematics II <sup>1,3</sup>	4
PHYS 206	Newtonian Mechanics for Engineering and Science <sup>1</sup>	3
University Core Curriculum ( <a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/</a> ) <sup>1,4</sup>		6
<b>Semester Credit Hours</b>		<b>15</b>
<b>Total Semester Credit Hours</b>		<b>31</b>

<sup>1</sup> A grade of C or better is required.

<sup>2</sup> CHEN requires 8 hours of freshman chemistry, which may be satisfied by CHEM 119 or CHEM 107/CHEM 117 and CHEM 120; Credit by Examination (CBE) for CHEM 119 or CHEM 107/CHEM 117 plus CHEM 120.

<sup>3</sup> Entering students will be given a math placement exam. Test results will be used in selecting the appropriate starting course which may be at a higher or lower level.

<sup>4</sup> Of the 18 hours shown as University Core Curriculum electives, 3 must be from creative arts, 3 from social and behavioral sciences, 6 from American history, and 6 from government/political science. The required 3 hours from international and cultural diversity and 3 hours of cultural discourse may be met by courses satisfying the creative arts, social and behavioral sciences, and American history requirements if

they are also on the approved list of international and cultural diversity or cultural discourse courses.

### Second Year

Fall		Semester Credit Hours
ENGL 210	Technical and Professional Writing <sup>1</sup>	3
ENGR 217/PHYS 217	Experimental Physics and Engineering Lab III - Electricity and Magnetism <sup>1</sup>	2
MATH 251	Engineering Mathematics III <sup>1</sup>	3
MEEN 221	Statics and Particle Dynamics <sup>1</sup>	3
PETE 225	Introduction to Drilling Systems <sup>1</sup>	3
PHYS 207	Electricity and Magnetism for Engineering and Science <sup>1</sup>	3
<b>Semester Credit Hours</b>		<b>17</b>

### Spring

CVEN 305	Mechanics of Materials <sup>1</sup>	3
GEOL 104	Physical Geology <sup>1</sup>	4
MATH 308	Differential Equations <sup>1</sup>	3
PETE 311	Reservoir Petrophysics <sup>1</sup>	3
PETE 315	Petroleum Engineering Thermodynamics	3
<b>Semester Credit Hours</b>		<b>16</b>

### Third Year

#### Fall

GEOL 404	Geology of Petroleum <sup>1</sup>	3
PETE 219	Foundations of Petroleum Data Analytics <sup>1</sup>	2
PETE 301	Petroleum Engineering Numerical Methods <sup>1</sup>	3
PETE 310	Reservoir Fluids <sup>1</sup>	3
PETE 314	Transport Processes in Petroleum Production <sup>1</sup>	3
PETE 353	Petroleum Project Evaluation <sup>1</sup>	3
<b>Semester Credit Hours</b>		<b>17</b>

#### Spring

PETE 321	Formation Evaluation <sup>1</sup>	4
PETE 323	Fundamentals of Reservoir Engineering <sup>1</sup>	3
PETE 324	Well Testing <sup>1</sup>	3
PETE 325	Petroleum Production Systems <sup>1</sup>	3
PETE 336	Petroleum Technical Presentation I	1
PETE 337	Junior Student Paper Contest <sup>1</sup>	0
PETE 355	Drilling Engineering <sup>1</sup>	3
<b>Semester Credit Hours</b>		<b>17</b>

#### Summer

PETE 300	Summer Practice <sup>1</sup>	0
<b>Semester Credit Hours</b>		<b>0</b>

### Fourth Year

#### Fall

PETE 401	Reservoir Simulation <sup>1</sup>	2
PETE 404	Integrated Reservoir Modeling <sup>1</sup>	3
PETE 410	Production Engineering <sup>1</sup>	3
PETE 436	Petroleum Technical Presentation II <sup>1</sup>	1

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Technical elective <sup>1,5</sup>	3
<b>Semester Credit Hours</b>	<b>15</b>
<b>Spring</b>	
PETE 402 Integrated Asset Development <sup>1</sup>	3
PETE 437 Senior Student Paper Contest <sup>1</sup>	0
PHIL 482 Ethics and Engineering <sup>1</sup>	3
University Core Curriculum ( <a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/</a> ) <sup>1,4</sup>	6
Technical elective <sup>1,5</sup>	3
<b>Semester Credit Hours</b>	<b>15</b>
<b>Total Semester Credit Hours</b>	<b>97</b>

<sup>5</sup> See an academic advisor for a list of approved courses.

A grade of C or better is required in all courses.

**Total Program Hours 128**