

PETROLEUM ENGINEERING DEGREE PROGRAM

If 4 a, b, c, or d was answered with yes, please answer the following questions:

If the proposal has potential budgetary impacts for another college/school, such as requiring new sections or a non-negligible increase in the number of seats offered, at least one contact must be at the college-level.

How many students do you expect to be impacted? n/a

Impacted schools must be contacted and their response(s) included:

Person communicated with:

Date of communication:

Response:

- e. Does this proposal involve changes to the core curriculum or other basic education requirements (42-hour core, signature courses, flags)? If yes, explain: **NO**

If yes, Undergraduate Studies must be informed of the proposed changes and their response included:

Person communicated with:

Date of communication:

Response:

- f. Will this proposal change the number of hours required for degree completion? **NO**

Note: THECB Semester Credit Hour Change Form required, download from URL:

<http://www.thecb.state.tx.us/reports/DocFetch.cfm?DocID=2419&format=doc>

If yes, explain:

5. COLLEGE/SCHOOL APPROVAL PROCESS

Department approval date: 4/12/17

Approved by whom: PGE Faculty and chair

College approval date: May 24, 2017

Approved by whom: CSE Degrees & Courses Committee

Dean approval date: Sept. 18, 2017

Approved by whom: CSE Faculty; Sharon L. Wood, Dean

Under Curriculum

Curriculum

Course requirements include courses within the Cockrell School of Engineering and other required courses. In addition, each student must complete the University's Core Curriculum. In some cases, a course that fulfills one of the following requirements may also be counted toward core curriculum or flag requirements; these courses are identified below.

In the process of fulfilling engineering degree requirements, students must also complete coursework to satisfy the following flag requirements: one independent inquiry flag, one course with a quantitative reasoning flag, one ethics and leadership flag, one global cultures flag, one cultural diversity in the US flag, and two writing flags. The independent inquiry flag, the quantitative reasoning flag, the ethics and leadership flag, and both writing flags are carried by courses specifically required for the degree; these courses are identified below. Courses that may be used to fulfill flag requirements are identified in the *Course Schedule*.

Courses used to fulfill technical and nontechnical elective requirements must be approved by the petroleum and geosystems engineering undergraduate adviser before the student enrolls in them.

Requirements

Hours

Petroleum and Geosystems Engineering Courses

PGE 301	Engineering, Energy, and the Environment	3
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PETROLEUM ENGINEERING DEGREE PROGRAM

PGE 310	Formulation and Solution of Geosystems Engineering Problems	3
PGE 427	Properties of Petroleum Fluids	4
PGE 322K	Transport Phenomena in Geosystems	3
PGE 326	Thermodynamics and Phase Behavior	3
PGE 333T	Engineering Communication (writing flag and ethics and leadership flag)	3
PGE 323K	Reservoir Engineering I: Primary Recovery	3
PGE 323L	Reservoir Engineering II: Secondary and Tertiary Recovery	3
PGE 334	Reservoir Geomechanics	3
PGE 337	Introduction to Geostatistics	3
PGE 362	Production Technology and Design	3
PGE 365	Resource Economics and Valuation	3
PGE 368 <u>PGE 358</u>	Fundamentals of Well Logging <u>Principles of Formation Evaluation</u>	3
PGE 373L	Geosystems Engineering Design and Analysis	3
PGE 424	Petrophysics	4
PGE 430	Drilling and Well Completions	4
Chemistry		
CH 301	Principles of Chemistry I (part II science and technology)	3
CH 302	Principles of Chemistry II	3
Engineering Mechanics		
E M 306	Statics	3
E M 319	Mechanics of Solids	3
Geological Sciences		
GEO 303	Introduction to Geology	3
GEO 316P	Sedimentary Rocks	3
Mathematics		
M 408C	Differential and Integral Calculus (mathematics; quantitative reasoning flag)	4
M 408D	Sequences, Series, and Multivariable Calculus	4
M 427J	Differential Equations with Linear Algebra (quantitative reasoning flag)	4
or M 427K	Advanced Calculus for Applications I	
Physics		
PHY 303K	Engineering Physics I (part I science and technology; quantitative reasoning flag)	3
PHY 303L	Engineering Physics II (part I science and technology; quantitative reasoning flag)	3
PHY 103M	Laboratory for Physics 303K	1
PHY 103N	Laboratory for Physics 303L	1
Rhetoric and Writing		

PETROLEUM ENGINEERING DEGREE PROGRAM

RHE 306	Rhetoric and Writing (English composition)	3
Other Required Courses		
Approved technical area electives		12
Remaining Core Curriculum Courses		
E 316L	British Literature (humanities; in E 316L, 316M, 316N, and 316P some sections carry a global cultures or cultural diversity flag)	3
or E 316M	American Literature	
or E 316N	World Literature	
or E 316P	Masterworks of Literature	
American and Texas government (some sections carry a cultural diversity flag)		6
American history (some sections carry a cultural diversity flag)		6
Visual and performing arts (some sections carry a global cultures and/or cultural diversity flag)		3
Social and behavioral sciences (some sections carry a global cultures and/or cultural diversity flag)		3
UGS 302	First-Year Signature Course (in UGS 302 all sections carry writing flag; in UGS 303 some sections carry a writing flag)	3
or UGS 303	First-Year Signature Course	
Total Hours		128

SUGGESTED ARRANGEMENT OF COURSES

First Year

First Term	Hours	Second Term	Hours
GEO 303	3	PHY 303K	3
CH 301	3	PHY 103M	1
M 408C	4	M 408D	4
RHE 306	3	PGE 301	3
UGS 302 or 303	3	CH 302	3
		Social and behavioral sciences or visual and performing arts	3
	16		17

Second Year

First Term	Hours	Second Term	Hours
PHY 303L	3	GEO 316P	3
PHY 103N	1	E M 319	3
E M 306	3	PGE 333T	3
M 427J or 427K	4	Social and behavioral sciences or visual or performing arts	3
PGE 310	3	PGE 427	4

PETROLEUM ENGINEERING DEGREE PROGRAM

PGE 326	3		
	17		16
Third Year			
First Term	Hours	Second Term	Hours
PGE 323K	3	PGE 323L	3
PGE 424	4	PGE 362	3
PGE 430	4	PGE 368 358	3
PGE 322K	3	American history	3
American government	3	Approved technical area elective	3
	17		15
Fourth Year			
First Term	Hours	Second Term	Hours
PGE 334	3	PGE 373L	3
PGE 337	3	E 316L, 316M, 316N, or 316P	3
PGE 365	3	American history	3
Approved technical area elective	3	Approved technical area electives	6
American government	3		
	15		15
Total credit hours: 128			

¹ See <https://facultycouncil.utexas.edu/degree-program-changes> for detailed explanations.

² Submit required Texas Higher Education Coordinating Board forms to the provost's office (lydia.cornell@austin.utexas.edu); downloadable from URL <https://facultycouncil.utexas.edu/thebc-forms>

³ **EXCLUSIVE:** of *exclusive* application and of primary interest only to a single college or school ("no protest" period is *seven calendar days*); **GENERAL:** of *general* interest to more than one college or school (but not for submission to the General Faculty) ("no protest" period is *fourteen calendar days*); *major* legislation must be submitted to the General Faculty for adoption ("no protest" period is *fourteen calendar days*).