MINING TECHNOLOGY, A.S.

Begin Campus: Fayette
End Campus: Fayette

Program Note: Only courses in the Maintenance Emphasis are available at Penn State Fayette for the Mining Technology, A.S. degree program.

Program Description
The Associate of Science degree in Mining Technology blends basic sciences, mathematics, principles and practices of management, and applied courses in Mining Technology to prepare students for supervisory roles in the Mining industry. This major helps prepare students for either a production-oriented or a maintenance-oriented position in the mining industry. Graduates of this major, after serving the required apprenticeship, should be qualified to become certified managers in their field. All students complete a common core of classes, but must also choose to enroll in one of two emphases, Maintenance or Production.

Maintenance Emphasis
The maintenance emphasis prepares students to become maintenance supervisors. Initially, graduates may work as apprentice electricians or mechanics to gain experience in repairs and planned maintenance. After certification is obtained, they may become involved with maintenance planning, working as or with the chief mine mechanic or chief mine electrician.

Production Emphasis
The production emphasis helps prepare students to become mine supervisors or engineering aides. Initially, some of the duties are to run transit and act as survey party chief, keep mine maps up to date and make projections, take samples and run analyses, make time studies, and assist with materials handling layouts.

What is Mining Technology?
The Mining Technology program prepares students for either a production-oriented or a maintenance-oriented position in the mining industry. Graduates of the major, after serving the required apprenticeship, can be qualified to become certified managers in their field.

You Might Like This Program If...
- You have a strong interest in science, especially geology.
- You like to study mathematics and solve problems.
- You are hardworking and enjoy collaboration with others.
- Hands-on coursework is of interest to you.
- You are interested in the mining industry.
- You care about the environment.
- You are interested in employee safety and the laws and regulations that impact safety.

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Entrance to Major
Students must have a minimum 2.0 GPA to change to this Associate degree after admission to the University.

Degree Requirements
For the Associate of Science degree in Mining Technology, a minimum of 67 credits is required:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Education</td>
<td>21</td>
</tr>
<tr>
<td>Requirements for the Major</td>
<td>58-59</td>
</tr>
</tbody>
</table>

12 of the 21 credits for General Education are included in the Requirements for the Major. This includes: 6 credits of GWS courses; 3 credits of GN courses; 3 credits of GQ courses.

Requirements for the Major
To graduate, a student enrolled in the major must earn a grade of C or better in each course designated by the major as a C-required course, as specified by Senate Policy 82-44 (https://senate.psu.edu/policies-and-rules-for-undergraduate-students/82-00-and-83-00-degree-requirements/#82-44).

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS 100</td>
<td>Effective Speech</td>
<td>3</td>
</tr>
<tr>
<td>CMPSC 100</td>
<td>Computer Fundamentals and Applications</td>
<td>3</td>
</tr>
<tr>
<td>EDSGN 100</td>
<td>Cornerstone Engineering Design</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 15</td>
<td>Rhetoric and Composition</td>
<td>3</td>
</tr>
<tr>
<td>GEOSC 20</td>
<td>Planet Earth</td>
<td>3</td>
</tr>
<tr>
<td>MATH 81</td>
<td>Technical Mathematics I</td>
<td>3</td>
</tr>
<tr>
<td>MATH 82</td>
<td>Technical Mathematics II</td>
<td>3</td>
</tr>
<tr>
<td>MNG 223</td>
<td>Mineral Land and Mine Surveying</td>
<td>2</td>
</tr>
<tr>
<td>MNGT 30</td>
<td>Mining Administration and Law</td>
<td>2</td>
</tr>
<tr>
<td>MNGT 110</td>
<td>Mining Systems Technology</td>
<td>3</td>
</tr>
<tr>
<td>MNGT 205W</td>
<td>Mining Machine Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>MNGT 211</td>
<td>Practicum in Mining Technology</td>
<td>3</td>
</tr>
<tr>
<td>MNGT 214</td>
<td>Mining Management I</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 150</td>
<td>Technical Physics I</td>
<td>3</td>
</tr>
</tbody>
</table>

Prescribed Courses: Require a grade of C or better

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNGT 100</td>
<td>Mining Technology Orientation</td>
<td>1</td>
</tr>
<tr>
<td>MNGT 204</td>
<td>Mine Plant Technology</td>
<td>3</td>
</tr>
<tr>
<td>MNGT 216</td>
<td>Mine Regulations and Laws</td>
<td>3</td>
</tr>
</tbody>
</table>

Additional Courses
Select 8-9 credits from one of the following emphases:

Maintenance Emphasis:
- MNGT 207 Electric Mine Machine Circuits
- MNGT 208 Mine Power Distribution
- MNGT 209 Mine Machinery Control Methods

Production Emphasis:
- MNGT 202 Mining Ventilation
- MNGT 213 Strata Control Methods
- MNGT 215 Mining Management II
General Education
Connecting career and curiosity, the General Education curriculum provides the opportunity for students to acquire transferable skills necessary to be successful in the future and to thrive while living in interconnected contexts. General Education aids students in developing intellectual curiosity, a strengthened ability to think, and a deeper sense of aesthetic appreciation. These are requirements for all associate degree students and are often partially incorporated into the requirements of a program. For additional information, see the General Education Requirements (https://bulletins.psu.edu/undergraduate/general-education/associate-degree-general-education-program/) section of the Bulletin and consult your academic adviser.

The keystone symbol appears next to the title of any course that is designated as a General Education course. Program requirements may also satisfy General Education requirements and vary for each program.

Foundations (grade of C or better is required and Inter-Domain courses do not meet this requirement.)
- Quantification (GQ): 3 credits
- Writing and Speaking (GWS): 3 credits

Knowledge Domains
- Arts (GA): 3 credits
- Humanities (GH): 3 credits
- Social and Behavioral Sciences (GS): 3 credits
- Natural Sciences (GN): 3 credits

Note: Up to six credits of Inter-Domain courses may be used for any Knowledge Domain requirement, but when a course may be used to satisfy more than one requirement, the credits from the course can be counted only once.

Exploration
- Any General Education course (including GHW and Inter-Domain): 3 credits

University Degree Requirements
Cultures Requirement
3 credits of United States (US) or International (IL) cultures coursework are required and may satisfy other requirements

Writing Across the Curriculum
3 credits required from the college of graduation and likely prescribed as part of major requirements.

Total Minimum Credits
A minimum of 60 degree credits must be earned for a associates degree. The requirements for some programs may exceed 60 credits. Students should consult with their college or department adviser for information on specific credit requirements.

Quality of Work
Candidates must complete the degree requirements for their major and earn at least a 2.00 grade-point average for all courses completed within their degree program.

Limitations on Source and Time for Credit Acquisition
Credit used toward degree programs may need to be earned from a particular source or within time constraints (see Senate Policy 83-80 (https://senate.psu.edu/policies-and-rules-for-undergraduate-students/82-00-and-83-00-degree-requirements/#83-80)). For more information, check the Suggested Academic Plan for your intended program.

Academic Advising
The objectives of the university’s academic advising program are to help advisees identify and achieve their academic goals, to promote their intellectual discovery, and to encourage students to take advantage of both in-and out-of class educational opportunities in order that they become self-directed learners and decision makers.

Both advisers and advisees share responsibility for making the advising relationship succeed. By encouraging their advisees to become engaged in their education, to meet their educational goals, and to develop the habit of learning, advisers assume a significant educational role. The advisee’s unit of enrollment will provide each advisee with a primary academic adviser, the information needed to plan the chosen program of study, and referrals to other specialized resources.

READ SENATE POLICY 32-00: ADVISING POLICY (https://senate.psu.edu/policies-and-rules-for-undergraduate-students/32-00-advising-policy/)

Fayette
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kmp30@psu.edu

Career Paths
Graduates of the major, after serving the required apprenticeship, should be qualified to become certified managers in mining technology.

Careers
Students completing the maintenance emphasis of the Mining Technology program are prepared to become maintenance supervisors. Initially, graduates may work as apprentice electricians or mechanics to gain experience in repairs and planned maintenance. After certification is obtained, they may become involved with maintenance planning, working as or with the chief mine mechanic or chief mine electrician. Students completing the production emphasis of the Mining Technology program are prepared to become mine supervisors or engineering aides. Initially, some of the duties are to run transit and act as survey party chief, keep mine maps up to date and make projections, take samples and run analyses, make time studies, and assist with materials handling layouts. Job titles include: Supervisor Trainee Mine Superintendent Service Engineer Mechanic Electrician Engineering Technician with a consulting firm or government mining research agency State or Federal Inspector.

MORE INFORMATION ABOUT POTENTIAL CAREER OPTIONS FOR GRADUATES OF THE MINING TECHNOLOGY PROGRAM (https://fayette.psu.edu/mining-technology/)

Accreditation
This program is accredited by the Engineering Technology Accreditation Commission of ABET.

MORE INFORMATION ABOUT ABET ACCREDITATION (http://www.abet.org)
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