

# MINING APPLICATIONS AND TECHNOLOGIES

College of Rural and Community Development  
 Community and Technical College  
 907-455-2906  
[www.ctc.uaf.edu/programs/protech/](http://www.ctc.uaf.edu/programs/protech/)

## Certificate

Minimum Requirements for Certificate: 31 or 37 credits

This program prepares students for employment in the mining technology industry and provides career development and personal enrichment for experienced miners and workers within the mineral industry. Possible career paths for certificate graduates include entry-level positions with exploration, mining, environmental and consulting companies.

Holders of this certificate will be trained to meet the anticipated demand for workers in open pit mining, surface coal mining, underground metal mining, sand and gravel, and placer mining. Two options are available: surface and underground mining techniques is intended for the miner, and mineral processing operations is intended for mineral process operators. After completing AMIT F109 and/or AMIT F129, students will receive the Mine Safety Health Association certificate. Contact the process technology department at 907-455-2868 for information on the MSHA certificate.

## Certificate Program

### Options: Surface and Underground Mining Techniques or Mineral Processing Operations

1. Complete the general university requirements (page 93).
2. Complete the certificate requirements (page 95).

3. Complete the following program requirements for either option A or option B:

#### Option A: Surface and Underground Mining Techniques

AMIT F101—Introduction to Mining .....	3
AMIT F109—Underground Mine Safety .....	1
AMIT F110—Underground Mining I .....	3
AMIT F120—Explosives I .....	3
AMIT F129—Surface Mining Safety .....	1
AMIT F130—Surface Mining Operations.....	3
AMIT F155—Drilling Technology.....	3
AMIT F210—Underground Mining II.....	3
AMIT F220—Explosives II.....	3
AMIT F230—Field Methods .....	2

#### Option B: Mineral Processing Operations

AMIT F101—Introduction to Mining .....	3
AMIT F129—Surface Mining Safety .....	1
AMIT F130—Surface Mining Operations.....	3
AMIT F135—Introduction to Mining Systems and Equipment .....	4
AMIT F140—Environmental Permitting.....	1
AMIT F145—Introduction to Mineral Beneficiation.....	3
AMIT F154—Water Quality and Flocculants.....	3
AMIT F162—Geochemical Sampling.....	1
AMIT F230—Field Methods .....	2
AMIT F231—Heap Leaching.....	1
PRT F101—Introduction to Process Technology .....	3
PRT F110—Introduction to Occupational Safety, Health and Environmental Awareness .....	3
PRT F140—Industrial Process Instrumentation I .....	3

4. Minimum credits required..... 31 or 37

All degrees (e.g. Certificate, A.A., A.A.S., A.S., etc) require additional courses. Refer to specific degree and program requirements.

## Certificate Requirements

### COMMUNICATION (2-3)

Complete one of the following:

ENGL F111X.....	(3)	_____
ABUS F170 .....	(3)	_____
ABUS F271 .....	(3)	_____
ENGL F211X.....	(3)	_____
ENGL F212 .....	(3)	_____
ENGL F213X.....	(3)	_____
COMM F131X.....	(3)	_____
COMM F141X.....	(3)	_____
DEVS F104.....	(1 – 3)	_____
DEVS F105 .....	(3)	_____

*Other program-approved discipline-based communication course or discipline-based courses with embedded communication content. (2 – 3)*

\* ENGL F212 does not fulfill the second half of the written communication requirement for the bachelor's degree.

### COMPUTATION (2-3)

Complete one of the following:

Any course at the F100-level or above in mathematical sciences (computer science, math or statistics).....	(3)	_____
ABUS F155 .....	(3)	_____
DEVM F105.....	(3)	_____
ECE F117 .....	(3)	_____
HLTH F116 .....	(3)	_____
HUMS F117.....	(3)	_____
PRT F155.....	(3)	_____
TTCH F131 .....	(3)	_____

*Other program-approved discipline-based computation course or discipline-based courses with embedded computation content. (2 – 3)*

### HUMAN RELATIONS (2-3)

Complete one of the following:

ANTH F100X/SOC F100X .....	(3)	_____
ABUS F154 .....	(3)	_____
ANL F287.....	(3)	_____
ECE F245 .....	(3)	_____
ED/PSY F245 .....	(3)	_____
HLTH F106 .....	(3)	_____
HUMS F120.....	(3)	_____
RHS F110 .....	(1)	_____
AND RHS F115 .....	(2)	_____

*Other program-approved discipline-based human relations course or discipline-based courses with embedded human relations content. (2 – 3)*

**MAJOR SPECIALTY CREDITS (minimum)..... 21**

**Minimum credits for required certificate..... 30**

## Associate of Applied Science Requirements

### COMMUNICATION (9)

ENGL F111X.....	(3)	_____
-----------------	-----	-------

Complete one of the following:

ABUS F271 .....	(3)	_____
ENGL F211X.....	(3)	_____
ENGL F212 .....	(3)	_____
ENGL F213X.....	(3)	_____

\* ENGL F212 does not fulfill the second half of the written communication requirement for the bachelor's degree.

Complete one of the following:

COMM F131X.....	(3)	_____
COMM F141X.....	(3)	_____

### COMPUTATION (3)

Complete one of the following:

Any course at the F100-level or above in mathematical sciences (computer science, math or statistics).....	(3)	_____
ABUS F155 .....	(3)	_____
DEVM F105.....	(3)	_____
ECE F117 .....	(3)	_____
HLTH F116 .....	(3)	_____
HUMS F117.....	(3)	_____
PRT F155.....	(3)	_____
TTCH F131 .....	(3)	_____

*Other program-approved discipline-based computation course or discipline-based courses with embedded computation content. (3)*

### HUMAN RELATIONS (2-3)

Complete one of the following:

ANTH F100X/SOC F100X .....	(3)	_____
ABUS F154 .....	(3)	_____
ANL F287.....	(3)	_____
ECE F245 .....	(3)	_____
ED/PSY F245 .....	(3)	_____
HLTH F106 .....	(3)	_____
HUMS F120.....	(3)	_____
RHS F110 .....	(1)	_____
AND RHS F115 .....	(2)	_____

*Other program-approved discipline-based human relations course or discipline-based courses with embedded human relations content. (3)*

**MAJOR SPECIALTY CREDITS (minimum)..... 30**

**Minimum credits required for degree ..... 60**



**UNIVERSITY OF ALASKA FAIRBANKS**

Admissions and the Registrar • P.O. Box 757480 • Fairbanks, AK 99775-7480 • admissions@uaf.edu • www.uaf.edu

**UNIVERSITY OF ALASKA FAIRBANKS**

Office of Admissions and the Registrar • P.O. Box 757480 • Fairbanks, AK 99775-7480 • admissions@uaf.edu • www.uaf.edu

UA is an AA/EO employer and educational institution and prohibits illegal discrimination against any individual: www.alaska.edu/titleIXcompliance/nondiscrimination.

