

**Course Requirements and Registration Priorities
School of Mining and Geosciences (Undergraduate), Fall 2023**

#	Abbr	Title	Cr(US)	Cr(ECTS)	PreRequisite	CoRequisite	AntiRequisite	1st priority registration	2nd priority registration	3rd priority registration	4th priority registration
SMG											
Economics, School of Mining and Geosciences											
1	SMG 200/ECON 220	Resource Economics	3	6	MATH 161 Calculus I (118) (C- and above) OR MATH 162 Calculus II (170) (C- and above)			3 year UG SMG, 4 year UG SMG, 4 year UG SMG (pending graduation)	SEDS, SSH		
Mining Engineering											
2	MINE 301	Mine Surveying and Geographic Information Systems	3	6				3 year UG SMG Mining Engineering	3 year UG SMG, 4 year UG SMG		
3	MINE 302	Geomechanics	3	6				3 year UG SMG Mining Engineering	3 year UG SMG, 4 year UG SMG		
4	MINE 401	Mining Geotechnical Engineering	3	6	MINE 302 Geomechanics (5878) (C- and above)			4 year UG SMG Mining Engineering			
5	MINE 402	Coal Mining	3	6				4 year UG SMG Mining Engineering			
6	MINE 489	Research Project I	3	6				4 year UG SMG Mining Engineering			
Petroleum Engineering											
7	PETE 201	Fluid Mechanics and Thermodynamics	3	6	MATH 161 Calculus I (118) (D and above) OR CHEM 101 General Chemistry I (113) (D and above)			2 year UG SMG	3 year UG SMG		
8	PETE 301	Numerical Methods for Petroleum Engineers	3	6	ENG 200 Engineering Mathematics III (Differential Equations and Linear Algebra) (5009) (C- and above) OR ENG 101 Programming for Engineers (4517) (C- and above)			3 year UG SMG Petroleum Engineering	4 year UG SMG Petroleum Engineering		
9	PETE 302	Reservoir Engineering I with Laboratory works	4	8	PETE 204 Reservoir Rock and Fluid Properties with Lab (5487) (C- and above)			3 year UG SMG Petroleum Engineering, 5 year UG SMG	4 year UG SMG Petroleum Engineering		
10	PETE 303	Well Logging and Formation Evaluation	3	6	GEOL 101 Fundamentals of Geology (4774) (C- and above)			3 year UG SMG Petroleum Engineering	4 year UG SMG Petroleum Engineering		
11	PETE 304	Well Completion and Stimulation	3	6	PETE 203 Drilling Engineering with Laboratories (5486) (C- and above)			3 year UG SMG Petroleum Engineering	4 year UG SMG Petroleum Engineering		

12	PETE 400	Capstone Design Project I	3	6	PETE 302 Reservoir Engineering I with Laboratory works (5955) (C- and above) AND PETE 203 Drilling Engineering with Laboratories (5486) (C- and above)			4 year UG SMG Petroleum Engineering, 5 year UG SMG			
13	PETE 405	Enhanced Oil Recovery	3	6	PETE 204 Reservoir Rock and Fluid Properties with Lab (5487) (D and above)			4 year UG SMG Petroleum Engineering, 5 year UG SMG			
14	PETE 408	Gas Engineering	3	6	PETE 302 Reservoir Engineering I with Laboratory works (5955) (C- and above) AND PETE 307 Production Engineering (6146) (C- and above)			4 year UG SMG Petroleum Engineering, 5 year UG SMG			
School of Mining and Geosciences											
15	GEOL 201	Mineralogy	3	6	GEOL 101 Fundamentals of Geology (4774) (C- and above)			2 year UG SMG Geology	Mining Engineering		
16	GEOL 202	Geologic Maps and Cross-Sections	3	6	GEOL 101 Fundamentals of Geology (4774) (D and above) OR GEOL 102 Fundamentals of Geology (4772) (D and above)			2 year UG SMG Geology	Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG		
17	GEOL 203	Geomorphology	3	6	GEOL 101 Fundamentals of Geology (4774) (C- and above) OR GEOL 102 Fundamentals of Geology (4772) (C- and above)			2 year UG SMG Geology			
18	GEOL 301	Sedimentary petrology	3	6	GEOL 101 Fundamentals of Geology (4774) (D and above) OR GEOL 202 Geologic Maps and Cross-Sections (5123) (D and above)	GEOL 202 Geologic Maps and Cross-Sections (5123) (D and above)		3 year UG SMG Geology	Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG		
19	GEOL 302	Thermodynamics and Geochemistry	3	6	GEOL 101 Fundamentals of Geology (4774) (D and above) OR GEOL 102 Fundamentals of Geology (4772) (D and above)			3 year UG SMG Geology	Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG		
20	GEOL 303	Structural Geology and Tectonics	3	6	(GEOL 101 Fundamentals of Geology (4774) (D and above) OR GEOL 102 Fundamentals of Geology (4772) (D and above)) AND GEOL 202 Geologic Maps and Cross-Sections (5123) (D and above)			3 year UG SMG Geology	Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG	4 year UG SEDS, 4 year UG SEDS (pending graduation)	
21	GEOL 305	Geology of ore deposits	3	6	GEOL 101 Fundamentals of Geology (4774) (D and above) OR GEOL 102 Fundamentals of Geology (4772) (D and above) OR GEOL 201 Mineralogy (5122) (D and above)			3 year UG SMG Geology	Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG	4 year UG SEDS, 4 year UG SEDS (pending graduation)	

22	GEOL 308	Environmental Geochemistry	3	6						
23	GEOL 309	Hydrogeology	3	6				3 year UG SMG Geology	4 year UG SMG Mining Engineering, 4 year UG SMG Petroleum Engineering	4 year UG SEDS, 4 year UG SEDS (pending graduation), 4 year UG SSH, 4 year UG SSH (pending graduation)
24	GEOL 310	Field Geology 2	3	6	GEOL 303 Structural Geology and Tectonics (5874) (D and above) OR GEOL 301 Igneous and metamorphic petrology (5886) (D and above)			3 year UG SMG Geology, 4 year UG SMG Geology	4 year UG SEDS, 4 year UG SEDS (pending graduation)	
25	GEOL 401	Petroleum Geology and Geochemistry	3	6				4 year UG SMG Geology, 4 year UG SMG Petroleum Engineering, 5 year UG SMG	4 year UG SEDS, 4 year UG SEDS (pending graduation)	
26	GEOL 404	Research Project I	3	6				4 year UG SMG Geology		
27	SMG 100	Introduction to Natural Resources Extraction	3	6				1 year UG SMG	SEDS, SSH	
28	SMG 210	Strength of Materials	3	6				2 year UG SMG	3 year UG SMG	