

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

#	Abbr	Title	Cr(US)	Cr(ECTS)	PreRequisite	CoRequisite	AntiRequisite	1st priority registration	2nd priority registration	3rd priority registration	4th priority registration
<b>SMG</b>											
<b>Mining Engineering</b>											
1	MINE 201	Mineral Processing	3	6				2 year UG SMG Mining Engineering, 4 year UG SMG Geology	Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG		
2	MINE 306	Underground Mining Systems and Design	3	6	MINE 302 Geomechanics (5878) (D and above) AND MINE 405 Mine Ventilation (5879) (D and above)			3 year UG SMG Mining Engineering	Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG		
3	MINE 307	Surface Mining System and Design	3	6	MINE 302 Geomechanics (5878) (D and above)			3 year UG SMG Mining Engineering	Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG		
4	MINE 308	Mine Planning	3	6				3 year UG SMG Mining Engineering	Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG		
5	MINE 309	Sustainability and Mining Environment	3	6	SMG 100 Introduction to Natural Resources Extraction (4773) (D and above)			3 year UG SMG Mining Engineering, 4 year UG SMG Geology	Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG		
6	MINE 310	Rock Breakage	3	6	MINE 302 Geomechanics (5878) (D and above)			3 year UG SMG Mining Engineering	Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG		
7	MINE 403	Mine Risk Management	3	6				4 year UG SMG Mining Engineering	Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG		
8	MINE 480	Mine Design Project	3	6	MINE 307 Surface Mining System and Design (6150) (C- and above) OR MINE 306 Underground Mining Systems and Design (6151) (C- and above)			4 year UG SMG Mining Engineering			
9	MINE 490	Research project II	3	6	MINE 489 Research Project I (6419) (P)			4 year UG SMG Mining Engineering			

**Petroleum Engineering**

10	PETE 202	Transport Phenomena	3	6	ENG 200 Engineering Mathematics III (Differential Equations and Linear Algebra) (5009) (C- and above) OR CHEM 101 General Chemistry I (113) (C- and above) OR CHEM 101L General Chemistry I lab (179) (C- and above)			2 year UG SMG Petroleum Engineering, 3 year UG SMG Petroleum Engineering			
11	PETE 203	Drilling Engineering with Laboratories	4	8	PETE 201 Fluid Mechanics and Thermodynamics (5120) (C- and above)			2 year UG SMG Petroleum Engineering, 3 year UG SMG Petroleum Engineering			
12	PETE 204	Reservoir Rock and Fluid Properties with Lab	4	8	PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above)			2 year UG SMG Petroleum Engineering, 4 year UG SMG Geology			
13	PETE 305	Well Test Analysis	3	6	PETE 302 Reservoir Engineering I with Laboratory works (5955) (C- and above)			3 year UG SMG Petroleum Engineering	Petroleum Engineering		
14	PETE 306	Reservoir Engineering II	3	6	PETE 204 Reservoir Rock and Fluid Properties with Lab (5487) (C- and above) OR PETE 302 Reservoir Engineering I with Laboratory works (5955) (C- and above)			3 year UG SMG Petroleum Engineering	Petroleum Engineering		
15	PETE 307	Production Engineering	3	6	PETE 201 Fluid Mechanics and Thermodynamics (5120) (C- and above) OR PETE 302 Reservoir Engineering I with Laboratory works (5955) (C- and above)			3 year UG SMG Petroleum Engineering	Petroleum Engineering		
16	PETE 311	Reservoir Simulation	3	6	PETE 301 Numerical Methods for Petroleum Engineers (5881) (C- and above) AND PETE 302 Reservoir Engineering I with Laboratory works (5955) (C- and above) AND PETE 304 Well Completion and Stimulation (5883) (C- and above)			3 year UG SMG Petroleum Engineering, 4 year UG SMG Petroleum Engineering			
17	PETE 404	Petroleum Geomechanics	3	6	GEOL 101 Fundamentals of Geology (4774) (C- and above) OR GEOL 102 Fundamentals of Geology (4772) (C- and above)			4 year UG SMG Petroleum Engineering			
18	PETE 407	Capstone Design Project II	3	6	PETE 400 Capstone Design Project I (6424) (P)			4 year UG SMG Petroleum Engineering			
19	PETE 421	Advanced Technologies in Drilling	3	6	PETE 203 Drilling Engineering with Laboratories (5486) (C- and above) AND PETE 304 Well Completion and Stimulation (5883) (C- and above)			4 year UG SMG Petroleum Engineering			

20	GEOL 101	Fundamentals of Geology	3	6				4 year UG SEDS, 4 year UG SEDS (pending graduation), 4 year UG SMG, 4 year UG SSH, 4 year UG SSH (pending graduation)		
21	GEOL 204	Sedimentology and stratigraphy	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)			2 year UG SMG Geology		
22	GEOL 205	Paleontology	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		
23	GEOL 301	Igneous and metamorphic petrology	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, 3 year UG SMG Geology, 3 year UG SMG Mining Engineering	1 year UG SEDS, 2 year UG SEDS, 3 year UG SEDS, 4 year UG SEDS (pending graduation), 5 year UG SEDS (pending graduation), 6 year UG SEDS	
24	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	1 year UG SEDS, 1 year UG SSH, 2 year UG SEDS, 2 year UG SSH, 3 year UG SEDS, 3 year UG SSH, 4 year UG SEDS, 4 year UG SEDS (pending graduation), 4 year UG SSH, 4 year UG SSH (pending graduation), 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation)

25	GEOL 304	Geophysics	3	6	GEOL 204 Sedimentology and stratigraphy (5475) (D and above)			3 year UG SMG Geology	Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG		
26	GEOL 307	Geographic Information Systems	3	6				3 year UG SMG Geology			
27	GEOL 309	Hydrogeology	3	6				3 year UG SMG Geology, 4 year UG SMG Mining Engineering			
28	GEOL 403	Geostatistics	3	6	MATH 161 Calculus I (118) (C- and above)			4 year UG SMG Geology		4 year UG SEDS, 4 year UG SSH	
29	GEOL 405	Research Project II	3	6	GEOL 404 Research Project I (6423) (C- and above)			4 year UG SMG Geology			
30	GEOL 407	Exploration Geology & Geophysics	3	6	GEOL 101 Fundamentals of Geology (4774) (C- and above)			4 year UG SMG Geology	1 year UG SEDS, 1 year UG SSH, 2 year UG SEDS, 2 year UG SSH, 3 year UG SEDS, 3 year UG SSH, 4 year UG SMG Mining Engineering, 4 year UG SMG Petroleum Engineering, 5 year UG SEDS, 5 year UG SEDS (pending graduation), 5 year UG SSH, 5 year UG SSH (pending graduation), 6 year UG SEDS, 6 year UG SSH, 6 year UG SSH (pending graduation)	4 year UG SEDS, 4 year UG SEDS (pending graduation), 4 year UG SSH, 4 year UG SSH (pending graduation)	
31	SMG 400	Engineering Economics	3	6	SMG 200/ECON 220 Resource Economics (6197) (C- and above)			4 year UG SMG Geology, 4 year UG SMG Mining Engineering	Geology, Mining Engineering, Petroleum Engineering, Undeclared SMG	SEDS, SSH	