ADMINISTRATIVE POLICIES
For
UNDERGRADUATE STUDENTS

TWENTY SECOND EDITION
CATALOG 139 (201631)

TEXAS A&M UNIVERSITY
COLLEGE STATION, TX 77843-3116
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OBJECTIVE

The objective of this handbook is to make available to students and faculty a concise reference for departmental policies related to the Undergraduate Petroleum Engineering curriculum at Texas A&M University (BS-PETE).

DEPARTMENT POLICY ON ACADEMIC ADVISING

Members of the faculty and staff designated by the Department Head, will be responsible for general academic advising of undergraduate students. Professor Priscilla McLeRoy is Director of the Undergraduate Program, Jake Williams and Chris Jenkins are Academic Advisors, and Gail Krueger is Senior Administrative Coordinator for undergraduates. General advising includes development of a comprehensive degree plan and planning of the next semester’s courses prior to registration. Students will be encouraged to enroll in a minimum of 15 credit hours per semester.

REGISTRATION BLOCKS

Undergraduate students who are on scholastic probation, who are not making scholastic progress or who have not been approved to Junior level petroleum engineering courses will be blocked from registration pending consultation with their academic advisor. The purpose of this policy is to assist students in developing a degree plan that satisfies all graduation requirements, including satisfying prerequisite course sequences.

COURSES COMPRISING THE MAJOR FIELD

For Catalog 139 and subsequent catalogs, the courses comprising the major field are defined by the Petroleum Engineering Department as follows:

*All required PETE and GEOL courses included in the curriculum in Petroleum Engineering.

COURSES TAKEN S/U

All non-zero credit hour courses leading to a baccalaureate degree in petroleum engineering must be taken for a letter grade (A, B, C, D, F), none accepted on a pass/fail (S/U) basis.

CURRENT CONTACT INFORMATION

To avoid missing important information from the Petroleum Engineering Department, it is the responsibility of each student to inform the University with up-to-date local and permanent addresses, telephone numbers, and University e-mail account (@tamu.edu). Communications are emailed to the university email account. To make changes, see website: howdy.tamu.edu, or call Gail Krueger at 979-845-6955.
Petroleum Engineering is concerned primarily with the economic extraction of oil, gas, and other natural resources from the earth. Oil and gas is produced through the design, drilling and operation of wells and well systems, and the integrated management of the underground reservoirs in which the resources are found.

The mission of the Petroleum Engineering Department is to create, preserve, integrate, transfer, and apply petroleum engineering knowledge and to enhance the human capability of its practitioners. The Petroleum Engineering Program has two educational objectives:

- graduates will have the technical depth and breadth to be successful professionals early in their careers; and
- graduates will have the broad technical knowledge and soft skills needed to rise to positions of professional leadership.

In essence, the goal of the Petroleum Engineering curriculum is to provide a modern engineering education with proper balance between fundamentals and practice, and to graduate engineers capable of being productive contributors immediately who are also prepared for life-long learning. The curriculum includes study of:

- design and analysis of well systems and procedures for drilling and completing wells;
- characterization and evaluation of subsurface geological formations and their resources;
- design and analysis of systems for producing, injecting, and handling fluids;
- application of reservoir engineering principles and practices for optimizing resource development and management; and
- use of project economics and resource valuation methods for design and decision making under conditions of risk and uncertainty.

There is a heavy emphasis on mathematics, computer applications, communication skills, and interdisciplinary problem solving. As a result, Aggie Petroleum Engineers are in high demand in the industry, and their starting salaries are consistently among the top in the University and the nation.

The department is well known for its curriculum, facilities and faculty, and its undergraduate program was recognized as the best in the nation by US News and World Report in their most recent evaluation. The faculty comprises more than 41 professors and lecturers, many of them widely known and globally involved in the petroleum industry. Three (3) of the faculty are members of the prestigious National Academy of Engineering, and 15 are Distinguished Members of the Society of Petroleum Engineers. The Bachelor of Science program is accredited by the Engineering Accreditation Commission of ABET, www.abet.org.

Students work as interns during the summer months; a minimum of six weeks of approved experience is required for graduation. The department also participates in the Cooperative Education Program.

In addition to the Bachelor of Science degree in Petroleum Engineering, the department also offers both masters and doctoral degrees, including the Master of Science and Master of Engineering, and the Doctor of Philosophy and Doctor of Engineering (see the Texas A&M University Graduate and Professional Catalog).

Before commencing course work in the major, students must be admitted to the major or have the approval of the department.
## PETROLEUM ENGINEERING CURRICULUM

### TAMIU Catalog 139 (2016-2017)

### FRESHMAN YEAR

<table>
<thead>
<tr>
<th>First Semester</th>
<th>(Th-Pr)</th>
<th>Cr</th>
<th>Second Semester</th>
<th>(Th-Pr)</th>
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<tr>
<td>ENGR 111&lt;sup&gt;2&lt;/sup&gt; Foundations in Engineering</td>
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<td>CHEM 117&lt;sup&gt;2&lt;/sup&gt; Gen. Chem. for Eng. Stu. Lab</td>
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<td>MATH 151&lt;sup&gt;2&lt;/sup&gt; Engineering Mathematics I</td>
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<td>ENGR 112&lt;sup&gt;2&lt;/sup&gt; Foundations in Engineering II</td>
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<td>PHYS 218&lt;sup&gt;2&lt;/sup&gt; Mechanics</td>
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<td>MATH 152&lt;sup&gt;2&lt;/sup&gt; Engineering Mathematics</td>
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### SOPHOMORE YEAR

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<td>ENGL 210, COMM 203, COMM 205, or COMM 243</td>
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<td>CVEN 305 Mechanics of Materials</td>
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<td>GEOL 104&lt;sup&gt;2&lt;/sup&gt; Physical Geology</td>
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<td>MATH 308 Differential Equations</td>
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<td>MEEN 315 Prin. of Thermodynamics</td>
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<td>MEEN 221 Statics and Particle Dynamics</td>
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<td>PETE 311 Reservoir Petrophysics</td>
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<td>PETE 225&lt;sup&gt;2&lt;/sup&gt; Intro. to Drilling Systems</td>
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### JUNIOR YEAR

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<td>GEOL 404 Geology of Petroleum</td>
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<td>PETE 321 Formation Evaluation</td>
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<td>PETE 301 Petr. Engr. Numerical Methods</td>
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<td>PETE 323 Fund. of Reservoir Engineering</td>
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<td>PETE 310 Reservoir Fluids</td>
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<td>PETE 324 Well Testing</td>
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<td>PETE 314 Trans. Processes in Petr. Production</td>
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<td>PETE 325 Petroleum Productions Systems</td>
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<td>PETE 337 Junior Student Paper Contest</td>
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<td>PETE 355 Drilling Engineering</td>
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<td>PETE 401 Reservoir Simulation</td>
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<td>PETE 402 Integrated Asset Development</td>
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<td>PETE 404 Integrated Reservoir Modeling</td>
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<td>PETE 437 Senior Student Paper Contest</td>
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<td>PETE 410 Production Engineering</td>
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<td>PETE 435 Technical Presentations II</td>
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### NOTES:

1. To be selected from the University Core Curriculum. 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 sciences. The required 6 hours from international and cultural diversity 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 courses.

2. **A grade of C or better is required.**

3. As approved by the department head, see [engineering.tamu.edu/petroleum/academics](http://engineering.tamu.edu/petroleum/academics) for a list of approved courses.

The following certificates from the College of Engineering are available for students pursuing this degree: Business Management, Engineering Systems Management, Energy Engineering, Engineering Project Management, Engineering Honors, International Engineering, Polymer Specialty and Safety Engineering.
Petroleum Engineering Curriculum - Catalog 139 (201631, 2016-2017)

The following is a list of 3-hour international and Cultural Diversity electives (6 credit hours required) that also meet the University Core Curriculum requirements for American History (6 credit hours required), Creative Arts (3 credit hours required), or Social and Behavioral Science (3 credit hours required).

See [http://core.tamu.edu](http://core.tamu.edu) for full list of American History, Creative Arts, & Social and Behavioral Science courses including those that do not also provide ICD

<table>
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<th>Foundational Component Area and Core Objectives</th>
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<td>American Indian History</td>
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<td>AFST 301</td>
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<td>Popular Musics in the African Diaspora</td>
<td>MUSC 327; PERF 327</td>
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<td>ANTH 324</td>
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<td>Survey of World Architecture History I</td>
<td>ARCH 1301</td>
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<td>Survey of World Architecture History II</td>
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<td>History &amp; Theory of Modern &amp; Contemporary Architecture</td>
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<td>Art History Survey II</td>
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<td>Field Studies in Design Communication</td>
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<td>HISP 205</td>
<td>Don Quixote and the other Arts</td>
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<td>Guitar Heroes</td>
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<td>Performance in World Cultures</td>
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<td>Popular Musics in the African Diaspora</td>
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<td>MUSC 328</td>
<td>Japanese Traditional Performing Arts</td>
<td>THAR 328</td>
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<td>Global Social Justice Issues in Agriculture</td>
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<td>Social and Behavioral Sciences</td>
<td>ANTH 201</td>
<td>Introduction to Anthropology</td>
<td>ANTH 2346, HUMA 2323</td>
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<td>Social and Behavioral Factors in Design</td>
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<td>Global Ethics, Culture and Practice</td>
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<td>Understanding Special Populations</td>
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<td>Foundations of Education in a Multicultural Society</td>
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<td>Morality and Society</td>
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<td>Diversity in Sport Organizations</td>
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<td>Urban Issues</td>
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<td>SOCI 207</td>
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</table>
Harold Vance Department of Petroleum Engineering

### Majors
- Bachelor of Science in Petroleum Engineering

### Minors
- Petroleum Engineering Minor

### Certificates
- Energy Engineering Certificate

### Courses

**PETE 201 Introduction to Petroleum Engineering**  
Credit 1. 1 Lecture Hour.  
Overview and history of the petroleum industry and petroleum engineering; nature of oil and gas reservoirs, exploration and drilling, formation evaluation, well completions and production, surface facilities, reservoir mechanics, improved oil recovery; impact of ethical, societal, environmental considerations; career development resources, including professional society.  
**Prerequisite:** Approval of department head.

**PETE 225 Introduction to Drilling Systems**  
Credits 3. 2 Lecture Hours. 3 Lab Hours.  
Introduction to petroleum drilling systems, including fundamental petroleum engineering concepts, quantities and unit systems, drilling rig components, drilling fluids, pressure loss calculations, casing, well cementing, and directional drilling.  
**Prerequisites:** Grade of C or better in ENGR 112, MATH 152 and PHYS 218.

**PETE 285 Directed Studies**  
Credits 1 to 4. 1 to 4 Other Hours.  
Special problems in various areas of petroleum engineering assigned to individual students or to groups.  
**Prerequisites:** Approval of department head.

**PETE 289 Special Topics in...**  
Credits 1 to 4. 1 to 4 Lecture Hours.  
Selected topics in an identified area of petroleum engineering. May be repeated for credit.  
**Prerequisite:** Approval of instructor.

**PETE 291 Research**  
Credits 1 to 4. 1 to 4 Other Hours.  
Research conducted under the direction of a faculty member in petroleum engineering. May be taken two times for credit. Registration in multiple sections of this course is possible within a given semester.  
**Prerequisites:** Freshman or sophomore classification and approval of instructor.

**PETE 300 Summer Practice**  
Credits 0.  
Required. No Credit. Industry practice to familiarize the petroleum engineering student with practices and equipment of the petroleum industry. Approval of advisor required.

**PETE 301 Petroleum Engineering Numerical Methods**  
Credits 3. 2 Lecture Hours. 3 Lab Hours.  
Use of numerical methods in a variety of petroleum engineering problems; numerical differentiation and integration; root finding; numerical solution of differential equations; curve fitting and interpolation; computer applications; introduction to the principles of numerical simulation methods.  
**Prerequisites:** MATH 308, junior or senior classification, petroleum engineering majors only; or approval of instructor.

**PETE 310 Reservoir Fluids**  
Credits 4. 3 Lecture Hours. 3 Lab Hours.  
Thermodynamic behavior of naturally occurring hydrocarbon mixtures; evaluation and correlation of physical properties of petroleum reservoir fluids including laboratory and empirical methods.  
**Prerequisites:** Grade of C or better in CHEM 107 and CHEM 117; MATH 251, MEEN 315, PETE 311.  
**Corequisite:** MATH 308.

**PETE 311 Reservoir Petrophysics**  
Credits 4. 3 Lecture Hours. 3 Lab Hours.  
Systematic theoretical and laboratory study of physical properties of petroleum reservoir rocks: lithology, porosity, elastic properties, strength, acoustic properties, electrical properties, relative and effective permeability, fluid saturations, capillary characteristics and rock-fluid interactions such as adsorption and absorption.  
**Prerequisites:** MATH 251; PHYS 208 with a grade of C or better.  
**Corequisite:** GEOL 104 with a grade of C or better.

**PETE 314 Transport Processes in Petroleum Production**  
Credits 3. 3 Lecture Hours.  
Basics and applications of fluid mechanics (statics; mass, energy, momentum balances; laminar and turbulent flow, Reynolds number, Moody diagram; non-Newtonian fluid flow; multi-phase flow; flow in porous media, non-Darcy flow); heat transfer (heat conduction, convection, heat exchangers); emphasis on analogies and similarities within mass, energy and momentum transport.  
**Prerequisites:** MEEN 315, junior or senior classification, petroleum engineering majors only; or approval of instructor.

**PETE 321 Formation Evaluation**  
Credits 4. 3 Lecture Hours. 3 Lab Hours.  
Well-log interpretation for formation evaluation of hydrocarbon-bearing reservoirs; basic rock physics principles; theory of tool operation; analysis of open hole logs and core measurements to estimate hydrocarbon reserves and petrophysical properties of the formation such as porosity, net pay thickness, water/hydrocarbon saturation, permeability and saturation-dependent capillary pressure; formation evaluation of clay-free and shaly-sand formations as well as basic introduction to formation evaluation of organic-shale formations.  
**Prerequisites:** PETE 301, PETE 310, PETE 311; GEOL 404, junior or senior classification, petroleum engineering majors only; or approval of instructor.

**PETE 323 Fundamentals of Reservoir Engineering**  
Credits 3. 3 Lecture Hours.  
Determination of reserves; material balance methods; aquifer models; fractional flow and frontal advance; displacement, pattern and vertical sweep efficiencies in waterfloods; enhanced oil recovery processes; design of optimal recovery processes; introduction and performance analysis of unconventional reservoirs.  
**Prerequisites:** PETE 301, PETE 310, PETE 311; GEOL 404, junior or senior classification, petroleum engineering majors only; or approval of instructor.

**PETE 324 Well Testing**  
Credits 3. 3 Lecture Hours.  
Analysis of well performance under varied reservoir conditions including evaluation of unsteady, pseudo-steady and steady state flow; well testing methods used to determine well and reservoir parameters; applications to conventional and unconventional wells producing gas and/or liquids; fundamentals of preparing and operating well test equipment to monitor, measure and gather samples for evaluating well performance.  
**Prerequisites:** PETE 301, PETE 310, PETE 311; GEOL 404, junior or senior classification, petroleum engineering majors only; or approval of instructor.
PETE 325 Petroleum Production Systems
Credits 3. 2 Lecture Hours. 3 Lab Hours.
Petroleum operation and oil field equipment including onshore and offshore production systems; wellbore inflow and outflow and backpressure analysis; downhole completion and sand control equipment; artificial lift equipment and design; stimulation, workover/completion nomenclature; flow assurance; produced fluids, fluid separation and metering, safety systems, pressure boosting and monitoring.
Prerequisites: PETE 301, PETE 310, PETE 314, junior or senior classification, petroleum engineering majors only; or approval of instructor.

PETE 335 Technical Presentations I
Credit 1. 1 Lecture Hour.
Preparation of a written technical paper proposal on a subject related to petroleum technology and an oral presentation of the proposal in a formal technical conference format.
Prerequisites: COMM 203, COMM 205 or ENGL 210; junior or senior classification.

PETE 337 Junior Student Paper Contest
Credits 0.
No Credit. Presentation of a technical proposal on a subject related to petroleum technology judged by petroleum professionals at the junior level departmental student paper contest. Must be taken on a satisfactory/unsatisfactory basis.
Prerequisite: PETE 335.

PETE 353 Petroleum Project Evaluation
Credits 3. 3 Lecture Hours.
Economic analysis and investment decision methods in petroleum and mineral extraction industries; depletion, petroleum taxation regulations, and projects of the type found in the industry; mineral project evaluation case studies.
Corequisites: PETE 301, PETE 310.

PETE 355 Drilling Engineering
Credits 3. 3 Lecture Hours.
Design and evaluation of well drilling systems; identification and solution of drilling problems; wellbore hydraulics, well control, casing design; well cementing directional drilling, offshore drilling.
Prerequisites: CVEN 305, PETE 225 with a grade C or better, PETE 314
Corequisites: PETE 321, PETE 325.

PETE 401 Reservoir Simulation
Credits 2. 1 Lecture Hour. 3 Lab Hours.
Solution of production and reservoir engineering problems using state-of-the-art commercial reservoir simulation software, using data commonly available in industry; emphasis on reservoir description, reservoir model design and calibration, production forecasting and optimization, economic analysis and decision making under uncertainty.
Prerequisites: PETE 310, PETE 321, PETE 323, PETE 324, PETE 353.

PETE 402 Integrated Asset Development
Credits 3. 1 Lecture Hour. 6 Lab Hours.
Capstone design encompassing previously acquired skills; project teams formed to solve practical petroleum engineering problems using current tools; technical content of the projects may include any combination of drilling and completion, formation evaluation, inflow/outflow design and analysis, and application of reservoir engineering principles.
Prerequisites: PETE 355, PETE 401, PETE 404, PETE 410.

PETE 404 Integrated Reservoir Modeling
Credits 3. 3 Lecture Hours.
Geophysical, geological, petrophysical and engineering data with geostatistical methods to create reservoir descriptions for dynamic reservoir modeling (simulation); geostatistical concepts such as variogram modeling, kriging and sequential Gaussian simulation; combines several techniques to quantify uncertainty in a realistic dynamic reservoir simulation.
Corequisite: PETE 401.
PETROLEUM ENGINEERING CURRICULUM
Prerequisites Curriculum Outline
TAMU Catalog 139 (201631, 2016-2017)

### FRESHMAN YEAR

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### SENIOR YEAR

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NOTES:
1. To be selected from the University Core Curriculum. 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 sciences. The required 6 hours from international and cultural diversity 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 courses.
2. A grade of C or better is required.
3. As approved by the department head, see engineering.tamu.edu/petroleum/academics for a list of approved courses.
R. Registration therein (co-requisite)

The following certificates from the College of Engineering are available for students pursuing this degree: Business Management, Engineering Systems Management, Energy Engineering, Engineering Project Management, Engineering Honors, International Engineering, Polymer Specialty and Safety Engineering.
### APPROVED PETROLEUM ENGINEERING Technical Electives

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<td>BAEN 460</td>
<td>Principles of Environmental Hydrology</td>
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<td>BAEN 465</td>
<td>Design of Biological Waste Treatment Systems</td>
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<td>Risk Analysis in Safety Engineering</td>
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<td>Gas and Petroleum Processing</td>
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<td>Process Dynamics and Control</td>
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<td>CVEN 301</td>
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<td>Engineered Environmental Systems</td>
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<td>Environmental Protection and Public Health</td>
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<td>CVEN 413</td>
<td>Natural Environmental Systems</td>
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<td>Geomatics for Civil Engineering</td>
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<td>ECEN 215</td>
<td>Principles in Electrical Engineering</td>
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<td>Signals and Systems</td>
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<td>ECEN 420</td>
<td>Linear Control Systems</td>
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<td>Economics of Resource Scarcity</td>
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<td>Global Engineering Design</td>
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<td>Fundamentals of Subsea Engineering</td>
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<td>Investment Analysis</td>
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<td>Managerial Finance I</td>
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<td>Survey of Finance Principles</td>
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<td>GEOL 306</td>
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<td>GEOL 410</td>
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<td>GEOP 421</td>
<td>Petroleum Seismology I</td>
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<td>ISEN 315</td>
<td>Production Systems Planning</td>
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<td>MATH 311</td>
<td>Topics in Applied Mathematics I</td>
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<tr>
<td>MATH 4xx</td>
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<tr>
<td>MEEN 368</td>
<td>Solid Mechanics in Mechanical Design</td>
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<tr>
<td>MSEN xxx</td>
<td>300 and 400 level courses approved for Materials Science &amp; Engineering Minor</td>
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<tr>
<td>PETE 406</td>
<td>High Performance Drilling Design and Operational Practices</td>
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<td>PETE 416</td>
<td>Solving Common Production Engineering Problems</td>
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<td>PETE 4xx</td>
<td>including up to 3 credit hours of PETE 485 or 491; excluding courses meeting degree requirements</td>
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<td>PETE 6xx</td>
<td>where 00 &lt; xx &lt; 60 (requires approval by Undergrad Advisor)</td>
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</table>

Non-PETE courses can be within or outside the College of Engineering and should satisfy a set of criteria:

1. Course has a discipline-specific prerequisite
2. Course requires advanced math skills (i.e. Math 251)
3. Course content uses formal analytical methods and requires quantitative coursework
4. Course material provides a deep understanding in a specific technical discipline

Prerequisites and/or Instructor/departmental approval from the department offering the course must be met for all technical electives.
SUMMER PRACTICE - PETE 300

One of the unique features of the curriculum in Petroleum Engineering at Texas A&M University is a requirement that students have summer practical experience; for example, six weeks fulltime employment in exploration and production with an oil and gas company or oilfield services company. This requirement permits our students to see how subjects they have studied are applied in industry, become familiar with practices and equipment of the petroleum producing industry, and gain valuable job experience. While one summer work experience is required, multiple summer work experiences are suggested and encouraged.

The student will register for PETE 300 in their last summer before graduation and will receive a satisfactory grade upon completion of the requirements. The required documentation consists of a Student Intern Report prepared by the student, a Summer Internship Evaluation prepared by the student intern's supervisor, and a letter/email from the student's employer stating the time period employed and the nature of the work experience. These documents are prepared at the end of the internship, and are available to the Undergraduate Curriculum Committee for use in program evaluation.

SCHOLASTIC PERFORMANCE REQUIREMENTS

All students, whether currently enrolled or seeking to transfer, who wish to pursue an academic program leading to a baccalaureate degree in petroleum engineering at Texas A&M University must satisfy each of the following requirements.

I. Admission to Sophomore Engineering Courses

To be admitted to the junior petroleum engineering courses, the student must have:

1. The student must have a grade of "C" or better for each. These courses are MATH 151 and 152, CHEM 107 and 117, PHYS 218, PHYS 208, ENGL 104, ENGR 111 and 112 or approved course substitutions. Any of these courses must be repeated before progressing in prerequisite course sequences if a student receives a final grade of "D" or "F".

2. Must have degree planner submitted and approved:
   a. by September 30 each academic year.
   b. Anytime you deviate from your degree plan

II. Admission to Junior Petroleum Engineering Courses

To be admitted to the junior petroleum engineering courses (the last two years of study), the student must have:

1. Completed the following basic courses: COMM 205, GEOL 104, MEEN 221 and 315, CVEN 305, MATH 251 and 308, PETE 225 and 311, or approved course equivalents.

2. A grade of "C" or better is required in GEOL 104 and PETE 225 before progressing in the prerequisite course sequence.

3. Cumulative TAMU Resident GPR of 2.0 or higher and PETE major GPR of 2.0 or higher. Note that the PETE major courses are comprised of all required PETE and GEOL courses included in the curriculum in Petroleum Engineering.

4. Must have degree planner submitted and approved:
   a. by September 30 each academic year.
   b. Anytime you deviate from your degree plan
III. Admission to Senior Petroleum Engineering Courses

To be admitted to the senior petroleum engineering courses (the final year of study), the student must have:

1. Completed the following courses: GEOL 404; and PETE 301, 310, 314, 321, 323, 324, 325, 335, 353, and 355.

2. Cumulative TAMU Resident GPR of 2.0 or higher and PETE major GPR of 2.0 or higher.
   Note that the PETE major courses are comprised of all required PETE and GEOL courses included in the curriculum in Petroleum Engineering.

3. Completed the summer practice requirement (PETE 300).

4. Must have degree planner submitted and approved:
   a. by September 30 each academic year.
   b. Anytime you deviate from your degree plan.
**Miss Reveille IIIX**  
**FALL 2016- College Station**  
**May 30, 2016 5:00pm**

*Completed Courses: All First Year Freshman Courses except PHYS 208, POLS 206 and POLS 207*

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<td>PETE 402</td>
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<td>PETE 406</td>
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</table>
According to the Scholastic Deficiency/Probation section (Revised: 2013) of the Texas A&M University Student Rules (http://student-rules.tamu.edu/rule12), Section 12.1 An undergraduate student is scholastically deficient when

- 12.1.1 His or her term grade point average is less than 2.00; or
- 12.1.2 His or her cumulative grade point average is less than 2.00; or
- 12.1.3 The cumulative grade point average in his or her major field of study is below a 2.00; or
- 12.1.4 He or she is not meeting college and/or major course of study grade point requirements.

**Probation & Block Policies (All Engineering Majors)**

Determination of scholastically deficient status occurs at the end of each long semester (fall or spring) once final semester grades have been posted. No scholastically deficient review occurs at the end of summer semester. Scholastically deficient students are placed on scholastic probation. Departments may have additional terms or definitions of scholastic probation, please refer to the department’s policy for more information.

- **Cumulative GPA <2.0**
  - Placed on scholastic probation and blocked from pre-registration by the department.
    - At the end of the probationary semester
      - If the term GPA is ≥2.0 in the probationary semester and the cumulative GPA is ≥2.0, the student will return to good academic standing.
      - If the term GPA is ≥2.0 in the probationary semester and the cumulative GPA remains below 2.0, the student may be allowed additional probationary semester(s) based on departmental policy.

- **Term GPA <2.0**
  - Placed on scholastic probation.
    - At the end of the probationary semester
      - If the term GPA is ≥2.0 in the probationary semester, the student will return to good academic standing.
      - If the term GPA is <2.0 in the probationary semester, the student will be dismissed from the department and blocked from further registration until the student has changed majors.
        - If the student changes majors within the college of engineering they will be placed on probation and blocked from pre-registration by the Engineering Academics and Student Affairs office.
        - If the term GPA is ≥2.0 in the probationary semester, the student will return to good academic standing.
        - If the term GPA is <2.0 in the probationary semester, the student will be dismissed from the college and blocked from further registration in the College of Engineering.

**University Level Suspension Policies**

- A scholastically-deficient undergraduate student may, after review by the Associate Provost for Undergraduate Studies or designee, be suspended from the university because of scholastic deficiency by the following action: Suspension – Separation of the student from the university for a definite period of time. The student is not guaranteed readmission at the end of this period of time. The student is guaranteed a review of the case and a decision regarding eligibility for readmission.

Below is a chart to visually represent the above policies:

<table>
<thead>
<tr>
<th>Classification</th>
<th>U1 – Freshman</th>
<th>U2 – Sophomore</th>
<th>U3 – Junior</th>
<th>U4 – Senior</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>COE Scholastic Probation &amp; Block</strong></td>
<td>&lt;2.0</td>
<td>&lt;2.0</td>
<td>&lt;2.0</td>
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<tr>
<td><strong>University Level Suspension Thresholds</strong></td>
<td>Grade point deficit of -18</td>
<td>Grade point deficit of -18</td>
<td>Grade point deficit of -14</td>
<td>Grade point deficit of -10</td>
</tr>
</tbody>
</table>

**Student Rights**

An undergraduate student blocked or suspended for deficient scholarship may request a hearing by the University Academic Appeals Panel in accordance with Student Rule 12.8.5.

Undergraduate students can appeal their dismissal. Dismissal letters sent to the students at the end of each semester will have instructions on how to appeal to their department or college depending on the level of dismissal.

Revised April 2016
NOTES: for undergraduate students in the Harold Vance Department of Petroleum Engineering (PETE):

1. Departmental policy on scholastic probation, suspension (block), and readmission must comply with College of Engineering policy, and Texas A&M University policy. These policies may change over time, through the processes of Texas A&M University, the College of Engineering, and the Harold Vance Department of Petroleum Engineering.

2. Note that the Freshman/Sophomore/Junior/Senior designations in the above policy correspond to Texas A&M University classifications U1/U2/U3/U4 respectively, as discussed in TAMU Undergraduate Catalog 139 (2016-2017).

3. When a PETE student is scholastically suspended, the student “will be blocked from registration in the College of Engineering for at least one calendar year”, and that readmission following suspension is not automatic. Application for readmission is through the Office of Admissions (see admissions.tamu.edu for requirements and deadlines).

4. The statement, “GPR ≥ 2.0 overall and in major field - good academic standing,” and any notation of good academic standing on TAMU transcript (official or unofficial) refers to TAMU Resident (cumulative) GPR of 2.000 or higher only, and only applies to 12.1.2 of the definition of scholastic deficiency. A student with TAMU Resident GPR of 2.000 or higher may still be scholastically deficient under the parts 12.1.1, 12.1.3, or 12.1.4 of the definition of scholastic deficiency.

DEPARTMENTAL SCHOLARSHIP REQUIREMENTS
2016- 2017

Scholarship Awards:

All current Petroleum Engineering students must apply for Petroleum Engineering department scholarships using the Texas A&M University Continuing Student Scholarship Application which is available on the Scholarship & Financial Aid website at: http://sfaid.tamu.edu/uwideapp/. This includes all students who have received Nelson and Von Gonten scholarships. Applications open on October 15, 2016 and are due by February 1, 2017. To apply, students must be full-time students (registered for at least 12 credit hours per semester) in good academic standing, and have a minimum GPR of 2.0. A student is not in good academic standing if he or she is on conduct probation or honor violation probation or has a GPR less than 2.0.

Petroleum Engineering department scholarships are awarded on an annual basis each Fall semester. Scholarship amounts are based on availability of funds and are paid in equal installments. The first installment will be paid at the beginning of the fall semester and the second at the beginning of the spring semester. The student must continue to meet departmental scholarship requirements to receive the second installment of the scholarship, and can only receive one departmental scholarship per academic year. Exceptions to the 12 credit hour rule may be granted to last semester graduating seniors on a case-by-case basis. If the exception is granted, the student may be awarded a proportional amount of the scholarship.

If annual scholarships are awarded to BA-ENGE-PE preference students, the student must be taking courses toward a PETE degree, and be making satisfactory progress toward that degree. They will also be required to meet all other scholarship requirements, i.e. must be a full-time student (12 credit hours per semester) and be in good academic standing.

BA-ENGE-PE preference students who meet the Nelson Scholarship criteria are eligible to apply for a Nelson Scholarship. Applicants must complete the Nelson Scholarship Application and selections are made by the Petroleum Engineering Scholarship Committee. Selected students will remain on the scholarship as long as they meet the scholarship requirements, are accepted into Petroleum Engineering
as their major before their 3rd semester, and complete the University Continuing Student Scholarship Application. Students on Nelson Scholarships will be allowed a maximum of one semester of probation if their GPR falls below 3.0.

Petroleum Engineering students who meet the Kelly and Bill Von Gonten Scholarship criteria are eligible to apply by completing the Kelly and Bill Von Gonten Scholarship Application. Selections are made by the Petroleum Engineering Scholarship Committee. The selected student will remain on the scholarship as long as they meet the scholarship requirements, and complete the University Continuing Student Scholarship Application. A student on the Kelly and Bill Von Gonten Scholarship will be allowed a maximum of one semester of probation if their GPR falls below 3.0.

**Scholarship Continuation:**

The academic achievement of all current PETE and BA-ENGE-PE students who have been awarded departmental scholarships is reviewed prior to the Spring semester. Scholarship continuation is determined as follows:

1. **Good Standing:** Students continue to meet all scholarship requirements as indicated by the donor gift agreement, i.e. full-time student status (12 credit hours per semester) and cumulative GPR indicated by the donor.

2. **Probation:** A student will be given one semester of probation if a student falls below the cumulative GPA required by the donor gift agreement, but remains above a 2.0 GPR.

3. **Cancellation:** Scholarships will be cancelled in the following situations:
   a. The student’s cumulative GPR is less than 2.0.
   b. The student does not register for 12 credit hours (full-time) each semester.
   c. The student transfers out of the department or BA-ENGE-PE preference, or leaves the university.
   d. The student is on conduct probation or honor violation probation, and if the length of the probation/deferred suspension is greater than one semester. If the conduct or honor violation probation/deferred suspension begins before funds have been disbursed for the semester, the student is not eligible for the funds and the scholarship will be cancelled. If the conduct or honor violation probation/deferred suspension begins after funds have been disbursed for the semester, the student keeps the funds for the semester as long as the conduct or honor probation/deferred suspension period is not greater than one semester.
   e. A BA-ENGE-PE preference student on a Nelson Scholarship is not accepted into PETE as their major before their 3\textsuperscript{rd} semester.

The student must write a thank you letter to the donor and provide a signed copy to the department in order to retain any scholarship he/she has been awarded. If the student does not write the thank you letter, he/she will be ineligible for a scholarship in future semesters.
MINOR FIELD OF STUDY

A petroleum engineering student who has completed all first year Engineering courses may declare a minor, consisting of prescribed courses that focus on a single content area or an interdisciplinary and/or comparative perspective on more than one area. The minor comprises 15 to 19 hours with a minimum of 6 in residence at the 300-400 level. Intent to pursue a minor must be made and the approval process completed before the student applies for graduation. The minor will be recognized on the transcript after graduation, but not on the diploma. Up to two (2) Minors may be approved.

Students wishing to pursue a minor may obtain an approval form from the minor granting department. The minor approval form must be signed by the minor-granting department and returned to the petroleum engineering department, where the minor program will be added to the student's degree requirements. The student, minor-granting department, and petroleum engineering department retain a copy of the signed approval form. The petroleum engineering department retains responsibility for advising the student after he/she obtains approval from a minor-granting department. No minor approval form is necessary for Business Administration (BUAD) or Mathematics (MATH); students may submit a plan for completion and request to add the BUAD or MATH minor through their academic advisor. Note that departmental policy may place additional restrictions beyond those of the minor granting department on courses used to satisfy minor requirements, as appropriate for petroleum engineering majors. As examples, for the MATH minor PETE students may not include MATH 417; and for the GEOL or GEOP minors, PETE students may not include GEOL 400, PETE 402, or PETE 401. A decision to pursue a minor should not be made lightly. Failure to complete requirements for the minor may delay graduation.

DOUBLE MAJOR

Student requests to pursue a double major will be evaluated on a case by case basis. Approval by the Director Undergraduate Advising is required.

TRANSFER OF COURSE CREDITS TO BS-PETE DEGREE REQUIREMENTS

There are two ways in which course credits earned at another institution of higher education may be transferred and applied to degree requirements. The first is transfer by equivalency, as indicated on the Transfer Course Equivalency system on the Howdy portal, or as determined by the Registrar's Office. The second type of transfer credit is transfer by title, and must be initiated through a student's academic advisor. In general, a course must be a reasonable substitution for the corresponding TAMU course, as determined by the PETE departmental Director of Undergraduate Advising.

Departmental policy does not allow for consideration of transfer by title of credit for 300-499 numbered TAMU courses, except when the course meets degree requirements of an ABET accredited engineering curriculum at the institution (college or university) at which the course was completed.

Q-DROPS

Students may drop courses without record according to University and College of Engineering policies.

Unless otherwise restricted, a student may drop a course without penalty through the 60th class day of a fall or spring semester, the 15th class day of summer term or the 35th class day of a 10-week
summer semester (as noted on the University Academic Calendar). The symbol Q shall be given to indicate a drop without penalty. Undergraduate students will normally be permitted four Q-drops during their undergraduate studies.

A student who drops a course after the Q-drop period has elapsed will receive a grade of F unless unusual circumstances exist as determined by the student's dean. The term "no grade" may be recorded by the dean of the student's college if it is determined such circumstances do exist.

CO-ENROLLMENT

The Petroleum Engineering Department discourages co-enrollment (concurrent enrollment) at Texas A&M University and any other institution.

International students wishing to co-enroll must obtain approval of the International Student Services office.

STUDENT PAPER CONTESTS

The Petroleum Engineering Department requires, as a condition for graduation, that students prepare two technical presentations and present them in public forums. Normally students take PETE 335 and PETE 435 during the fall semester of the junior year and fall semester of the senior year, respectively; and, participate in the departmental student paper contests held during the same academic years in which PETE 335 and PETE 435 are taken (typically held on a Saturday, early in the Spring semester). PETE 337 in spring semester of junior year, PETE 437 in spring semester of senior year; and it is disallowed to enroll in PETE 337 and PETE 437 concurrently.

TAMU STUDENT CHAPTERS OF THE
SOCIETY OF PETROLEUM ENGINEERS (SPE)
AMERICAN ASSOCIATION OF DRILLING ENGINEERS (AADE)

It is the general policy of the Petroleum Engineering Department to encourage all PETE undergraduate students to actively participate in the professional programs and social activities sponsored by the Texas A&M University student chapters of SPE and AADE.

The major benefit to students is the enhancement of their educational experiences at Texas A&M University through formal and informal association with professionals who are actively working in the petroleum exploration and production industry. More information can be found on the SPE website at spe.tamu.edu and AADE website at aade-tamu-student-chapter.webnode.com/.

CERTIFICATE PROGRAMS

The College of Engineering has designed the certificate programs to offer students the opportunity to go beyond the traditional curriculum and gain specific knowledge in a concentration area. The certificates are of great value - both to the students who pursue them and to potential employers who seek candidates who possess competencies developed from earning them.

ENGINEERING HONORS CERTIFICATE

The Petroleum Engineering Department encourages all qualified students (Honors Program eligible) to participate in the University and/or Engineering Honors Program. Requirements are available at the Engineering Academic & Affairs website engineering.tamu.edu/programs/eh.
GRAHAM PETROLEUM VENTURES PROGRAM (PVP)

Petroleum engineering graduates today enter a business climate of ever-increasing complexity. Petroleum economics, finance, business principles, and project management have become as important for engineers as understanding subsurface engineering. To bridge this gap, engineering students find themselves needing a business background to complement their technical expertise.

Through a collaboration between the Harold Vance Department of Petroleum Engineering and Mays Business School, the Petroleum Ventures Program allows petroleum engineering and business students to take courses and work together on projects in a Petroleum Business Impact Lab. This interdisciplinary initiative sets Aggie petroleum engineers apart by giving them unparalleled exposure to business concepts, industry leaders and case-based learning opportunities.

The program impacts undergraduate petroleum engineering and finance students with a desire to work in energy finance or petroleum management.

The program enables access to courses that train petroleum engineering students in the following areas:

- Petroleum economics
- New venture formation
- Business planning
- Leadership
- Communication
- Accessing capital
- Evaluating A&D opportunities
- Human relations
- Public relations
- Investor relations
- Daily management decision-making
- Crisis management

Up to 25 petroleum engineering students accepted each academic year are required to take two PVP-qualified classes as part of their core degree plan. Students interested to go further take two additional technical electives for credit toward their petroleum engineering major. Those interested in pursuing the full PVP certificate take five additional courses from the Mays Business School. Students pursuing a Master’s of Financial Management do so with one additional year after completing their petroleum engineering degree.

ADDITIONAL ENGINEERING CERTIFICATES

- International Engineering
- Business Management
- Engineering Systems Management
- Engineering Project Management
- Polymer Specialty
- Engineering Therapeutics Manufacturing
- Data Center Engineering Operations
- Safety Engineering
- Quality Engineering for Regulated Medical Technologies
- Zachry Leadership Program