

**Course Requirements and Registration Priorities
School of Mining and Geosciences, Fall 2022**

#	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)			4 year UG SMG			
Mining Engineering											
2	MINE 301	Mine Surveying and Geographic Information Systems	3	6				Mining Engineering			
3	MINE 302	Geomechanics	3	6				Mining Engineering			
4	MINE 304	Resource Estimation	3	6				Mining Engineering			
5	MINE 401	Mining Geotechnical Engineering	3	6	MINE 302 Geomechanics (5878) (C- and above)			Mining Engineering			
6	MINE 402	Coal Mining	3	6				Mining Engineering			
7	MINE 405	Mine Ventilation	3	6				Mining Engineering			
8	MINE 489	Research Project I	3	6				Mining Engineering			
9	MINE 501	Foundations of Mining	3	6				1 year Gr SMG Mining Engineering			
10	MINE 502	Geology for Mining Engineers	3	6				1 year Gr SMG Mining Engineering			
11	MINE 503	Applied Geostatistics	3	6				Mining Engineering			
12	MINE 504	Mine Geomechanics	3	6				Mining Engineering			
13	MINE 505	Advanced Mine Ventilation	3	6				Mining Engineering			
14	MINE 601	Mine Management and Sustainability	3	6				Mining Engineering			
15	MINE 602	Mine Maintenance and Services	3	6	MINE 502 Geology for Mining Engineers (3691) (C- and above)			Mining Engineering			
16	MINE 690	Thesis I	6	12				Mining Engineering			
17	MINE 890-0	Thesis Research	0	0				Mining Engineering			
Petroleum Engineering											
18	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 Mining Engineering, 3 year UG SMG Mining Engineering, Petroleum Engineering	SEDS		

19	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)			Petroleum Engineering			
20	PETE 302	Reservoir Engineering I with Laboratory works	4	8	PETE 204 Reservoir Rock and Fluid Properties with Lab (5487) (C- and above)			Petroleum Engineering			
21	PETE 303	Well Logging and Formation Evaluation	3	6	GEOL 101 Fundamentals of Geology (4774) (C- and above)			Petroleum Engineering			
22	PETE 304	Well Completion and Stimulation	3	6	PETE 203 Drilling Engineering with Laboratories (5486) (C- and above)			Petroleum Engineering			
23	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)			Petroleum Engineering			
24	PETE 401	Production Enhancement	3	6	PETE 307 Production Engineering (6146) (C- and above)			Petroleum Engineering			
25	PETE 501	Foundations of Petroleum Engineering	3	6				Petroleum Engineering			
26	PETE 502	Petroleum Geology	3	6				Petroleum Engineering			
27	PETE 503	Fluid Flow Through Porous Media	3	6				Petroleum Engineering			
28	PETE 504	Advanced Formation Evaluation	3	6				Petroleum Engineering			
29	PETE 505	Advanced Drilling Engineering	3	6				Petroleum Engineering			
30	PETE 509	Advanced Well Testing and Evaluation	3	6				Petroleum Engineering			
31	PETE 600	Thesis I	6	12				Petroleum Engineering			
32	PETE 601	Petroleum Data Analytics	3	6				Petroleum Engineering			
33	PETE 602	Research Seminar	3	6				Petroleum Engineering			
34	PETE 620	Thesis II	12	24				2 year Gr SMG Petroleum Engineering			
35	PETE 701	Advanced Well Engineering	4	8				SMG	SEDS		
36	PETE 805	Special Topics in Petroleum Engineering: Data Analytics	4	8				SMG	SEDS		
37	PETE 890	Thesis Research	0	0				Petroleum Engineering			
School of Mining and Geosciences											
38	GEOL 201	Mineralogy	3	6	GEOL 101 Fundamentals of Geology (4774) (C- and above)			Geology	Mining Engineering	SEDS	

39	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)			Geology	Mining Engineering	SEDS	
40	GEOL 203	Geomorphology	3	6	GEOL 101 Fundamentals of Geology (4774) (C- and above) OR GEOL 102 Fundamentals of Geology (4772) (C- and above)			Geology	Mining Engineering	SEDS	
41	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)			Geology	Mining Engineering	SEDS	
42	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)			Geology	Mining Engineering	SEDS	
43	GEOL 306	Geodynamics	3	6	GEOL 101 Fundamentals of Geology (4774) (D and above) OR GEOL 102 Fundamentals of Geology (4772) (D and above)			SMG			
44	GEOL 308	Environmental Geochemistry	3	6				Geology	Mining Engineering	SEDS	
45	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)			4 year UG SMG Geology	4 year UG SMG Mining Engineering		
46	GEOL 401	Petroleum Geology and Geochemistry	3	6				4 year UG SMG Geology, 4 year UG SMG Petroleum Engineering		3 year UG SMG Geology	
47	GEOL 402	Water Resource Management	3	6				4 year UG SMG Geology, 4 year UG SMG Mining Engineering		3 year UG SMG Geology	
48	GEOL 404	Research Project I	3	6				4 year UG SMG Geology			
49	SMG 100	Introduction to Natural Resources Extraction	3	6				SMG	SEDS		
50	SMG 710	Research Methods and Statistics	3	6				SMG	SEDS		