MINING APPLICATIONS AND TECHNOLOGIES

College of Rural and Community Development
Community and Technical College
907-479-2436
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 95).

2. Complete the certificate requirements (page 97).

3. Complete the following requirements for 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 Mine 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 Mine 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

Certificate Requirements

Communication . . . . .2 – 3 Credits

Complete one of the following:
- ENGL F111X—Introduction to Academic Writing..(3)
- ABUS F170—Business English...(3)
- ABUS F271—Business Communications ....(3)
- ENGL F211X—Academic Writing about Literature...............................(3)
- ENGL F212—Business, Grant and Report Writing* ....(3)
- ENGL F213X—Academic Writing about the Social and Natural Sciences ......(3)
- COMM F131X—Fundamentals of Oral Communication: Group Context .....(3)
- COMM F141X—Fundamentals of Oral Communication: Public Context......(3) or successful completion of competency test
- DEVS F104—University Communications.................................... (1 – 3)
- DEVS F105—Intensive Reading Development ....(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 Credits

Complete one of the following:
- Any course at the F100-level or above in mathematical sciences (computer science, math or statistics). ....(3)
- ABUS F155—Business Math...(3)
- DEVM F105—Intermediate Algebra..(3)
- ECE F117—Math Skills for Early Childhood Educators.....................(3)
- HLTH F116—Mathematics in Health Care ....(3)
- HUMS F117—Math Skills for Human Services....................................(3)
- TTCH F131—Mathematics for the Trades ....(3)
- Other program-approved discipline-based computation course or discipline-based courses with embedded computation content. .... (2 – 3)

Human Relations . . . . .2 – 3 Credits

Complete one of the following:
- ANTH F100X/SOC F100X—Individual, Society and Culture(s) ....(3)
- ABUS F154—Human Relations ....(3)
- ANL F287—Teaching Methods for Alaska Native Languages (h).....................(3)
- ECE F104—Child Development: Prenatal, Infants and Toddlers (s) ....(3)
- ECE F107—Child Development II: Preschool and Primary Years (s) ....(3)
- ED/PSY F245—Child Development (s) ....(3)
- HLTH F106—Human Behavior in Health Care (s) ....(3)
- HUMS F120—Cultural Diversity in Human Services...........................(3)
- RHS F110—Cross-Cultural Bridging Skills (1) AND RHS F115—Issues of Personal Development ....(2)
- Other program-approved discipline-based human relations or discipline-based courses with embedded human relations content. .... (2 – 3)

Major specialty at least... 21 Credits

Electives to total .... 30 Credits

Associate of Applied Science Requirements

Written Communication. .6 Credits

- ENGL F111X—Introduction to Academic Writing..(3)

Complete one of the following:
- ABUS F271—Business Communications ....(3)
- ENGL F211X—Academic Writing about Literature...............................(3)
- ENGL F212—Business, Grant and Report Writing* ....(3)
- ENGL F213X—Academic Writing about the Social and Natural Sciences ......(3)

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

Oral Communication . . . . .3 Credits

Complete one of the following:
- COMM F131X—Fundamentals of Oral Communication: Group Context .....(3)
- COMM F141X—Fundamentals of Oral Communication: Public Context......(3) or successful completion of competency test

Computation. . . . . .3 Credits

Complete one of the following:
- Any course at the F100-level or above in mathematical sciences (computer science, math or statistics). ....(3)
- ABUS F155—Business Math...(3)
- DEVM F105—Intermediate Algebra..(3)
- ECE F117—Math Skills for Early Childhood Educators.....................(3)
- HLTH F116—Mathematics in Health Care ....(3)
- HUMS F117—Math Skills for Human Services....................................(3)
- TTCH F131—Mathematics for the Trades ....(3)
- Other program-approved discipline-based computation course or discipline-based courses with embedded computation content. ....(3)

Human Relations . . . . .3 Credits

Complete one of the following:
- ANTH F100X/SOC F100X—Individual, Society and Culture (s) ....(3)
- ABUS F154—Human Relations ....(3)
- ANL F287—Teaching Methods for Alaska Native Languages (h).....................(3)
- ECE F104—Child Development: Prenatal, Infants and Toddlers (s) ....(3)
- ECE F107—Child Development II: Preschool and Primary Years (s) ....(3)
- ED/PSY F245—Childhood Development (s) ....(3)
- HLTH F106—Human Behavior in Health Care (s) ....(3)
- HUMS F120—Cultural Diversity in Human Services...........................(3)
- RHS F110—Cross-Cultural Bridging Skills (1) AND RHS F115—Issues of Personal Development ....(2)
- Other program-approved discipline-based human relations course or discipline-based courses with embedded human relations content. ....(3)

Major specialty at least... 30 Credits

Electives to total .... 60 Credits

Minimum credits required for degree .... 60 Credits