

REQUIREMENTS FOR THE BACHELOR OF SCIENCE
MEWBOURNE COLLEGE OF EARTH AND ENERGY
THE UNIVERSITY OF OKLAHOMA

Academic Year
For Students Entering the Oklahoma State System for Higher Education Summer 2023 through Spring 2024

General Requirements	
Minimum Total Credit Hours	129
Minimum Upper-Division Hours	40
Minimum Retention/Graduation Grade Point Averages:	
Overall - Combined and OU	2.50
Major - Combined and OU	2.50
Curriculum - Combined and OU	2.50

Program
Petroleum Engineering
B765
Bachelor of Science

OU encourages students to complete at least 33 hours of applicable coursework each year to have the opportunity to graduate in 4 years.

GENERAL EDUCATION AND COLLEGE REQUIREMENTS

Courses for fulfillment of General Education and college requirements must be from the approved General Education course list at <http://www.ou.edu/content/gened/courses.html>. **Courses graded P/NP will not apply**

UNIVERSITY-WIDE GENERAL EDUCATION (MINIMUM 40 HOURS) AND COLLEGE REQUIREMENTS

At least three hours of Upper-Division General Education coursework must be completed **outside the major**.

Code	Title	Credit Hours
Core Area I: Symbolic and Oral Communication		
<i>English Composition (6 hours)</i>		
ENGL 1113	Principles of English Composition	3
ENGL 1213	Principles of English Composition	3
or EXPO 1213	Expository Writing	
<i>Language (0-10 hours)</i>		
(0-10 hours in the same language) Students who have not completed two years of the same language in high school are required to take two college courses in the same language		
Beginning Course		0-5
Beginning Course, continued		0-5
<i>Mathematics (minimum 3 hours)</i>		
MATH 1914	Differential and Integral Calculus I ¹	3-4
or MATH 1823	Calculus and Analytic Geometry I	
Core Area II: Natural Science (minimum 7 hours, 2 courses)		
CHEM 1315	General Chemistry (Science with Lab) ¹	5
or CHEM 1335	General Chemistry I: Signature Course	
PHYS 2514	General Physics for Engineering and Science Majors ¹	4
Core Area III: Social Science (6 hours)		
P SC 1113	American Federal Government	3
Choose one course from the General Education Social Science list		
Core Area IV: Arts and Humanities		
<i>Artistic Forms (3 hours)</i>		
Choose one course from the General Education Artistic Forms list.		
<i>Western Culture (6 hours)</i>		
HIST 1483	United States to 1865	3
or HIST 1493	United States, 1865 to the Present	
Choose one course from the General Education Western Culture list (Excluding HIST 1483 and HIST 1493)		
<i>World Culture (3 hours)</i>		
Choose one course from the General Education World Culture list		
Core Area V: First Year Experience (3 hours)		
Choose one course		
Total Credit Hours		39-50

¹Mewbourne College of Earth and Energy Sciences requirements that also satisfy University General Education requirements.

ADDITIONAL MEWBOURNE COLLEGE OF EARTH & ENERGY REQUIREMENT

Code	Title	Credit Hours
PHYS 2524	General Physics for Engineering and Science Majors	4
Total Credit Hours		4

FREE ELECTIVES

Electives to bring total applicable hours to 129 including 40 upper-division hours.

MAJOR REQUIREMENTS

Bachelor of Science in Petroleum Engineering accredited by the Engineering Accreditation Commission of ABET, <https://www.abet.org>, under the General Criteria and the Petroleum and Similarly Named Engineering Programs Program Criteria.

A minimum grade of C is required for each course in the curriculum, and students must successfully complete prerequisite courses (with a minimum C grade) before proceeding to the next course.

Code	Title	Credit Hours
P E 2011	Introduction to Petroleum Engineering	1
P E 2113	Statics and Dynamics	3
P E 2213	Thermodynamics	3
P E 2153	Mechanics of Materials	3
P E 3022	Technical Communications	2
P E 3213	Reservoir Rock Properties	3
P E 3221	Rock Properties Laboratory	1
P E 3220	Petroleum Engineering Internship ¹	0
P E 3123	Petroleum Reservoir Fluids	3
P E 3223	Fluid Mechanics	3
P E 3313	Drilling I	3
P E 3712	Petroleum Economics	2
P E 3723	Numerical Methods for Engineering Computation	3
P E 3413	Production Engineering I	3
P E 3513	Reservoir Engineering I	3
P E 3813	Formation Evaluation with Well Logs	3
P E 4331	Drilling Engineering Laboratory	1
P E 4323	Drilling II	3
P E 4423	Production Engineering II	3
P E 4521	Reservoir Fluid Mechanics Laboratory	1
P E 4711	Petroleum Project Evaluation	1
P E 4532	Reservoir Engineering II	2
P E 4463	Data Analytics	3
P E 4553	Integrated Reservoir Management	3
Choose 3 hours of approved P E Elective ¹		3
Total Credit Hours		59

¹PE Elective: P E 4573, P E 4583, P E 4033, or any P E 5000-level course.

MAJOR SUPPORT REQUIREMENTS

Code	Title	Credit Hours
MATH 2924	Differential and Integral Calculus II ¹	4
MATH 2934	Differential and Integral Calculus III ¹	4
MATH 3113	Introduction to Ordinary Differential Equations	3
CHEM 1415	General Chemistry (Continued)	5
or CHEM 1435	General Chemistry II: Signature Course	
GEOL 1114	Physical Geology for Science and Engineering Majors	4
GEOL 3003	Structural Geology and Stratigraphy for Petroleum Engineers	3
GPHY 3423	Introductory Petroleum Geology and Geophysics	3
Total Credit Hours		26

¹The MATH 1823, MATH 2423, MATH 2433, and MATH 2443 sequence can be substituted for MATH 1914, MATH 2924, and MATH 2934.

More information in the catalog: (<http://ou-public.courseleaf.com/mewbourne-earth-energy/mewbourne-petroleum-geological-engineering/petroleum-engineering-bachelor-science/>).

SUGGESTED SEMESTER PLAN OF STUDY

Bachelor of Science in Petroleum Engineering accredited by the Engineering Accreditation Commission of ABET, <https://www.abet.org>, under the General Criteria and the Petroleum and Similarly Named Engineering Programs Program Criteria.

A minimum grade of C is required for each course in the curriculum.

Students must successfully complete prerequisite courses (with a minimum C grade) before proceeding to the next course.

Courses designated as Core I, II, III, IV, or V are part of the General Education curriculum. Students must complete a minimum of 40 hours of General Education courses, chosen from the approved lists.

Two college-level courses in a single language are required; this may be satisfied by successful completion of 2 years in a single language in high school. Students who must take language at the University will have an additional 6-10 hours of coursework.

Year	FIRST SEMESTER		Hours	SECOND SEMESTER		Hours
FRESHMAN	ENGL 1113	Principles of English Composition (Core I)	3	ENGL 1213 or EXPO 1213	Principles of English Composition (Core I) or Expository Writing	3
	CHEM 1315	General Chemistry (Core II) ¹	5	CHEM 1415	General Chemistry (Continued) ¹	5
	MATH 1914	Differential and Integral Calculus I (Core I) ²	4	MATH 2924	Differential and Integral Calculus II ²	4
		First Year Experience (Core V) ³	3	PHYS 2514	General Physics for Engineering and Science Majors (Core II)	4
				P E 2011	Introduction to Petroleum Engineering	1
	CREDIT HOURS		15	CREDIT HOURS		17
SOPHOMORE	MATH 2934	Differential and Integral Calculus III ²	4	P E 2213	Thermodynamics	3
	PHYS 2524	General Physics for Engineering and Science Majors	4	P E 3022	Technical Communications	2
	GEOL 1114	Physical Geology for Science and Engineering Majors	4	P E 3213	Reservoir Rock Properties	3
	P E 2113	Statics and Dynamics	3	P E 3221	Rock Properties Laboratory	1
		Approved Elective: Artistic Forms (Core IV) ³	3	MATH 3113	Introduction to Ordinary Differential Equations	3
					Approved Elective: World Culture (Core IV) ³	3
	CREDIT HOURS		18	CREDIT HOURS		15
	SUMMER					
	P E 3220	Petroleum Engineering Internship	0			
	CREDIT HOURS		0			
JUNIOR	GEOL 3003	Structural Geology and Stratigraphy for Petroleum Engineers	3	GPHY 3423	Introductory Petroleum Geology and Geophysics	3
	P E 3123	Petroleum Reservoir Fluids	3	P E 2153	Mechanics of Materials	3
	P E 3223	Fluid Mechanics	3	P E 3413	Production Engineering I	3
	P E 3313	Drilling I	3	P E 3513	Reservoir Engineering I	3
	P E 3712	Petroleum Economics	2	P E 3813	Formation Evaluation with Well Logs	3
	P E 3723	Numerical Methods for Engineering Computation	3	P E 4331	Drilling Engineering Laboratory	1
	CREDIT HOURS		17	CREDIT HOURS		16
SENIOR	HIST 1483 or HIST 1493	United States to 1865 (Core IV) or United States, 1865 to the Present	3	P SC 1113	American Federal Government (Core III)	3
	P E 4323	Drilling II	3	P E 4463	Data Analytics	3
	P E 4423	Production Engineering II	3	P E 4553	Integrated Reservoir Management	3
	P E 4521	Reservoir Fluid Mechanics Laboratory	1		P E - Approved P E Elective ⁴	3
	P E 4532	Reservoir Engineering II	2		Approved Elective: Western Culture (Core IV) ³	3
	P E 4711	Petroleum Project Evaluation	1			
	Approved Elective: Social Science (Core III) ³	3				
	CREDIT HOURS		16	CREDIT HOURS		15

¹ CHEM 1315 and CHEM 1415 can be substituted with CHEM 1335 (Fall only) and CHEM 1435 (Spring only), respectively.

² The MATH 1823, MATH 2423, MATH 2433, and MATH 2443 sequence can be substituted for MATH 1914, MATH 2924, and MATH 2934.

³ To be chosen from the University-Wide General Education Approved Course List. Three of these hours must be upper-division (3000-4000). See list in the Class Schedule.

⁴ PE Elective: P E 4573, P E 4583, P E 4033, or any P E 5000-level course.