

Course Requirements and Registration Priorities
School of Mining and Geosciences, Spring 2022

#	Abbr	Title	Cr(US)	Cr(ECTS)	PreRequisite	CoRequisite	AntiRequisite	1st priority registration	2nd priority registration	3rd priority registration	4th priority registration
SMG											
Mining Engineering											
1	MINE 201	Mineral Processing	3	6				2 year UG SMG Mining Engineering, 4 year UG SMG Geology	SMG	SEDS	
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	SMG	SEDS	
3	MINE 307	Surface Mining System and Design	3	6	MINE 302 Geomechanics (5878) (D and above)			3 year UG SMG Mining Engineering	SMG	SEDS	
4	MINE 308	Mine Planning	3	6				3 year UG SMG Mining Engineering	SMG	SEDS	
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	SMG	SEDS	
6	MINE 310	Rock Breakage	3	6	MINE 302 Geomechanics (5878) (D and above)			3 year UG SMG Mining Engineering	SMG	SEDS	
7	MINE 403	Mine Risk Management	3	6				4 year UG SMG Mining Engineering	SMG	SEDS	
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	SMG	SEDS	
9	MINE 490	Research project II	3	6	MINE 489 Research Project I (6419) (P)			4 year UG SMG Mining Engineering	SMG	SEDS	
10	MINE 507	Rock Excavation Methods	3	6				Mining Engineering			
11	MINE 508	Advanced Rock Mechanics	3	6				Mining Engineering			
12	MINE 509	Advanced Surface Mine Design	3	6				Mining Engineering			
13	MINE 510	Advanced Underground Mine Design	3	6				Mining Engineering			
14	MINE 691	Thesis II	15	30	MINE 690 Thesis I (4531) (P)			Mining Engineering			
15	MINE 702	Current Research Literature	4	8				Mining Engineering			
16	MINE 703	Advanced Mining Systems	4	8				Mining Engineering	Petroleum Engineering, SEDS, SSH		

17	MINE 803	Advanced Geometallurgy	4	8				Mining Engineering	Petroleum Engineering, SEDS, SSH		
18	MINE 890-0	Thesis Research	0	0				Mining Engineering			
Petroleum Engineering											
19	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	SMG		
20	PETE 203	Drilling Engineering with Laboratories	4	8	PETE 201 Fluid Mechanics and Thermodynamics (5120) (C- and above)			2 year UG SMG Petroleum Engineering	SMG		
21	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	SMG		
22	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	SMG		
23	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	SMG		
24	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	SMG		
25	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)			4 year UG SMG Petroleum Engineering	SMG		
26	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	SMG		
27	PETE 405	Enhanced Oil Recovery	3	6	PETE 204 Reservoir Rock and Fluid Properties with Lab (5487) (D and above)			3 year UG SMG Petroleum Engineering	SMG		
28	PETE 407	Capstone Design Project II	3	6	PETE 400 Capstone Design Project I (6424) (P)			4 year UG SMG Petroleum Engineering	SMG		
29	PETE 506	Advanced Reservoir Simulation	3	6				Petroleum Engineering			

30	PETE 507	Advanced Reservoir Engineering	3	6				Petroleum Engineering		
31	PETE 508	Advanced Production Engineering	3	6				Petroleum Engineering		
32	PETE 600	Thesis I	6	12				Petroleum Engineering		
33	PETE 606	Advanced Enhanced Oil Recovery	3	6				Petroleum Engineering		
34	PETE 615	Advanced Petroleum Exploration	3	6	PETE 502 Petroleum Geology (4478) (C- and above)			Instructor's Permission Required. Registration through Add Course form only!		
35	PETE 701	Advanced Well Engineering	4	8				Petroleum Engineering	Mining Engineering, SEDS, SSH	
36	PETE 702	Current Research Literature	4	8				Petroleum Engineering		
37	PETE 703	Advanced Reservoir Engineering	4	8				Petroleum Engineering	Mining Engineering, SEDS, SSH	
38	PETE 801	Advanced Reservoir Simulation	4	8				Petroleum Engineering	Mining Engineering, SEDS, SSH	
39	PETE 803	Advanced Enhanced Oil Recovery	4	8				Petroleum Engineering	Mining Engineering, SEDS, SSH	
40	PETE 890	Thesis Research	0	0				Petroleum Engineering		
School of Mining and Geosciences										
41	GEOL 101	Fundamentals of Geology	3	6				1 year UG SMG	SMG	SEDS, SSH
42	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	SMG	
43	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	SMG	
44	GEOL 206	Field Geology 1	3	6	GEOL 202 Geologic Maps and Cross-Sections (5123) (C- and above)			2 year UG SMG Geology	SMG	
45	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)		2 year UG SMG Geology	SMG	

46	GEOL 304	Geophysics	3	6	GEOL 204 Sedimentology and stratigraphy (5475) (D and above)			3 year UG SMG Geology	SMG		
47	GEOL 306	Geodynamics	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	SMG		
48	GEOL 307	Geographic Information Systems	3	6				3 year UG SMG Geology	SMG		
49	GEOL 308	Environmental Geochemistry	3	6				3 year UG SMG Geology	SMG		
50	GEOL 309	Hydrogeology	3	6				3 year UG SMG Geology	SMG		
51	GEOL 403	Geostatistics	3	6	MATH 161 Calculus I (118) (C- and above)			4 year UG SMG Geology			
52	GEOL 405	Research Project II	3	6	GEOL 404 Research Project I (6423) (C- and above)			4 year UG SMG Geology			
53	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, 4 year UG SMG Petroleum Engineering	4 year UG SSH, SMG		
54	SMG 520	Research Methods	3	6				Mining Engineering, Petroleum Engineering			