

REQUIREMENTS FOR THE BACHELOR OF SCIENCE/MASTER 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 2020 through Spring 2021

General Requirements	
Minimum Total Credit Hours	151-157
Minimum Retention/Graduation Grade Point Averages:	
Overall - Combined and OU	3.00
Major - Combined and OU	3.00
Curriculum - Combined and OU	3.00

Program
Petroleum Engineering
A764/F765
Bachelor of Science/Master of Science

OU encourages students to complete at least 31 hours of applicable coursework each year to have the opportunity to graduate in 5 years.

In order to progress in your curriculum, and as a specific graduation requirement, a grade of C or better is required in each course in the curriculum. Students must successfully complete prerequisite courses (with a minimum C grade) before proceeding to the next course.

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
	HIST 1483 or HIST 1493	United States to 1865 (Core IV) or United States, 1865 to the Present	3	PHYS 2514	General Physics for Engineering and Science Majors (Core II)	4
		Approved Elective: Social Science (Core III) ³	3	P E 2011	Introduction to Petroleum Engineering	1
	CREDIT HOURS	18		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 2153	Mechanics of Materials	3
	GEOL 1114	Physical Geology for Science and Engineering Majors	4	P E 3022	Technical Communications	2
	P E 2113	Statics and Dynamics	3	P E 3213	Reservoir Rock Properties	3
				P E 3221	Rock Properties Laboratory	1
				Approved Elective: Artistic Forms (Core IV) ³	3	
	CREDIT HOURS	15		CREDIT HOURS	15	
	SUMMER					
	P E 3220	Petroleum Engineering Internship ⁴	0			
	CREDIT HOURS	0				
JUNIOR	MATH 3113	Introduction to Ordinary Differential Equations	3	GEOL 3003	Structural Geology and Stratigraphy for Petroleum Engineers	3
	P E 3123	Petroleum Reservoir Fluids	3	P E 3413	Production Engineering I	3
	P E 3223	Fluid Mechanics	3	P E 3513	Reservoir Engineering I	3
	P E 3313	Drilling I	3	P E 3813	Formation Evaluation with Well Logs	3
	P E 3712	Petroleum Economics	2	P E 4331	Drilling Engineering Laboratory	1
P E 3723	Numerical Methods for Engineering Computation	3		Approved Elective: Non-Western Culture (Core IV) ³	3	
	CREDIT HOURS	17		CREDIT HOURS	16	
SENIOR	GPHY 3423	Introductory Petroleum Geology and Geophysics	3	P SC 1113	American Federal Government	3
	P E 4323	Drilling II	3	P E 4552	Data Analytics	2
	P E 4423	Production Engineering II	3	P E 5553	Integrated Reservoir Management (Capstone) ⁵	3
	P E 4521	Reservoir Fluid Mechanics Laboratory	1		P E Approved Graduate Elective ⁵	3
	P E 4712	Petroleum Project Evaluation	2		Approved Elective: Western Civilization & Culture (Core IV) ³	3
P E 4533	Reservoir Engineering II	3		Approved Graduate Elective	3	
	CREDIT HOURS	15		CREDIT HOURS	17	
	SUMMER					
	P E 5980	Research for Master's Thesis ⁶	2			
		Applied Math Course ⁷	3			
	CREDIT HOURS	5				
FIFTH YEAR	P E 5980	Research for Master's Thesis ⁶	2	P E 5980	Research for Master's Thesis ⁶	2
		Approved Graduate Elective	3		Approved Graduate Elective	3
		Approved Graduate Elective	3			
		Approved Graduate Elective	3			
	CREDIT HOURS	11		CREDIT HOURS	5	

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 twelve hours must be upper-division (3000-4000). See list in the Class Schedule.

⁴ An approved PE elective may be taken in place of P E 3220 for 1 to 3 credit hours.

⁵ Courses applied to both BS and MS degrees.

⁶ For non-Thesis option M.S. students P E 5980 will be replaced by 12 hours of graduate-level electives approved by the graduate liaison. The Thesis option M.S. requires publication or acceptance of a paper or conference proceeding with the student as first or second author in a topic relating to the student's thesis. The Graduate college will not authorize a student to defend until the graduate liaison has confirmed the student has met this requirement.

⁷ Applied Math course - One course from the following list or approved by the department: MATH 4163, P E 5563, or P E 5990 (Topic: Petroleum Inverse Studies).

- Courses designated as Core I, II, III, IV, or Capstone 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 foreign language are required; this may be satisfied by successful completion of 2 years in a single foreign language in high school. Students who must take foreign language at the University will have an additional 6-10 hours of coursework.
- Students may apply only 3 credit hours of S/U graded coursework (excluding thesis research) toward the M.S.

B.S. PROGRAM ACCREDITED BY THE ENGINEERING ACCREDITATION COMMISSION OF ABET, <http://www.abet.org>

Students may enter the accelerated program based on the undergraduate degree pattern offered in the year they first enrolled in the Oklahoma State System of Higher Education or later. Students must maintain a 3.0 GPA from the time of entering the accelerated program until graduation.

Students must take the GRE and apply for the MS program during the third year; minimum OU GPA and combined GPA of 3.0 is required. Students should submit an application to the School of Petroleum Engineering for the accelerated program during the fall semester of the Junior year. Students must also apply to the Graduate College during the spring semester of the Senior year to be admitted by that college to the MS program.