

Petroleum and Natural Gas Engineering Curriculum

starting Fall 2021

Fall

Spring

	Course No.	Name	Prerequisite/Note	Credits	Course No.	Name	Prerequisite/Note	Credits
Freshman Year	MATH 121	Calculus I	MATH 110- Pre-calculus	3	MATH 122	Calculus II	MATH 121-Calc. I	3
	HIST 259	Environmental History	First semester freshman	3	PHYS 121	Physics I	Math 121 Corequisite	4
	CHEM 121	Chemistry I		4	CHEM 122	Chemistry II	CHEM 121 - Chem. I	4
	ENGR 101	Intro to Eng		1	CORE 113	First Year Seminar*	Freshman Year	3
	WRIT 102	Research Writing		3	GEOL 205	Physical & Structural Geology	MATH 110-Pre-calculus	3
	RLST 105	Franciscan Goals for Today	Freshman Year	3	CORE 104	Community Enrichment Series		0
	CORE 103	Community Enrichment Series		0	PNGE 193	PNGE Freshman Seminar		0
	PNGE 192	PNGE Freshman Seminar		0				
		Total				Total		17
Sophomore Year	GEOL 221	Sedimentology and Sequence Stratigraphy	GEOL 205	3	MATH 306	Diff Equations I	MATH 122	3
	ENGR 201	Engineering Statics	PHYS 121	3	PHYS 122	Physics II	PHYS 121	4
	PNGE 233 / L	Reservoir Rock Properties	GEOL 205, MATH 121, CHEM 122	4	LIT 104**	Literature (see Gen Ed list)		3
	MATH 221	Calculus III	MATH 122	3	PNGE 261&L	Intro to Drilling Systems	GEOL 221	3
	ENGR 210	Programming for Engineers (Lecture)	MATH110-Pre-calculus	2	LANG XXX	Language 102+		3
	PNGE 110	Petroleum Statistics Lab	MATH 110-Pre-calculus	1	ENGR 315	Mechanics of Materials	ENGR 201	2
	PNGE 292	PNGE Sophomore Seminar		0	PNGE 293	PNGE Sophomore Seminar		0
		Total				Total		18
Junior Year	ENGR 301	Fluid Mechanics	MATH 221, ENGR 201	4	PHIL 307	Environmental Ethics	RLST or PHIL 300+	3
	GEOL 321	Petroleum Geology	GEOL 221	2	PNGE 381	Formation Evaluation	PNGE 341 & Co PNGE 361	3
	PNGE 341	Fundamentals of Reservoir Engineering	PNGE 241	3	PNGE 361	Drilling Engineering I	PNGE 261	3
	ENGR 321	Thermodynamics	PHYS122 & 122L	3	PNGE 311	Environmental-Petroleum Engineering	PNGE 241, GETM 3: "Communication & Diversity"	3
	PHIL 205	PHIL 205		3	PNGE 351	Production Engineering	PNGE 261, MATH 121	3
	PNGE 392	PNGE Junior Seminar		1	EPPS**	EPPS		3
	EXAM 301	Wr Comp Exam	Junior Year	0	PNGE 393	PNGE Junior Seminar		0
		Total				Total		18
Senior Year	PNGE 411	Economic Eval of Oil and Gas	PNGE 351, 361, & 381	3	PNGE 436	Geophysics	PNGE 381, GEOL 321	3
	PNGE 421	Reservoir Engineering II	PNGE 341	3	PNGE498	Senior Capstone Design	PNGE 497, PNGE 411	3
	EPPS**	EPPS		3	PNGE 4XX	PNGE Elective 2		3
	PNGE 4XX	PNGE Elective 1		3	FNAR	Fine Arts Elective		3
	PNGE 431	Introduction to EOR	PNGE 351 & 381, co-GEOL 321	2	CORE 407	Keystone Sem.		3
	ECON 101	MacroEconomics	EPPS	3	PNGE 493	PNGE Senior Seminar		0
	PNGE 497	Senior Project Proposal	PNGE 351, 361, & 381	1				
	PNGE 492	PNGE Senior Seminar		0				
		Total				Total		15
Total Credits: 133 (43 PNGE, 8 GEOL, 12 ENGR, 31 Collateral, & 39 Gen Ed)								