

Name:

Key:

Done
In Progress
Possible based on prerequisites

2016-2017 Petroleum Engineering Curriculum

This chart was prepared by Freshman Engineering using the 2016-2017 catalog. It is designed to assist in advising and course selection; refer to the student's catalog requirement year for official requirements and to the student's degree audit for official progress.

Prerequisites	FEP		Math	1103	Fundamentals of Algebra	Prerequisite: Entrance requirements.	3	
	FEP		Math	1120	College Algebra	Prerequisite: By placement examination.	5	
	FEP		Math	1140	College Algebra	Prerequisite: By placement examination.	3	
	FEP		Math	1160	Trigonometry	Prerequisite: Math 1120 or 1140 with a grade of "C" or better; or by placement exam.	2	
	FEP		Chem	1100	Introduction to Laboratory Safety & Hazardous Materials		1	
Semester 1	FEP	<i>Hum/Soc Sci Requirement-English</i>	English	1120	Exposition and Argumentation		3	
	FEP		Fr Eng	1100	Study & Careers in Engineering		1	
	FEP		Chem	1310	General Chemistry I	Prerequisite: Entrance requirements.	4	
	FEP		Chem	1319	General Chemistry Laboratory	Prerequisite: Preceded or accompanied by both Chem 1310 and Chem 1100.	1	
	FEP	<i>Hum/Soc Sci Elective - History</i>	History/Pol Sci	one of these	1. History 1200 Modern Western Civilization (preferred) 2. History 1300 American History to 1877 3. History 1310 American History Since 1877 4. Pol Sci 1200 American Government		3	
	FEP		Math	1214	Calculus for Engineers I	Prerequisites: A grade of "C" or better in both Math 1160 and one of Math 1120 or Math 1140; or by placement exam.	4	
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Semester 2	FEP		Math	1215	Calculus for Engineers II	Prerequisites: Math 1160 and either Math 1208 or Math 1214 both with a grade of "C" or better; or by placement exam.	4	
			Geo Eng	1150	Physical & Environmental Geology	Prerequisite: Entrance requirements. (Co-listed with Geology 1110).	3	
			Geo Eng	1119	Physical and Environmental Geology Laboratory	Prerequisite: Preceded or accompanied by Geology 1110. (Co-listed with Geology 1119).	1	
	FEP		Physics	1135	Engineering Physics I	Prerequisite: Math 1208 or 1214.	4	
			Pet Eng	2510	Properties of Hydrocarbon Fluids	Prerequisite: Chem 1310.	3	
	FEP		Mech Eng	1720	Introduction to Engineering Design		3	
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Semester 3		Math	2222	Calculus with Analytic Geometry III	Prerequisites: Math 1215 or Math 1221 with a grade of "C" or better.	4		
		Physics	2135	Engineering Physics II	Prerequisites: Physics 1135 or Physics 1111, Math 1221 or Math 1215.	4		
		Geology	3310	Structural Geology	Prerequisites: GEOLOGY 1110 or GEO ENG 1111.	3		
		Geology	3319	Structural Geology Lab (<i>optional</i>)	Prerequisites: Preceded or accompanied by GEOLOGY 3310.			
		Civ Eng	2200	Statics	Prerequisites: Physics 1135 or Physics 1111 with a grade of "C" or better; Math 1215 or Math 1221 with a grade of "C" or better; preceded or accompanied by Math 2222.	3		
		Pet Eng	3320	Petrophysics	Prerequisites: Preceded or accompanied by both Pet Eng 2510 and Physics 1135.	3		
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Semester 4		Math	3304	Elementary Differential Equations	Prerequisite: Math 2222 with a grade of "C" or better.	3		
		Pet Eng	3520	Petroleum Reservoir Engineering	Prerequisite: Accompanied or preceded by Pet Eng 2510.	3		
		Mech Eng	2350	Engineering Mechanics - Dynamics	Prerequisites: A grade of "C" or better in each of Civ Eng 2200 and Math 2222	2		
		Civ Eng	2210	Mechanics of Materials	Prerequisite: Civ Eng 2200 with grade of "C" or better.	3		
	FEP	<i>Hum/Soc Sci Elective - Econ</i>	Econ	one of these	1. Econ 1100 Principles of Microeconomics 2. Econ 1200 Principles of Macroeconomics		3	
			Geology	3620	Stratigraphy and Sedimentation	Prerequisite: Geology 2620 or Geology 2611.	3	
							17	
Semester 5		Geophys	4231	Seismic Interpretation	Prerequisites: Math 1208 or Math 1214; Geology 1110 or Geo Eng 1150.	3		
		Civ Eng	3330	Engineering Fluid Mechanics	Prerequisites: Mech Eng 2350 or Mech Eng 2340, and MATH 3304, each with a grade of "C" or better.	3		
		<i>Technical Elective - Reservoir Engineering</i>	Pet Eng	one of these	1. Pet Eng 4511 Applied Petroleum Reservoir Engineering 2. Pet Eng 4531 Natural Gas Engineering 3. Pet Eng 4611 Secondary Recovery of Petroleum 4. Pet Eng 4311 Reservoir Characterization 5. Pet Eng 4621 Fundamentals of Petroleum Reservoir Simulation	1. Prerequisites: Pet Eng 3520 and 3529. 2. Prerequisite: Preceded or accompanied by Pet Eng 3520. 3. Prerequisites: Pet Eng 3520, Pet Eng 3529. 4. Prerequisites: Pet Eng 3520, Pet Eng 3310; Geology 4611 or Geology 4511. 5. Prerequisite: Pet Eng 3520.	3	
			Geology	5513	Petroleum Geology	Prerequisites: Geology 1110 or Geo Eng 1150; accompanied or preceded by both Geology 3310 and Geology 3620.	3	
			Pet Eng	4210	Drilling and Well Design	Prerequisite: Preceded or accompanied by Civ Eng 3330.	3	
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Semester 6		Pet Eng	3330	Well Logging	Prerequisites: Physics 2135 or 2111; Pet Eng 3520.	3	
		Pet Eng	4410	Well Performance and Production Systems	Prerequisite: Preceded or accompanied by Pet Eng 3520.	3	
		Pet Eng	4710	Finite Element Analysis with Applications in Petroleum Engineering	Prerequisites: Pet Eng 3520, Geology 3310, and Math 3304.	3	
		Pet Eng	4590	Petroleum Economics and Asset Valuation	Prerequisites: Pet Eng 3520, Econ 1100 or Econ 1200.	3	
		<i>Hum/Soc Sci Elective</i>	various	one of these Petroleum Engineering students are especially encouraged to study foreign languages.	(<i>FEP</i>) Course chosen from the Approved List of Humanities and Social Science Courses for Engineering Degrees at ugs.mst.edu. Prerequisites vary.	3	

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Semester 7		Mech Eng	2527	Thermal Analysis	Prerequisites: Math 1215 (or 1221), Physics 1135.	3		
		Pet Eng	4010	Seminar	Prerequisite: Senior standing in Pet Eng. (Co-listed with Geology 4010, Geo Eng 4010).	1		
		Pet Eng	4520	Well Test Analysis	Prerequisite: Pet Eng 3520.	3		
		Pet Eng	4720	Mechanical Earth Modeling	Prerequisites: Pet Eng 3310 and Geology 3310.	3		
		<i>Technical Elective - Interest Area</i>	various	one of these	Select Petroleum Engineering electives in accordance with interest area. Students interested in reservoir engineering select from topics in advanced reservoir engineering, simulation, natural gas engineering, and formation characterization. Students interested in drilling/completions and production select petroleum electives such as advanced drilling, well completions, stimulation. Other general interest petroleum electives may be selected as available.	Prerequisites vary.	3	
		<i>Hum/Soc Sci Elective</i>	various	one of these	(<i>FEP</i>) Course chosen from the <i>Approved List of Humanities and Social Science Courses for Engineering Degrees</i> at ugs.mst.edu .	Prerequisites vary.	3	

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Semester 8		Pet Eng	4097	Petroleum Engineering Design	Prerequisites: Pet Eng 3520, Pet Eng 3410, and senior standing.	3	
		Geo Eng	4115	Statistical Methods in Geology and Engineering		3	
	<i>Hum/Soc Sci Elective - Upper Level</i>	various	one of these	(FEP) Course, chosen from the Approved List of Humanities and Social Science Courses for Engineering Degrees at ugs.mst.edu, at the 2000-level or above which requires as a prerequisite the successful completion of a lower level humanities or social sciences course. Foreign language courses numbered 1180 will be considered to satisfy this requirement. Students may receive humanities credit for foreign language courses in their native tongue only if the course is at the 4000 level.	Prerequisites vary.	3	
	<i>Technical Elective - Interest Area</i>	various	one of these	Select Petroleum Engineering electives in accordance with interest area. Students interested in reservoir engineering select from topics in advanced reservoir engineering, simulation, natural gas engineering, and formation characterization. Students interested in drilling/completions and production select petroleum electives such as advanced drilling, well completions, stimulation. Other general interest petroleum electives may be selected as available.	Prerequisites vary.	3	
	<i>Hum/Soc Sci Elective - English</i>	English	one of these	1. Engl 3560 Technical Writing (preferred) 2. Engl 1160 Writing and Research 3. Engl 1600 Introduction to Technical Communication	1. Prerequisites: English 1120 and second-semester junior standing. 2. Prerequisite: English 1120. 3. Prerequisite: English 1120. (Co-listed with TCH COM 1600).	3	
						15	
						Total =	129