

# 2007-08 CATALOG

## GEOLOGICAL ENGINEERING

B.S. Degree Requirements  
134 Credits

### GENERAL REQUIREMENTS

#### COMMUNICATIONS:- (9)

Engl 111X (3)\_\_\_\_  
Engl 211X or 213X (3)\_\_\_\_  
Comm 131X or 141X (3)\_\_\_\_

#### PERSPECTIVES ON THE HUMAN CONDITION:- (18-22)

Complete the 6 courses listed **OR** 4 of those listed plus 2 semester length courses in a single AK Native or other non-English language or 3 semester length courses (9 credits) in American Sign Language.

Anth 100X/Soc 100X (3)\_\_\_\_  
Econ/PS 100X (3)\_\_\_\_  
Hist 100X (3)\_\_\_\_  
Art/Mus/Thr 200X or Hum 201X or  
ANS 202X (3) \_\_\_\_  
Engl/FL 200X (3)\_\_\_\_  
BA 323X or Comm 300X or Just 300X or Nrm 303X or  
Phil 322X or PS 300X (3)\_\_\_\_  
Language option as listed above:  
\_\_\_\_\_( ) \_\_\_\_\_( ) \_\_\_\_\_( ) \_\_\_\_\_

#### MATHEMATICS:- (18)

Math 200X (4)\_\_\_\_ Math 202X (4)\_\_\_\_  
Math 201X (4)\_\_\_\_ Math 302 (3)\_\_\_\_  
STAT 200 (3)\_\_\_\_

#### NATURAL SCIENCE:- (16)

Chem 105X (4)\_\_\_\_ Chem 106X (4)\_\_\_\_  
Phys 211X (4)\_\_\_\_ Phys 212X (4)\_\_\_\_

#### LIBRARY & INFO SKILLS:- (1)

LS 101X (1)\_\_\_\_

#### UPPER DIVISION CREDITS:- (39)

Transfer Credits \_\_\_\_\_  
UAF Credits (24)\* \_\_\_\_\_  
TOTAL TO DATE: \_\_\_\_\_  
TO BE COMPLETED: \_\_\_\_\_

\*a minimum of 24 UAF credits

COMPLETE 2 DESIGNATED (W) COURSES AND  
1 DESIGNATED (O) COURSE OR 2 COURSES  
DESIGNATED (O/2) AT THE  
UPPER DIVISION LEVEL:

\_\_\_\_\_(W) \_\_\_\_\_(W)  
\_\_\_\_\_(O) OR \_\_\_\_\_(O/2)\_\_\_\_\_(O/2)

*\*Designates only grades of "C" or better may be used to fulfill this requirement.*

### \*MAJOR REQUIREMENTS

#### A. Complete the following:- (52)

G.E. 101 (1)\_\_\_\_  
G.E. 261 (3)\_\_\_\_  
G.E. 365 (3)\_\_\_\_  
G.E. 375 (3)\_\_\_\_  
G.E. 381 (2)\_\_\_\_(W)  
G.E. 382 (4)\_\_\_\_(W)  
G.E. 405 (3)\_\_\_\_  
G.E. 420 (3)\_\_\_\_  
G.E. 471 (3)\_\_\_\_  
G.E. 480 (3)\_\_\_\_(W)  
Geos 213 (4)\_\_\_\_  
Geos 214 (4)\_\_\_\_  
Geos 322 (4)\_\_\_\_  
Geos 332 (3)\_\_\_\_  
Min 202 (3)\_\_\_\_  
Min 370 (3)\_\_\_\_  
Min 408 (3)\_\_\_\_

#### B. Complete 6 credits of approved

Technical elective:

\_\_\_\_\_(3)\_\_\_\_ \_\_\_\_\_(3)\_\_\_\_

#### C. Complete the following

Engineering Science courses:- (14)

E.S. 201 (3)\_\_\_\_  
E.S. 208 (4)\_\_\_\_  
E.S. 331 (3)\_\_\_\_  
E.S. 341 (4)\_\_\_\_

#### D. Must take the Fundamentals

Of Engineering Exam.

EXAM TAKEN: \_\_\_\_\_

*Must earn 'C' grades or better in A, B and C areas.*

Credits for core/general requirements:	62
Credits required for major:	72
Total credits required for degree	134

## BACHELOR OF SCIENCE IN GEOLOGICAL ENGINEERING

### First Year: Fall

GE 101-Intro to Geological Engineering	1
ENGL 111X-Meth.of Written Comm.	3
MATH 200X-Calculus I	4
CHEM 105X-General Chemistry	4
Perspectives Core (1 of 6)	3
	15

### First Year: Spring

COMM 131X or 141X	3
MATH 201X-Calculus II	4
GE 261-General Geology for Engineers	3
CHEM 106X-General Chemistry	4
LS 101X-Library Information & Research	1
	15

### Second Year: Fall

MATH 202X-Calculus III	4
GEOS 213-Mineralogy	4
PHYS 211X-General Physics	4
ENGL 211X/213X-Intermediate Exposition	3
MIN 202-Mine Surveying	3
	18

### Second Year: Spring

ES 201-Computer Techniques	3
ES 208-Mechanics	4
PHYS 212X-General Physics	4
GEOS 214-Petrology and Petrography	4
Perspectives Core (2 of 6)	3
	18

### Third Year: Fall

ES 331-Mechanics of Materials	3
GE 365-Geological Materials Engineering	3
GE 375-Princ of Engr Geol & Terrain Anal	3
GEOS 322-Stratigraphy & Sedimentation	4
STAT 200-Elem. Probability & Statistics	3
	16

### Third Year: Spring

ES 341-Fluid Mechanics	4
GEOS 332-Ore Deposits and Structure	3
MATH 302-Differential Equations	3
MIN 370-Rock Mechanics	3
Perspectives Core (3 of 6)	3
	16

### Summer: After Third Year

GE 381- Field Methods and Applied Design I	2
GE 382- Field Methods and Applied Design II	4
	6

### Fourth Year: Fall

GE 405-Exploration Geophysics	3
GE 471-Remote Sensing For Engineers	3
Technical Electives	3
Perspectives Core (4 of 6)	3
Perspectives Core (5 of 6)	3
	15

### Fourth Year: Spring

GE 420-Subsurface Hydrology	3
GE 480-Senior Design	3
MIN 408-Mineral Valuation & Economics	3
Technical Electives	3
Perspectives Core (6 of 6)	3
	15

### Note:

Students must plan their elective courses in consultation with their mining engineering faculty advisor. Technical electives are selected from the list of the approved technical electives for mining engineering program and other programs course listing. All elective courses must be approved by the department head.