MINING ENGINEERING B.S.

Program Requirements

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Minimum Requirements for Mining Engineering B.S.: 124 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (http://catalog.uaf.edu/bachelors/#gurbachelorsdegreestext)		
General Education Requirements		
Complete the general education requirements. (http://catalog.uaf.edu/bachelors/#generaleducationrequirementstext)		36-40
As part of the general education requirements, complete the following:		
CHEM F105X	General Chemistry I	
CHEM F106X	General Chemistry II	
MATH F251X	Calculus I	
B.S. Degree Requirements		
Complete the B.S. degree requirements. (http://catalog.uaf.edu/bachelors/#bachelorofsciencetext)		16
As part of the B.S. requirements, complete the following:		
LS F101X	Library Information and Research	
MATH F252X	Calculus II	
PHYS F211X	General Physics I	
PHYS F212X	General Physics II	
Mining Engineering Program Requirements		
Complete the following:		
ES F208	Mechanics	4
ES F307	Elements of Electrical Engineering	3
ES F331	Mechanics of Materials	3
ES F341	Fluid Mechanics	4
ES F346	Introduction to Thermodynamics	3
GE F261	General Geology for Engineers	3
GEOS F262	Rocks and Minerals	3-4
or GEOS F213	Mineralogy	
GEOS F332	Ore Deposits and Structure	3-4
or GEOS F214	Petrology and Petrography	
MATH F253X	Calculus III	4
MATH F302	Differential Equations	3
MIN F110	Elements of Mine Safety, Operations and Development	2
MIN F202	Surveying and CAD for Engineers	2
MIN F302	Underground Mine Environmental Engineering	3
MIN F303	Ore Handling and Industrial Explosives	3
MIN F313	Introduction to Mineral Preparation	3
MIN F370	Rock Mechanics	3
MIN F390	Geostatistics and Mineral Economics	3
MIN F407	Mine Reclamation and Environmental Management	2
MIN F409	Operations Research and Computer Applications in Mineral Industry	2
MIN F444	Accidents, Emergency and Safety Management in Mines	2
MIN F454	Underground Mining Methods	2
MIN F482	Computer-aided Mine Design:VULCAN	3
MIN F484	Surface Mining Methods	1
MIN F485	Mining Engineering Exit Interview	0
MIN F489	Mining Design Project I [1]	1
MIN F490	Mining Design Project II [1]	2
MIN F491	Automation and Control	2
Recommended Technical Electives		
Complete 3 credits from the following: [2]		3
CE F401	Arctic Engineering (or AE A403 Arctic Engineering)	
GE F440	Slope Stability	
MIN F401	Mine Site Field Trips	
MIN F415	Coal Preparation	
Approved technical electives		
Fundamentals of Engineering (FE) Examination		
Complete the Fundamentals of Engineering (FE) examination administered by the State of Alaska.		
Total Credits		**124-130**

1. Fulfills the baccalaureate capstone requirement.
2. Students must plan their elective courses in consultation with their mining engineering faculty advisor. Technical electives are selected from the list of approved technical electives for the mining engineering program and other program course listings. All elective courses must be approved by the student's faculty advisor.