Campus Curricula Committee Meeting Agenda
February 7, 2018
2:00pm – 3:30pm, 216 Parker Hall
(For Faculty Senate Meeting of February 22, 2018)

Review of submitted Course Change forms:
File: 4382.2 EXP ENG 5922: Tunneling & Underground Construction Techniques
File: 1173.15 GEO ENG 1150: Physical and Environmental Geology
File: 1534.4 MIN ENG 2925: Surveying For Mineral Engineers
File: 2037.1 MIN ENG 3812: Statics And Mechanics Of Rock Materials
File: 41.7 MIN ENG 3913: Mineral Identification and Exploration
File: 2260.8 MIN ENG 4113: Mine Atmosphere Control
File: 677.1 MIN ENG 4122: Advanced Mine Health and Safety
File: 600.1 MIN ENG 4212: Advanced Aggregate and Quarrying
File: 906.2 MIN ENG 4322: Coal Mine Development And Production
File: 431.1 MIN ENG 4412: Aggregate Materials Characterization, Sizing and Dimension Stone
File: 81.1 MIN ENG 4423: Mineral Processing I (Flotation and Hydrometallurgy)
File: 1698.1 MIN ENG 4424: Mineral Processing II (Mechanics and Design)
File: 1726.4 MIN ENG 4522: Ore Reserve Analysis And Geostatistics
File: 529.5 MIN ENG 4742: Environmental Aspects of Mining
File: 1823.5 MIN ENG 4823: Rock Mechanics
File: 1145.8 MIN ENG 4912: Mine Power and Drainage
File: 1524.4 MIN ENG 4932: Underground Mining Methods and Equipment
File: 682.4 MIN ENG 4933: Surface Mining Methods and Equipment
File: 1257.1 MIN ENG 5113: Mine Atmosphere Control
File: 2505.1 MIN ENG 5122: Advanced Topics in Mine Health and Safety
File: 825.1 MIN ENG 5212: Aggregates and Quarrying
File: 839.1 MIN ENG 5322: Coal Mining Methods
File: 1930.1 MIN ENG 5412: Aggregates Materials Sizing and Characterization
File: 500.1 MIN ENG 5413: Material Processing by High Pressure Water Jet
File: 2019.1 MIN ENG 5422: Coal Preparation
File: 1028.1 MIN ENG 5423: Flotation and Hydrometallurgy
File: 956.1 MIN ENG 5424: Mineral Processing II Mechanics and Design
File: 1344.1 MIN ENG 5522: Ore Reserve Analysis and Geostatistics
File: 1599.1 MIN ENG 5742: Environmental Aspects of Mining
File: 590.1 MIN ENG 5823: Rock Mechanics
File: 1696.1 MIN ENG 5912: Mine Power and Drainage
File: 2264.1 MIN ENG 5932: Underground Mining Methods
File: 2265.1 MIN ENG 5933: Surface Mining Methods
File: 103.1 MIN ENG 6842: Advanced Rock Mechanics
File: 369.1 MIN ENG 6843: Dynamic Rock Mechanics

Review of submitted Degree Change Forms:
File: 95.24 MI ENG-BS: Mining Engineering BS
## Course Change Request

**Date Submitted:** 10/31/17 12:55 pm  
**Viewing:** *EXP ENG 5922 : Advanced Tunneling & Underground Construction Techniques*  
**Last approved:** 09/16/17 3:21 am  
**Last edit:** 11/28/17 11:21 am  
**Changes proposed by:** cifarellit

<table>
<thead>
<tr>
<th>Catalog Pages referencing this course</th>
<th>Explosives Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programs referencing this course</td>
<td>MI ENG-BS: Mining Engineering BS</td>
</tr>
<tr>
<td>Other Courses referencing this course</td>
<td>In The Catalog Description: MIN ENG 5922 : Advanced Tunneling &amp; Underground Construction Techniques</td>
</tr>
</tbody>
</table>

**Requested Effective Change Date:** Fall 2018  
**Department:** Mining & Nuclear Engineering  
**Discipline:** Explosives Engineering (EXP ENG)  
**Course Number:** 5922  
**Title:** Advanced Tunneling & Underground Construction Techniques  
**Abbreviated Course Title:** Tun and Undergrnd Const  
**Catalog Description:** Mechanical Advanced topics in mechanical and conventional excavation techniques in underground tunneling and construction. Topics include tunneling layouts design, equipment and performance modeling, ground control systems including support, drainage, and structural integrity. Construction specifications, advance rate and contractual and cost estimation.  
**Prerequisites:** Consent of instructor.  
**Field Trip Statement:**  
**Credit Hours:** LEC: 2    LAB: 1    IND: 0    RSD: 0    Total: 3  
**Required for Majors:** No  
**Elective for Majors:** Yes  

### Approval Path

1. 11/27/17 7:12 pm  
   Braden lusk (blusk): Approved for RMINNUCL Chair  
2. 11/28/17 10:15 am  
   Brittany Parnell (ershenb): Approved for CCC Secretary  
3. 01/08/18 1:36 pm  
   sraper: Approved for Engineering DSCC Chair  
4. 01/23/18 10:44 am  
   Brittany Parnell (ershenb): Approved for Pending CCC Agenda post  

### History

1. Sep 16, 2017 by Kyle Perry (kapqh4)
<table>
<thead>
<tr>
<th>Justification for change:</th>
<th>Course was being offered to graduate and undergraduate students under two separate course numbers. 5922 was selected as the course number to utilize based on recommendations of the curriculum committee.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semesters previously offered as an experimental course</td>
<td></td>
</tr>
<tr>
<td>Co-Listed Courses:</td>
<td>MIN ENG 5922 - Advanced Tunneling &amp; Underground Construction Techniques</td>
</tr>
</tbody>
</table>
Course Change Request

Date Submitted: 12/16/17 1:21 pm

Viewing: GEO ENG 1150 : Physical and Environmental Geology

File: 1173.15

Last approved: 05/24/16 4:57 am

Last edit: 01/23/18 1:44 pm

Changes proposed by: grotekr

Catalog Pages referencing this course

Freshman Engineering Program

Programs referencing this course

CV ENG-BS: Civil Engineering BS
EV ENG-BS: Environmental Engineering BS
GE ENG-MI: Geological Engineering Minor
GEO-MI: Geology Minor
PE ENG-BS: Petroleum Engineering BS
GE ENG-BS: Geological Engineering BS
MI ENG-BS: Mining Engineering BS

Other Courses referencing this course

In The Catalog Description:

GEOLOGY 1110 : Physical And Environmental Geology

In The Prerequisites:

CIV ENG 3116 : Construction Materials, Properties And Testing
CIV ENG 3715 : Fundamentals Of Geotechnical Engineering
CIV ENG 6760 : Inca Civilization Geotechnical Engineering Practices

GEO ENG 2536 : Basic Weather
GEO ENG 3175 : Geomorphology And Terrain Analysis
GEO ENG 3249 : Fundamentals Of Computer Applications In Geological Engineering
GEO ENG 5331 : Subsurface Hydrology
GEO ENG 5443 : Subsurface Exploration
GEO ENG 5575 : Aggregates And Quarrying
GEO ENG 6407 : Inca Civilization Geotechnical Engineering Practices
GEO ENG 6782 : Surface Waves (MASW) and Ground Penetrating Radar (GPR)

GEOLOGY 1120 : Evolution Of The Earth
GEOLOGY 2611 : Physical Mineralogy And Petrology
GEOLOGY 4411 : Hydrogeology
GEOLOGY 4431 : Methods Of Karst Hydrogeology
GEOLOGY 4711 : Paleoclimatology and Paleoecology
GEOLOGY 4831 : Computational Geology
GEOLOGY 4841 : Geological Field Studies
GEOLOGY 5311 : Depositional Systems
GEOLOGY 5513 : Petroleum Geology
GEOPHYS 2211 : Geophysical Imaging
GEOPHYS 4231 : Seismic Interpretation
GEOPHYS 5202 : Exploration and Development Seismology
MIN ENG 3913 : Mineral Identification and Exploration

Approval Path

1. 12/17/17 8:51 am
   David Borrok (borrokd):
   Approved for RGEOSENG Chair

2. 12/18/17 8:59 am
   Brittany Parnell (ershenb):
   Approved for CCC Secretary

3. 01/08/18 1:36 pm
   sraper: Approved for Engineering DSCC Chair

4. 01/23/18 1:44 pm
   Brittany Parnell (ershenb):
   Approved for Pending CCC Agenda post

History

1. Feb 16, 2015 by grotekr (1173.1)
2. May 24, 2016 by kleb6b (1173.6)
<table>
<thead>
<tr>
<th>Requested Effective Change Date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Department</strong></td>
</tr>
<tr>
<td><strong>Discipline</strong></td>
</tr>
<tr>
<td><strong>Course Number</strong></td>
</tr>
<tr>
<td><strong>Title</strong></td>
</tr>
<tr>
<td><strong>Abbreviated Course Title</strong></td>
</tr>
<tr>
<td><strong>Catalog Description</strong></td>
</tr>
<tr>
<td><strong>Prerequisites</strong></td>
</tr>
<tr>
<td><strong>Field Trip Statement</strong></td>
</tr>
<tr>
<td><strong>Credit Hours</strong></td>
</tr>
<tr>
<td><strong>Required for Majors</strong></td>
</tr>
<tr>
<td><strong>Elective for Majors</strong></td>
</tr>
<tr>
<td><strong>Justification for change:</strong></td>
</tr>
<tr>
<td><strong>Semesters previously offered as an experimental course</strong></td>
</tr>
<tr>
<td><strong>Co-Listed Courses:</strong></td>
</tr>
<tr>
<td><strong>Course Reviewer Comments</strong></td>
</tr>
</tbody>
</table>
Course Change Request

Date Submitted: 10/31/17 10:04 am

Viewing: **MIN ENG 2925 : Surveying For Mineral Engineers**

File: 1534.4

Last approved: 06/26/17 3:15 am

Last edit: 11/29/17 9:01 am

Changes proposed by: cifarellit

<table>
<thead>
<tr>
<th>Programs referencing this course</th>
<th><strong>MI ENG-BS: Mining Engineering BS</strong></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Requested Effective Change Date</th>
<th>Fall 2018 2017</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Department</th>
<th>Mining &amp; Nuclear Engineering</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Mining Engineering (MIN ENG)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Course Number</th>
<th>2925</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Title</th>
<th>Surveying For Mineral Engineers</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Abbreviated Course Title</th>
<th>Survey For Mineral Engrs</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Catalog Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principles of surface and underground survey practice utilizing total station, engineer's level and GPS. Traversing and details, note taking and computations, balancing surveys and error analysis, staking-out new points, and map construction with AutoCAD.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preceded or accompanied by Min Eng 2126. 1912.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Field Trip Statement</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>LEC: 0</th>
<th>LAB: 2</th>
<th>IND: 0</th>
<th>RSD: 0</th>
<th>Total: 2</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Required for Majors</th>
<th>Yes No</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Elective for Majors</th>
<th>No</th>
</tr>
</thead>
</table>
Justification for change:
course is now held at the experimental mine and students need mine safety to work on the mine site.

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer sraper (11/29/17 9:01 am): changed to "required for majors".

Comments
Course Change Request

A deleted record cannot be edited

**Course Deactivation Proposal**

Date Submitted: 12/07/17 4:40 pm

Viewing: **MIN ENG 3812 : Statics And Mechanics Of Rock Materials**

File: 2037.1

Last edit: 12/07/17 4:40 pm

Changes proposed by: cifarellit

<table>
<thead>
<tr>
<th>Programs referencing this course</th>
<th>GEOL-MI: Geology Minor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other Courses referencing this course</td>
<td>CIV ENG 3116 : Construction Materials, Properties And Testing</td>
</tr>
</tbody>
</table>

Requested Effective Change Date: Fall 2018 08/01/2014

Department: Mining & Nuclear Engineering

Discipline: Mining Engineering (MIN ENG)

Course Number: 3812

Title: Statics And Mechanics Of Rock Materials

Abbreviated Course Title: Stat & Mech Of Rock Mtrl

Catalog Description:
Application of the principles of mechanics to engineering problems of equilibrium, strength, and stiffness concerning rock materials and mine support structures. This course extends the study of statics to rock materials in mines and covers rock-related and support structure-related mechanics of materials. The course is complemented by rock mechanics laboratory.

Prerequisites:
MECH ENG 2340; or IDE 50 and 150.

Field Trip Statement

A deleted record cannot be edited

Course Deactivation Proposal

Date Submitted: 12/07/17 4:40 pm

Viewing: **MIN ENG 3812 : Statics And Mechanics Of Rock Materials**

File: 2037.1

Last edit: 12/07/17 4:40 pm

Changes proposed by: cifarellit

<table>
<thead>
<tr>
<th>Programs referencing this course</th>
<th>GEOL-MI: Geology Minor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other Courses referencing this course</td>
<td>CIV ENG 3116 : Construction Materials, Properties And Testing</td>
</tr>
</tbody>
</table>

Requested Effective Change Date: Fall 2018 08/01/2014

Department: Mining & Nuclear Engineering

Discipline: Mining Engineering (MIN ENG)

Course Number: 3812

Title: Statics And Mechanics Of Rock Materials

Abbreviated Course Title: Stat & Mech Of Rock Mtrl

Catalog Description:
Application of the principles of mechanics to engineering problems of equilibrium, strength, and stiffness concerning rock materials and mine support structures. This course extends the study of statics to rock materials in mines and covers rock-related and support structure-related mechanics of materials. The course is complemented by rock mechanics laboratory.

Prerequisites:
MECH ENG 2340; or IDE 50 and 150.

Field Trip Statement

A deleted record cannot be edited

Course Deactivation Proposal

Date Submitted: 12/07/17 4:40 pm

Viewing: **MIN ENG 3812 : Statics And Mechanics Of Rock Materials**

File: 2037.1

Last edit: 12/07/17 4:40 pm

Changes proposed by: cifarellit

<table>
<thead>
<tr>
<th>Programs referencing this course</th>
<th>GEOL-MI: Geology Minor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other Courses referencing this course</td>
<td>CIV ENG 3116 : Construction Materials, Properties And Testing</td>
</tr>
</tbody>
</table>

Requested Effective Change Date: Fall 2018 08/01/2014

Department: Mining & Nuclear Engineering

Discipline: Mining Engineering (MIN ENG)

Course Number: 3812

Title: Statics And Mechanics Of Rock Materials

Abbreviated Course Title: Stat & Mech Of Rock Mtrl

Catalog Description:
Application of the principles of mechanics to engineering problems of equilibrium, strength, and stiffness concerning rock materials and mine support structures. This course extends the study of statics to rock materials in mines and covers rock-related and support structure-related mechanics of materials. The course is complemented by rock mechanics laboratory.

Prerequisites:
MECH ENG 2340; or IDE 50 and 150.

Field Trip Statement
Credit Hours | LEC: 2 | LAB: 1 | IND: 0 | RSD: 0 | Total: 3
--- | --- | --- | --- | --- | ---
Required for Majors | No | | | | |
Elective for Majors | No | | | | |

Justification for change: course no longer being taught. Multiple rock mech courses were being offered to graduate and undergraduate students under two separate course numbers. Other numbers were selected as the course numbers to utilize based on recommendations of the curriculum committee.

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer Comments
# Course Change Request

**Date Submitted:** 10/31/17 9:28 am

**Viewing:** **MIN ENG 3913 : Mineral Identification and Exploration**

**File:** 41.7

**Last approved:** 06/26/17 3:14 am

**Last edit:** 11/28/17 10:22 am

Changes proposed by: cifarellit

### Programs referencing this course
- GEOL-MI: Geology Minor
- MI ENG-MI: Mining Engineering Minor
- GE ENG-BS: Geological Engineering BS
- MI ENG-BS: Mining Engineering BS

### Other Courses referencing this course
- In The Prerequisites: MIN ENG 4932 : Underground Mining Methods And Equipment

### Requested Effective Change Date
- Fall 2018

### Department
- Mining & Nuclear Engineering

### Discipline
- Mining Engineering (MIN ENG)

### Course Number
- 3913

### Title
- Mineral Identification and Exploration

### Abbreviated Course Title
- Mineral ID and Exploration

### Catalog Description

### Prerequisites
- Either both Chem 1310 and Chem 1319 or Chem 1351; either Geo Eng 1150 or Geology 1110.

### Field Trip Statement

### Credit Hours
- LEC: 2  
- LAB: 1  
- IND: 0  
- RSD: 0  
- Total: 3

### Required for Majors
- Yes

### Elective for Majors
- No

### Justification for change:
- ABET requirements and course mapping

### Approval Path
1. 11/27/17 7:13 pm  
   Braden lusk (blusk): Approved for RMINNUCL Chair
2. 11/28/17 10:22 am  
   Brittany Parnell (ershenb): Approved for CCC Secretary
3. 01/08/18 1:39 pm  
   sraper: Approved for Engineering DSCC Chair
4. 01/23/18 2:08 pm  
   Brittany Parnell (ershenb): Approved for Pending CCC Agenda post

### History
1. Apr 25, 2014 by lahne (41.1)
2. Jun 26, 2017 by cifarellit (41.3)
Course Change Request

A deleted record cannot be edited

Course Deactivation Proposal

Date Submitted: 11/29/17 3:01 pm

Viewing: MIN ENG 4113 : Mine Atmosphere Control

File: 2260.8

Last approved: 06/26/17 3:15 am

Last edit: 11/29/17 3:01 pm

Changes proposed by: cifarellit

Other Courses referencing this course

In The Prerequisites:

MIN ENG 6133 : Mine Atmospheric Control II

Requested Effective Change Date

Fall Spring 2018

Department Mining & Nuclear Engineering

Discipline Mining Engineering (MIN ENG)

Course Number 4113

Title Mine Atmosphere Control

Abbreviated Course Title Mine Atmosphere Control

Catalog Description

Fundamentals of mine ventilation, including the principles of airflow, control of gases, dust, and temperature, methane drainage, mine fans, network theory, computer network simulation, and economics of airflow, with emphasis on analysis, systems design and practical application.

Prerequisites

Mech Eng 2527; Civ Eng 3330 or Nuc Eng 3221.

Field Trip Statement

Credit Hours

LEC: 2
LAB: 1
IND: 0
RSD: 0
Total: 3

Required for Majors

Yes

Elective for Majors

No

Justification for change:

Course was being offered to graduate and undergraduate students under two separate course numbers. 5113 was selected as the course number to utilize based on recommendations of the curriculum committee.

Semesters previously offered as an experimental course

In Workflow

1. RMINNUCL Chair
2. CCC Secretary
3. Engineering DSCC Chair
4. Pending CCC Agenda post
5. CCC Meeting Agenda
6. Campus Curricula Committee Chair
7. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. CAT entry
11. Peoplesoft

Approval Path

1. 12/07/17 10:32 pm
Braden lusk
(blusnk): Approved for RMINNUCL Chair
2. 12/08/17 10:09 am
Brittany Parnell
(ershenb): Approved for CCC Secretary
3. 01/08/18 1:36 pm
sraper: Approved for Engineering DSCC Chair
4. 01/23/18 2:12 pm
Brittany Parnell
(ershenb): Approved for Pending CCC Agenda post

History

1. Feb 9, 2015 by cifarellit (2260.1)

https://nextcatalog.mst.edu/courseleaf/courseleaf.cgi?page=/courseadmin/2260/index.html...
Course Change Request

Date Submitted: 10/31/17 11:19 am

Viewing: MIN ENG 4122: Advanced Mine Health and Safety

File: 677.1
Last edit: 11/29/17 9:21 am
Changes proposed by: cifarellit

Requested: Fall 2018
Effective Change Date: 08/01/2014

Department: Mining & Nuclear Engineering
Discipline: Mining Engineering (MIN ENG)
Course Number: 4122
Title: Advanced Mine Health and Safety
Abbreviated Course Title: Adv Mine Health and Saf
Catalog Description:
A detailed study of health and safety principles, practices, analyses, regulations, risks, issues, and hazards recognition, mitigation and control, and disaster prevention technology, in the mining industry.
Prerequisites:
Min Eng 2126.
Field Trip:

Statement:

Credit Hours: LEC: 3, LAB: 0, IND: 0, RSD: 0, Total: 3
Required for Majors: No
Elective for Majors: Yes No

Justification for change:
Changing catalog description to match actual course content.

Semesters previously offered as an

In Workflow
1. RMINNUCL Chair
2. CCC Secretary
3. Engineering DSCC Chair
4. Pending CCC Agenda post
5. CCC Meeting Agenda
6. Campus Curricula Committee Chair
7. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. CAT entry
11. Peoplesoft

Approval Path
1. 11/27/17 7:14 pm
Braden lusk (blusk): Approved for RMINNUCL Chair
2. 11/28/17 10:29 am
Brittany Parnell (ershenb): Approved for CCC Secretary
3. 01/08/18 1:36 pm
sraper: Approved for Engineering DSCC Chair
4. 01/23/18 2:14 pm
Brittany Parnell (ershenb): Approved for Pending CCC Agenda post

https://nextcatalog.mst.edu/courseleaf/courseleaf.cgi?page=/courseadmin/677/index.html&...
experimental
course

Co-Listed
Courses:

Course Reviewer sraper (11/29/17 9:21 am): checked "elective for majors"
Comments
Course Change Request

Course Deactivation Proposal

Date Submitted: 12/07/17 4:38 pm

Viewing: MIN ENG 4212: Advanced Aggregate and Quarrying

File: 600.1
Last edit: 12/07/17 4:38 pm

Changes proposed by: cifarellit

Requested: Fall 2018 08/01/2014
Effective Change Date

Department: Mining & Nuclear Engineering
Discipline: Mining Engineering (MIN ENG)
Course Number: 4212
Title: Advanced Aggregate and Quarrying
Abbreviated Course Title: Adv Aggregate & Quarrying

Catalog Description
Advanced coverage of topics on the stone and aggregate industry, including surface and underground operations, plant equipment, economics, marketing, transportation, and environmental topics. **The course will include at least one field trip and a design project.**

Prerequisites
Min Eng 3912, co-requisite: Civ Eng 3116.

Field Trip Statement
**The course will include at least one field trip and a design project.**

Credit Hours
<table>
<thead>
<tr>
<th>LEC</th>
<th>LAB</th>
<th>IND</th>
<th>RSD</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
</tbody>
</table>

Required for Majors: No
Elective for Majors: No

Justification for change:
Moved field trip statement to course description to match PeopleSoft.
Course was being offered to graduate and undergraduate students under two

In Workflow
1. RMINNUCL Chair
2. CCC Secretary
3. Engineering DSCC Chair
4. Pending CCC Agenda post
5. CCC Meeting Agenda
6. Campus Curricula Committee Chair
7. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. CAT entry
11. Peoplesoft

Approval Path
1. 12/07/17 10:32 pm
Braden lusk (blusk): Approved for RMINNUCL Chair
2. 12/08/17 10:10 am
Brittany Parnell (ershenb): Approved for CCC Secretary
3. 01/08/18 1:49 pm
sraper: Approved for Engineering DSCC Chair
4. 01/23/18 2:16 pm
Brittany Parnell (ershenb): Approved for
separate course numbers. Deactivate course based on recommendations of the Mining Faculty and curriculum committee.

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer Comments
Course Change Request

A deleted record cannot be edited

Course Deactivation Proposal

Date Submitted: 11/29/17 3:05 pm

Viewing: **MIN ENG 4322 : Coal Mine Development And Production**

File: 906.2

Last approved: 04/28/14 4:00 am

Last edit: 11/29/17 3:05 pm

Changes proposed by: cifarellit

<table>
<thead>
<tr>
<th>Other Courses referencing this course</th>
<th>In The Prerequisites:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>MIN ENG 5322 : Advanced Coal Mining Methods</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Requested Effective Change Date</th>
<th><strong>Fall 2018 01/13/2015</strong></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Department</th>
<th>Mining &amp; Nuclear Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discipline</td>
<td>Mining Engineering (MIN ENG)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Number</th>
<th>4322</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
<td>Coal Mine Development And Production</td>
</tr>
<tr>
<td>Abbreviated Course Title</td>
<td>Coal Min Devlp &amp; Product</td>
</tr>
</tbody>
</table>

| Catalog Description | An in-depth study of all aspects of coal mining, including an overview of coal industry, reserves and geology, planning and development of coal mines, surface and underground mechanized methods of face preparation, equipment, coal extraction, handling and preparation as practiced in the United States. |

| Prerequisites | Accompanied or preceded by Min Eng 4912. |

<table>
<thead>
<tr>
<th>Field Trip Statement</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit Hours</td>
<td>LEC: 3</td>
</tr>
<tr>
<td>Required for Majors</td>
<td>No</td>
</tr>
<tr>
<td>Elective for Majors</td>
<td>No</td>
</tr>
</tbody>
</table>

| Justification for change: | Additional course that is not being taught. |

| Semesters previously offered as an experimental course | |

In Workflow

1. RMINNUCL Chair
2. CCC Secretary
3. Engineering DSCC Chair
4. Pending CCC Agenda post
5. CCC Meeting Agenda
6. Campus Curricula Committee Chair
7. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. CAT entry
11. Peoplesoft

Approval Path

1. 12/07/17 10:32 pm
   Braden Lusk (blusk): Approved for RMINNUCL Chair
2. 12/08/17 10:11 am
   Brittany Parnell (ershenb): Approved for CCC Secretary
3. 01/08/18 1:49 pm
   sraper: Approved for Engineering DSCC Chair
4. 01/23/18 2:18 pm
   Brittany Parnell (ershenb): Approved for Pending CCC Agenda post

History

1. Apr 28, 2014 by lahne (906.1)
<table>
<thead>
<tr>
<th>Course Reviewer</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIN ENG 4322: Coal Mine Development And Production</td>
<td></td>
</tr>
</tbody>
</table>
# Course Change Request

A deleted record cannot be edited

**Course Deactivation Proposal**

Date Submitted: 12/07/17 4:37 pm

Viewing: **MIN ENG 4412 : Aggregate Materials Characterization, Sizing and Dimension Stone Characterization**

File: 431.1

Last edit: 12/07/17 4:37 pm

Changes proposed by: cifarellit

<table>
<thead>
<tr>
<th>Programs referencing this course</th>
<th>MNRL PR-MI: Mineral Process Eng Minor</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Requested Effective Change Date</th>
<th>Fall 2018 08/01/2014</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Department</th>
<th>Mining &amp; Nuclear Engineering</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Mining Engineering (MIN ENG)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Course Number</th>
<th>4412</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Title</th>
<th>Aggregate Materials Characterization, Sizing and Dimension Stone Characterization</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Abbreviated Course Title</th>
<th>Aggregate Materials</th>
</tr>
</thead>
</table>

| Catalog Description              | Geological formation of aggregates; aggregate properties and their measurements; aggregates for specific end-user applications; specifications and standards; processing (crushing, screening, classification, and washing); plant design and flow sheet analysis; dimension stone processing; quality control and assurance. **Field Trip Required:** to enhance the classroom instructions and to expose the students to industrial practices of safe production. |

<table>
<thead>
<tr>
<th>Prerequisites</th>
<th>Min Eng 2412, 3412.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Field Trip Statement</th>
<th>No</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>LEC: 2</th>
<th>LAB: 1</th>
<th>IND: 0</th>
<th>RSD: 0</th>
<th>Total: 3</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Required for Majors</th>
<th>No</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Elective for Majors</th>
<th>Yes No</th>
</tr>
</thead>
</table>

| Justification for change: | Industry needs/approval and National Stone, Sand and Gravel Association (NSSGA) acceptance for the course expansion. Course was being offered to graduate and undergraduate students under two separate course numbers. 5412 was selected as the course number to utilize based on recommendations of the curriculum committee. |

In Workflow

1. RMINNUCL Chair
2. CCC Secretary
3. Engineering DSCC Chair
4. Pending CCC Agenda post
5. CCC Meeting

<table>
<thead>
<tr>
<th>Agenda</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Campus Curricula Committee Chair</td>
</tr>
<tr>
<td>7. FS Meeting</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Approval Path</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 12/07/17 10:32 pm Braden Lusk (blusk): Approved for RMINNUCL Chair</td>
</tr>
<tr>
<td>2. 12/08/17 10:11 am Brittany Parnell (ershenb): Approved for CCC Secretary</td>
</tr>
<tr>
<td>3. 01/08/18 1:50 pm sraper: Approved for Engineering DSCC Chair</td>
</tr>
<tr>
<td>4. 01/23/18 2:21 pm Brittany Parnell (ershenb): Approved for Pending CCC Agenda post</td>
</tr>
</tbody>
</table>

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer: ershenb (10/03/17 11:31 am): Checked "yes" elective for majors and updated prerequisite to Min Eng 2412.
## Course Change Request

A deleted record cannot be edited

### Course Deactivation Proposal

**Date Submitted:** 11/29/17 3:08 pm  
**Viewing:** MIN ENG 4423 : Mineral Processing I (Flotation and Hydrometallurgy)

**File:** 81.1  
**Last edit:** 11/29/17 3:08 pm  
**Changes proposed by:** cifarellit

<table>
<thead>
<tr>
<th>Programs referencing this course</th>
<th>MNRL PR-MI: Mineral Process Eng Minor</th>
</tr>
</thead>
</table>

- **Requested Effective Change Date:** Fall 2018 08/01/2014
- **Department:** Mining & Nuclear Engineering
- **Discipline:** Mining Engineering (MIN ENG)
- **Course Number:** 4423
- **Title:** Mineral Processing I (Flotation and Hydrometallurgy)
- **Abbreviated Course Title:** Min Proc I (Flotat & Hydromet)

**Catalog Description:**
Forth flotation including mineral surfaces, double layer theory, zeta potential, hydrophobicity, adsorption, collectors, frothers, modulation, kinetics, and sulphide and acid flotation systems. Hydrometallurgy including leaching, ion exchange and liquid/liquid extraction.

**Prerequisites:**
Min Eng 3412.

**Field Trip Statement**

**Credit Hours**
- **LEC:** 2  
- **LAB:** 1  
- **IND:** 0  
- **RSD:** 0  
- **Total:** 3

**Required for Majors:** No

### Approval Path

1. **12/07/17 10:32 pm**  
   Braden lusk (blusk): Approved for RMINNUCL Chair

2. **12/08/17 10:12 am**  
   Brittany Parnell (ershreb): Approved for CCC Secretary

3. **01/08/18 1:50 pm**  
   sraper: Approved for Engineering DSCC Chair

4. **01/23/18 2:24 pm**  
   Brittany Parnell (ershreb): Approved for CCC Meeting

5. **05/23/18 1:50 pm**  
   Campus Curricula Committee Chair

6. **06/23/18 1:50 pm**  
   FS Meeting

7. **07/23/18 1:50 pm**  
   Registrar

8. **08/23/18 1:50 pm**  
   CAT entry

9. **09/23/18 1:50 pm**  
   Peoplesoft occasion
<table>
<thead>
<tr>
<th>Justification for change:</th>
<th>Course was being offered to graduate and undergraduate students under two separate course numbers. 5423 was selected as the course number to utilize based on recommendations of the curriculum committee.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semesters previously offered as an experimental course</td>
<td></td>
</tr>
<tr>
<td>Co-Listed Courses:</td>
<td></td>
</tr>
<tr>
<td>Course Reviewer Comments</td>
<td></td>
</tr>
</tbody>
</table>
Course Change Request

A deleted record cannot be edited

Course Deactivation Proposal

Date Submitted: 11/29/17 3:09 pm

Viewing: MIN ENG 4424: Mineral Processing II (Mechanics and Design)

File: 1698.1
Last edit: 11/29/17 3:09 pm
Changes proposed by: cifarellit

<table>
<thead>
<tr>
<th>Programs referencing this course</th>
<th>MNRL PR-MI: Mineral Process Eng Minor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other Courses referencing this course</td>
<td>In The Catalog Description: MET ENG 5270: Mineral Processing II (Mechanics and Design)</td>
</tr>
</tbody>
</table>

Requested Effective Change Date: Fall 2018 08/01/2014

Department: Mining & Nuclear Engineering
Discipline: Mining Engineering (MIN ENG)
Course Number: 4424
Title: Mineral Processing II (Mechanics and Design)
Abbreviated Course Title: Min Proc II - (Mechs & Dsgn)

Catalog Description:
Mineral particle mechanics of comminution, sizing, classification, concentration, filtering and thickening. Mill and equipment selection and design including flowsheet, development and plant assessment.

Prerequisites:
Min Eng 3412.

Field Trip Statement:

Credit Hours:
LEC: 2
LAB: 1
IND: 0
RSD: 0
Total: 3

In Workflow
1. RMINNUCL Chair
2. CCC Secretary
3. Engineering DSCC Chair
4. Pending CCC Agenda post
5. CCC Meeting
6. Campus Curricula Committee Chair
7. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. CAT entry
11. Peoplesoft

Approval Path
1. 12/07/17 10:32 pm
   Braden lusk (blusk): Approved for RMINNUCL Chair
2. 12/08/17 10:12 am
   Brittany Parnell (ershenb): Approved for CCC Secretary
3. 01/08/18 1:50 pm
   sraper: Approved for Engineering DSCC Chair
4. 01/23/18 2:25 pm
   Brittany Parnell (ershenb): Approved for
<table>
<thead>
<tr>
<th>Required for Majors</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elective for Majors</td>
<td>No</td>
</tr>
<tr>
<td>Justification for change:</td>
<td>Course was being offered to graduate and undergraduate students under two separate course numbers. 5423 was selected as the course number to utilize based on recommendations of the curriculum committee.</td>
</tr>
<tr>
<td>Semesters previously offered as an experimental course</td>
<td></td>
</tr>
<tr>
<td>Co-Listed Courses:</td>
<td>MET ENG 5270 - Mineral Processing II (Mechanics and Design)</td>
</tr>
<tr>
<td>Course Reviewer Comments</td>
<td></td>
</tr>
</tbody>
</table>

Pending CCC Agenda post
### Course Change Request

A deleted record cannot be edited

<table>
<thead>
<tr>
<th>Course Deactivation Proposal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Submitted: 11/29/17 3:09 pm</td>
</tr>
<tr>
<td>Viewing: <strong>MIN ENG 4522</strong>: Ore Reserve Analysis And Geostatistics</td>
</tr>
<tr>
<td>File: 1726.4</td>
</tr>
<tr>
<td>Last approved: 06/26/17 3:15 am</td>
</tr>
<tr>
<td>Last edit: 11/29/17 3:09 pm</td>
</tr>
<tr>
<td>Changes proposed by: cifarellit</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Programs referencing this course</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GEOL-MI: Geology Minor</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other Courses referencing this course</th>
</tr>
</thead>
<tbody>
<tr>
<td>In The Prerequisites: <strong>MIN ENG 4096</strong>: Computer Aided Mine Design</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Requested Effective Change Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall <strong>2018</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining &amp; Nuclear Engineering</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Discipline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining Engineering (MIN ENG)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>4522</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ore Reserve Analysis And Geostatistics</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Abbreviated Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ore Reserve Analysis &amp; Geostat</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Catalog Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>An introduction to principles of geostatistics, theory of spatially correlated random variables, variance and co-variances and their application on the evaluation of mineral resources, ore reserve estimation, strategic exploration, and production planning. Real case studies from mining industry will be presented.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stat 3113 or Stat 3115</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Field Trip</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statement</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEC: 2</td>
</tr>
<tr>
<td>LAB: 1</td>
</tr>
<tr>
<td>IND: 0</td>
</tr>
<tr>
<td>RSD: 0</td>
</tr>
<tr>
<td>Total: 3</td>
</tr>
</tbody>
</table>

In Workflow

1. RMINUCL Chair |
2. CCC Secretary |
3. Engineering DSCC Chair |
4. Pending CCC Agenda post |
5. CCC Meeting Agenda |
6. Campus Curricula Committee Chair |
7. FS Meeting Agenda |
8. Faculty Senate Chair |
9. Registrar |
10. CAT entry |
11. Peoplesoft |

**Approval Path**

1. **12/07/17 10:32 pm**
   - Braden lusk (blusk): Approved for RMINUCL Chair
2. **12/08/17 10:13 am**
   - Brittany Parnell (ershenb): Approved for CCC Secretary
3. **01/08/18 1:50 pm**
   - sraper: Approved for Engineering DSCC Chair
4. **01/23/18 2:29 pm**
   - Brittany Parnell (ershenb): Approved for...
Course was being offered to graduate and undergraduate students under two separate course numbers. 5522 was selected as the course number to utilize based on recommendations of the curriculum committee.
Course Change Request

A deleted record cannot be edited

Course Deactivation Proposal

Date Submitted: 11/29/17 3:10 pm

Viewing: MIN ENG 4742: Environmental Aspects Of Mining

File: 529.5

Last approved: 02/09/15 3:18 am

Last edit: 11/29/17 3:10 pm

Changes proposed by: cifarellit

Other Courses referencing this course

In The Catalog Description:
GEO ENG 4276: Environmental Aspects Of Mining

In The Prerequisites:
MIN ENG 6522: Mining Property Feasibility Studies And Evaluation Procedure
MIN ENG 6712: Managing Social and Environmental Risks in Mining (Intro to Responsible Mining)
MIN ENG 6735: Sustainability In Mining

Requested Effective Change Date Fall 2018 2015

Department Mining & Nuclear Engineering

Discipline Mining Engineering (MIN ENG)

Course Number 4742

Title Environmental Aspects Of Mining

Abbreviated Course Title Env Aspects Of Mining

Catalog Description
Permitting: the legal environment of reclamation and environmental impact assessment; post-mining land-use selection and mine planning for optimum reclamation of all mines: metal, nonmetal, and coal; unit operations of reclamation: drainage, backfill, soil replacement, revegetation, maintenance, etc.

Prerequisites
Co-requisites: MIN ENG 4933 or GEO ENG 5441 or ENV ENG 5619.

Field Trip Statement

Approval Path
1. 12/07/17 10:32 pm Braden lusk (blusk): Approved for RMINNUCL Chair
2. 12/08/17 10:13 am Brittany Parnell (ershenb): Approved for CCC Secretary
3. 01/08/18 1:50 pm sraper: Approved for Engineering DSCC Chair
4. 01/23/18 2:37 pm Brittany Parnell (ershenb): Approved for
<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>LEC: 3</th>
<th>LAB: 0</th>
<th>IND: 0</th>
<th>RSD: 0</th>
<th>Total: 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required for Majors</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elective for Majors</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Justification for change:</td>
<td>Course was being offered to graduate and undergraduate students under two separate course numbers. 5742 was selected as the course number to utilize based on recommendations of the curriculum committee.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semesters previously offered as an experimental course</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Co-Listed Courses:</td>
<td>GEO ENG 4276 - Environmental Aspects Of Mining</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Course Change Request

A deleted record cannot be edited

Course Deactivation Proposal

Date Submitted: 11/29/17 2:51 pm

Viewing: **MIN ENG 4823 : Rock Mechanics**

File: 1823.5

Last approved: 02/09/15 3:19 am

Last edit: 11/29/17 2:51 pm

Changes proposed by: cifarellit

**Programs referencing this course**

- GEOL-MI: Geology Minor
- GE ENG-BS: Geological Engineering BS

**Other Courses referencing this course**

- In The Prerequisites:
  - GEO ENG 6477: Discontinuous Rock
  - MIN ENG 4922: Tunneling & Underground Construction Techniques
  - MIN ENG 4933: Surface Mining Methods And Equipment
  - MIN ENG 5822: Strata Control
  - MIN ENG 6842: Advanced Rock Mechanics
  - MIN ENG 6843: Rock Mechanics IV

**Requested Effective Change Date**

Fall **2018 2015**

**Department**

Mining & Nuclear Engineering

**Discipline**

Mining Engineering (MIN ENG)

**Course Number**

4823

**Title**

Rock Mechanics

**Abbreviated Course Title**

Rock Mechanics

**Catalog Description**

Applications of the fundamental principles of mechanics to engineering problems of equilibrium, strength and stiffness of rock materials. Review of in-situ stresses, laboratory and field instrumentation, rock and rockmass properties, pillar design, roof span design, rock reinforcement, surface subsidence, slope stability, and violent failures.

**Prerequisites**

In Workflow

1. RMINNUCL Chair
2. CCC Secretary
3. Engineering DSCC Chair
4. Pending CCC Agenda post

5. CCC Meeting Agenda

6. Campus Curricula Committee Chair
7. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. CAT entry
11. Peoplesoft Approval Path

1. 12/07/17 10:32 pm
   Braden lusk (blusk): Approved for RMINNUCL Chair
2. 12/08/17 10:13 am
   Britanny Parnell (ershenb): Approved for CCC Secretary
3. 01/08/18 1:50 pm
   sraper: Approved for Programs referencing this course
4. 01/23/18 2:39 pm
   Britanny Parnell (ershenb): Approved for Other Courses referencing this course

https://nextcatalog.mst.edu/courseleaf/courseleaf.cgi?page=/courseadmin/1823/index.html... 1/23/2018
Physics 2135; Civ Eng 2210; and Geology 3310.

Field Trip
Statement
Field trip required.

<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>LEC: 2</th>
<th>LAB: 1</th>
<th>IND: 0</th>
<th>RSD: 0</th>
<th>Total: 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required for</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Majors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elective for</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Majors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Justification for change:
Course was being offered to graduate and undergraduate students under two separate course numbers. 5823 was selected as the course number to utilize based on recommendations of the curriculum committee.

Semesters previously offered as an experimental course
Co-Listed Courses:

Course Reviewer
Comments
Course Change Request

A deleted record cannot be edited

Course Deactivation Proposal

Date Submitted: 11/29/17 3:01 pm
Viewing: MIN ENG 4912 : Mine Power And Drainage
File: 1145.8
Last approved: 06/26/17 3:15 am
Last edit: 11/29/17 3:01 pm
Changes proposed by: cifarellit

Other Courses referencing this course

In The Prerequisites: MIN ENG 4322 : Coal Mine Development And Production

Requested Effective Change Date

Fall Spring 2018

Department Mining & Nuclear Engineering
Discipline Mining Engineering (MIN ENG)
Course Number 4912
Title Mine Power And Drainage
Abbreviated Course Title Mine Power And Drainage

Catalog Description

Prerequisites
Mech Eng 2527; Civ Eng 3330 or Nuc Eng 3221.

Field Trip
Statement
Field trip required.

Credit Hours LEC: 2 LAB: 1 IND: 0 RSD: 0 Total: 3
Required for Majors Yes

In Workflow
1. RMINNUCL Chair
2. CCC Secretary
3. Engineering DSCC Chair
4. Pending CCC Agenda post
5. CCC Meeting Agenda
6. Campus Curricula Committee Chair
7. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. CAT entry
11. Peoplesoft

Approval Path
1. 12/07/17 10:32 pm
   Braden lusk (blusk): Approved for RMINNUCL Chair
2. 12/08/17 10:13 am
   Brittany Parnell (ershenb): Approved for CCC Secretary
3. 01/08/18 1:50 pm
   sraper: Approved for Engineering DSCC Chair
4. 01/23/18 2:43 pm
   Brittany Parnell (ershenb): Approved for

https://nextcatalog.mst.edu/courseleaf/courseleaf.cgi?page=/courseadmin/1145/index.html...
<table>
<thead>
<tr>
<th>Elective for Majors</th>
<th>No</th>
</tr>
</thead>
</table>

Justification for change:
Course was being offered to graduate and undergraduate students under two separate course numbers. 5912 was selected as the course number to utilize based on recommendations of the curriculum committee.

Semesters previously offered as an experimental course

Co-Listed Courses:

| Course Reviewer Comments |

<table>
<thead>
<tr>
<th>History</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Feb 9, 2015 by cifarellit (1145.1)</td>
</tr>
<tr>
<td>2. Jun 26, 2017 by cifarellit (1145.4)</td>
</tr>
</tbody>
</table>
A deleted record cannot be edited

**Course Deactivation Proposal**

Date Submitted: 11/29/17 3:11 pm

Viewing: **MIN ENG 4932 : Underground Mining Methods And Equipment**

File: 1524.4
Last approved: 06/26/17 3:15 am
Last edit: 11/29/17 3:10 pm
Changes proposed by: cifarellit

<table>
<thead>
<tr>
<th>Programs referencing this course</th>
<th>MI ENG-MI: Mining Engineering Minor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other Courses referencing this course</td>
<td>In The Prerequisites:</td>
</tr>
<tr>
<td></td>
<td>MIN ENG 4096 : Computer Aided Mine Design</td>
</tr>
<tr>
<td></td>
<td>MIN ENG 4922 : Tunneling &amp; Underground Construction Techniques</td>
</tr>
<tr>
<td></td>
<td>MIN ENG 6932 : Advanced Mining Systems</td>
</tr>
<tr>
<td></td>
<td>MIN ENG 6935 : Underground Mine Design</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Requested Effective Change Date</th>
<th>Fall 2018 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department</td>
<td>Mining &amp; Nuclear Engineering</td>
</tr>
<tr>
<td>Discipline</td>
<td>Mining Engineering (MIN ENG)</td>
</tr>
<tr>
<td>Course Number</td>
<td>4932</td>
</tr>
<tr>
<td>Title</td>
<td>Underground Mining Methods And Equipment</td>
</tr>
<tr>
<td>Abbreviated Course Title</td>
<td>Ungrnd Min Meth &amp; Equip</td>
</tr>
</tbody>
</table>


| Prerequisites | Preceded or accompanied by Min Eng 3913. |

<table>
<thead>
<tr>
<th>In Workflow</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. RMINNUCL Chair</td>
</tr>
<tr>
<td>2. CCC Secretary</td>
</tr>
<tr>
<td>3. Engineering DSCC Chair</td>
</tr>
<tr>
<td>4. Pending CCC Agenda post</td>
</tr>
<tr>
<td>5. CCC Meeting Agenda</td>
</tr>
</tbody>
</table>

| 6. Campus Curricula Committee Chair |
| 7. FS Meeting Agenda |
| 8. Faculty Senate Chair |
| 9. Registrar |
| 10. CAT entry |
| 11. Peoplesoft |

<table>
<thead>
<tr>
<th>Approval Path</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 12/07/17 10:32 pm</td>
</tr>
<tr>
<td>Braden lusk (blusk): Approved for RMINNUCL Chair</td>
</tr>
<tr>
<td>2. 12/08/17 10:14 am</td>
</tr>
<tr>
<td>Brittany Parnell (ershenb): Approved for CCC Secretary</td>
</tr>
<tr>
<td>3. 01/08/18 1:50 pm</td>
</tr>
<tr>
<td>sraper: Approved for</td>
</tr>
<tr>
<td>4. 01/23/18 2:45 pm</td>
</tr>
<tr>
<td>Brittany Parnell (ershenb): Approved for</td>
</tr>
</tbody>
</table>
Field Trip Statement

Field Trip Required.

<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>LEC: 3</th>
<th>LAB: 0</th>
<th>IND: 0</th>
<th>RSD: 0</th>
<th>Total: 3</th>
</tr>
</thead>
</table>

**Required for Majors**
Yes

**Elective for Majors**
No

**Justification for change:**
Course was being offered to graduate and undergraduate students under two separate course numbers. 5932 was selected as the course number to utilize based on recommendations of the curriculum committee.

**Semesters previously offered as an experimental course**

**Co-Listed Courses:**

**Course Reviewer Comments**

---

1. Jun 26, 2017 by cifarellit (1524.1)

Pending CCC Agenda post

https://nextcatalog.mst.edu/courseleaf/courseleaf.cgi?page=/courseadmin/1524/index.html...
Course Change Request

A deleted record cannot be edited

Course Deactivation Proposal

Date Submitted: 12/07/17 4:39 pm

Viewing: MIN ENG 4933: Surface Mining Methods And Equipment

Programs referencing this course

MI ENG-MI: Mining Engineering Minor

Other Courses referencing this course

In The Prerequisites:
- GEO ENG 4276: Environmental Aspects Of Mining
- MIN ENG 4096: Computer Aided Mine Design
- MIN ENG 4742: Environmental Aspects Of Mining
- MIN ENG 5933: Advanced Surface Mining Methods
- MIN ENG 6932: Advanced Mining Systems
- MIN ENG 6936: Surface Mine Design

Requested Effective Change Date

Fall 2018 2017

Department
Mining & Nuclear Engineering

Discipline
Mining Engineering (MIN ENG)

Course Number
4933

Title
Surface Mining Methods And Equipment

Abbreviated Course Title
Surface Min Mth & Equip

Catalog Description

Prerequisites

In Workflow

1. RMINNUCL Chair
2. CCC Secretary
3. Engineering DSCC Chair
4. Pending CCC Agenda post
5. CCC Meeting Agenda

6. Campus Curricula Committee Chair
7. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. CAT Registrar
11. Peoplesoft

Approval Path

1. 11/27/17 7:14 pm
   Braden lusk (blusk): Approved for RMINNUCL Chair

2. 11/28/17 10:30 am
   Brittany Parnell (ershenb): Approved for CCC Secretary

3. 11/30/17 2:02 pm
   sraper: Rollback to CCC Secretary for Engineering DSCC Chair

4. 11/30/17 2:30 pm
   Brittany Parnell (ershenb):
<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>LEC: 3</th>
<th>LAB: 0</th>
<th>IND: 0</th>
<th>RSD: 0</th>
<th>Total: 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required for Majors</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elective for Majors</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Justification for change:**

New curriculum implementation. Course was being offered to graduate and undergraduate students under two separate course numbers. 5933 was selected as the course number to utilize based on recommendations of the curriculum committee.

**Semesters previously offered as an experimental course:**

Co-Listed Courses:

**Course Reviewer Comments**

- **sraper (11/30/17 2:02 pm):** Rollback: Wrong form submitted
- **ershenb (11/30/17 2:30 pm):** Rollback: Wrong form submitted. Rollback per request of Tina Alobaidan
- **sraper (12/22/17 9:23 am):** Rollback: per email conversation, this needs course needs to be deactivated.

**History**

1. Jun 26, 2017 by cifarellit (682.1)
## Course Change Request

**Date Submitted:** 10/31/17 11:59 am  

**Viewing:** MIN ENG 5113: Advanced-Mine Atmosphere Control  
*File: 1257.1  
Last edit: 01/08/18 1:40 pm  
Changes proposed by: cifarellit*

### Programs referencing this course

<table>
<thead>
<tr>
<th>Course</th>
<th>Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>MI ENG-BS: Mining Engineering BS</td>
<td></td>
</tr>
</tbody>
</table>

### Requested Effective Change Date

<table>
<thead>
<tr>
<th>Semester</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2018</td>
<td>08/01/2014</td>
</tr>
</tbody>
</table>

### Department

Mining & Nuclear Engineering

### Discipline

Mining Engineering (MIN ENG)

### Course Number

5113

### Title

**Advanced**-Mine Atmosphere Control

### Abbreviated Course Title

Adv Mine Atmosphere Control

### Catalog Description

*Fundamentals of Advanced mine ventilation, including the principles of airflow, ventilation network based on airflow requirements, control of gases, dust, and temperature, methane drainage, mine fans, network theory, computer network simulation, and economics of airflow, with emphasis on analysis, systems design and practical application. Theory based on the Code of Federal Regulations. Computer simulation of ventilation systems, mine fire simulation, and economics of airflow based on underground mine layouts. Research paper or design project required.*

### Prerequisites

Mech 2527 and Civ Mi.Eng 3330 4113 or Nuc Eng 3221. Consent of Instructor.

### Field Trip Statement

No

### Credit Hours

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEC</td>
<td>2</td>
</tr>
<tr>
<td>LAB</td>
<td>1</td>
</tr>
<tr>
<td>IND</td>
<td>0</td>
</tr>
<tr>
<td>RSD</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>3</td>
</tr>
</tbody>
</table>

### Required for Majors

Yes No

### Elective for Majors

No

### Justification for change:

Course was being offered to graduate and undergraduate students under two separate course numbers. 5113 was selected as the course number to utilize based on recommendations of the curriculum committee.

### Approval Path

1. 11/27/17 7:15 pm  
   Braden lusk (blusk): Approved for RMINNUCL Chair
2. 11/28/17 10:43 am  
   Brittany Parnell (ershenb): Approved for CCC Secretary
3. 01/08/18 1:40 pm  
   sraper: Approved for Engineering DSCC Chair
4. 01/23/18 2:50 pm  
   Brittany Parnell (ershenb): Approved for Pending CCC Agenda post
5. 01/08/18 1:40 pm  
   Brittany Parnell (ershenb): Approved for CCC Meeting Agenda
6. 11/28/17 10:43 am  
   Brittany Parnell (ershenb): Approved for CCC Secretary
7. 01/08/18 1:40 pm  
   sraper: Approved for Engineering DSCC Chair
8. 01/23/18 2:50 pm  
   Brittany Parnell (ershenb): Approved for Pending CCC Agenda post
9. 01/08/18 1:40 pm  
   Brittany Parnell (ershenb): Approved for CCC Meeting Agenda
10. 01/23/18 2:50 pm  
    Brittany Parnell (ershenb): Approved for Pending CCC Agenda post
11. 01/08/18 1:40 pm  
    Brittany Parnell (ershenb): Approved for CCC Meeting Agenda

---

https://nextcatalog.mst.edu/courseleaf/courseleaf.cgi?page=/courseadmin/1257/index.html...  
1/23/2018
<table>
<thead>
<tr>
<th>Course Reviewer</th>
<th>sraper (01/08/18 1:40 pm)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Changed to &quot;Required for Majors&quot; with new DC form showing as required.</td>
<td></td>
</tr>
</tbody>
</table>
Course Change Request

Course Deactivation Proposal

Date Submitted: 11/29/17 2:53 pm
Viewing: MIN ENG 5122: Advanced Topics in Mine Health and Safety
File: 2505.1
Last edit: 11/29/17 2:53 pm
Changes proposed by: cifarellit

<table>
<thead>
<tr>
<th>Requested</th>
<th>Fall 2018 08/01/2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effective Change Date</td>
<td></td>
</tr>
<tr>
<td>Department</td>
<td>Mining &amp; Nuclear Engineering</td>
</tr>
<tr>
<td>Discipline</td>
<td>Mining Engineering (MIN ENG)</td>
</tr>
<tr>
<td>Course Number</td>
<td>5122</td>
</tr>
<tr>
<td>Title</td>
<td>Advanced Topics in Mine Health and Safety</td>
</tr>
<tr>
<td>Abbreviated Course Title</td>
<td>Adv Mine Health and Safety</td>
</tr>
<tr>
<td>Catalog Description</td>
<td>Advanced topics in mine health and safety including practices and regulations; risks and hazards recognition, mitigation and control; disaster prevention and control. Students will complete a research paper or project report. Pre-requisite: Mi Eng 4122 or Consent of Instructor.</td>
</tr>
<tr>
<td>Prerequisites</td>
<td></td>
</tr>
<tr>
<td>Field Trip Statement</td>
<td>No</td>
</tr>
<tr>
<td>Credit Hours</td>
<td>LEC: 3 LAB: 0 IND: 0 RSD: 0 Total: 3</td>
</tr>
<tr>
<td>Required for Majors</td>
<td>No</td>
</tr>
<tr>
<td>Elective for Majors</td>
<td>No</td>
</tr>
<tr>
<td>Justification for change:</td>
<td>Course was being offered to graduate and undergraduate students under two separate course numbers. 4122 was selected as the course number to utilize based on recommendations of the curriculum committee.</td>
</tr>
<tr>
<td>Semesters previously offered as an experimental course</td>
<td></td>
</tr>
<tr>
<td>Co-Listed Courses:</td>
<td></td>
</tr>
</tbody>
</table>

Course Reviewer Comments

Approval Path

1. 12/07/17 10:32 pm
   Braden Lusk (blusk): Approved for RMINNNUCL Chair
2. 12/08/17 10:25 am
   Brittany Parnell (ershenb): Approved for CCC Secretary
3. 01/08/18 1:50 pm
   sraper: Approved for Engineering DSCC Chair
4. 01/23/18 2:52 pm
   Brittany Parnell (ershenb): Approved for Pending CCC Agenda post
Course Change Request

Date Submitted: 10/31/17 12:07 pm

Viewing: **MIN ENG 5212**: Advanced Aggregates and Quarrying

File: 825.1

Last edit: 11/29/17 9:36 am

Changes proposed by: cifarellit

<table>
<thead>
<tr>
<th>Programs referencing this course</th>
<th>MIN ENG-BS: Mining Engineering BS</th>
</tr>
</thead>
</table>

**Requested Effective Change Date**

Fall 2018 08/01/2014

**Department**

Mining & Nuclear Engineering

**Discipline**

Mining Engineering (MIN ENG)

**Course Number**

5212

**Title**

Advanced Aggregates and Quarrying

**Abbreviated Course Title**

Adv. Aggregates and Quarrying

**Catalog Description**

*Advanced coverage of topics on the stone and aggregate industry, including surface and underground operations, plant equipment, economics, marketing, transportation, and environmental topics. The course will include at least one field trip and a design project.*

*Advanced topics in aggregates mining, mine design and planning, and project valuation. In-pit crushing and conveying, and advances in comminution technology for the aggregates industry. Design project or research paper required.*

**Prerequisites**

*Min Eng 3912, co-requisite: Civ Eng 3116. Mi Eng 4212 or Consent of Instructor.*

**Field Trip Statement**

**Credit Hours**

| LEC: 3 | LAB: 0 | IND: 0 | RSD: 0 | Total: 3 |

**Required for Majors**

No

**Elective for Majors**

Yes

<table>
<thead>
<tr>
<th>In Workflow</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. RMINNUCL Chair</td>
</tr>
<tr>
<td>2. CCC Secretary</td>
</tr>
<tr>
<td>3. Engineering DSCC Chair</td>
</tr>
<tr>
<td>4. Pending CCC Agenda post</td>
</tr>
<tr>
<td>5. CCC Meeting Agenda</td>
</tr>
<tr>
<td>6. Campus Curricula Committee Chair</td>
</tr>
<tr>
<td>7. FS Meeting Agenda</td>
</tr>
<tr>
<td>8. Faculty Senate Chair</td>
</tr>
<tr>
<td>9. Registrar</td>
</tr>
<tr>
<td>10. CAT entry</td>
</tr>
<tr>
<td>11. Peoplesoft</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Approval Path</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 11/27/17 7:15 pm Braden lusk (blusk): Approved for RMINNUCL Chair</td>
</tr>
<tr>
<td>2. 11/28/17 10:51 am Brittany Parnell (ershenb): Approved for CCC Secretary</td>
</tr>
<tr>
<td>3. 01/08/18 1:42 pm sraper: Approved for Engineering DSCC Chair</td>
</tr>
<tr>
<td>4. 01/23/18 3:44 pm Brittany Parnell (ershenb): Approved for Pending CCC Agenda post</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Justification for change:</th>
<th>Course was being offered to graduate and undergraduate students under two separate course numbers. 5212 was selected as the course number to utilize based on recommendations of the curriculum committee.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semesters previously offered as an experimental course</td>
<td></td>
</tr>
<tr>
<td>Co-Listed Courses:</td>
<td></td>
</tr>
<tr>
<td>Course Reviewer</td>
<td>sraper (11/29/17 9:36 am): checked &quot;elective for majors&quot;</td>
</tr>
<tr>
<td>Comments</td>
<td></td>
</tr>
</tbody>
</table>

Key: 825

Preview Bridge
# Course Change Request

**Date Submitted:** 10/31/17 12:11 pm

**Viewing:** **MIN ENG 5322 : Advanced Coal Mining Methods**

**File:** 839.1

**Last edit:** 11/29/17 10:38 am

Changes proposed by: cifarellit

## Programs referencing this course

<table>
<thead>
<tr>
<th>Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>MI ENG-BS: Mining Engineering BS</td>
</tr>
</tbody>
</table>

## Requested Effective Change Date

<table>
<thead>
<tr>
<th>Department</th>
<th>Mining &amp; Nuclear Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discipline</td>
<td>Mining Engineering (MIN ENG)</td>
</tr>
<tr>
<td>Course Number</td>
<td>5322</td>
</tr>
<tr>
<td>Title</td>
<td>Advanced Coal Mining Methods</td>
</tr>
<tr>
<td>Abbreviated Course Title</td>
<td>Adv. Coal Mining Methods</td>
</tr>
</tbody>
</table>

## Catalog Description

An in-depth study Advanced topics in coal mining methods, planning and development of all aspects surface and underground mining systems; planning of coal mining, including an overview of the logistics, resources, infrastructure for large-scale surface coal industry, reserves and geology, planning and development of mines; face preparation, equipment interface, haulage systems, sequencing and scheduling and extraction from underground coal mines, surface and underground mechanized methods of face preparation, equipment, coal extraction, handling and preparation as practiced in the United States. Students will complete a research paper or project report.

## Prerequisites

Min Eng 5912 4322 or consent Consent of instructor. Instructor.

## Field Trip Statement

<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>LEC: 3</th>
<th>LAB: 0</th>
<th>IND: 0</th>
<th>RSD: 0</th>
<th>Total: 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required for Majors</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elective for Majors</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Justification for change:

Course was being offered to graduate and undergraduate students under two separate course numbers. 5322 was selected as the course number to utilize based on recommendations of the curriculum committee.

## Approval Path

1. 11/27/17 7:15 pm Braden lusk (blusk): Approved for RMINNUCL Chair
2. 11/28/17 10:55 am Brittany Parnell (ershenb): Approved for CCC Secretary
3. 01/08/18 1:42 pm sraper: Approved for Engineering DSCC Chair
4. 01/23/18 3:51 pm Brittany Parnell (ershenb): Approved for Pending CCC Agenda post

## Semesters previously offered as an Elective for Majors

No
experimental course

Co-Listed Courses:

<table>
<thead>
<tr>
<th>Course Reviewer</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>sraper (11/29/17 10:38 am)</td>
<td>checked &quot;elective for majors&quot;</td>
</tr>
</tbody>
</table>
Course Change Request

Date Submitted: 10/31/17 11:34 am

Viewing: **MIN ENG 5412**: Advanced Aggregates Materials Sizing and Characterization

File: 1930.1  
Last edit: 11/29/17 10:57 am  
Changes proposed by: cifarellit

Programs referencing this course

<table>
<thead>
<tr>
<th>Programs referencing this course</th>
</tr>
</thead>
<tbody>
<tr>
<td>MI ENG-BS: Mining Engineering BS</td>
</tr>
</tbody>
</table>

Requested Effective Change Date

<table>
<thead>
<tr>
<th>Requested Effective Change Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2018 08/01/2014</td>
</tr>
</tbody>
</table>

Department

<table>
<thead>
<tr>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining &amp; Nuclear Engineering</td>
</tr>
</tbody>
</table>

Discipline

<table>
<thead>
<tr>
<th>Discipline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining Engineering (MIN ENG)</td>
</tr>
</tbody>
</table>

Course Number

<table>
<thead>
<tr>
<th>Course Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>5412</td>
</tr>
</tbody>
</table>

Title

<table>
<thead>
<tr>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Aggregates Materials Sizing and Characterization</td>
</tr>
</tbody>
</table>

Abbreviated Course Title

<table>
<thead>
<tr>
<th>Abbreviated Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggregates Size and Char</td>
</tr>
</tbody>
</table>

Catalog Description

**Geological formation of aggregates;** Advanced methods for evaluating aggregate properties; occurrences, extraction, material flow sheet analysis; Advances in processing and their measurements; aggregates for specific end-user applications; specifications classification; advanced statistical methods for quality control and standards; processing (crushing, screening, classification, assurance, and washing); plant design and flow sheet analysis; quality control and assurance. Standards. Students will complete and present a research paper on the subject.

Prerequisites

<table>
<thead>
<tr>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min Mi.Eng 2412 4412 or consent Consent of instructor. Instructor.</td>
</tr>
</tbody>
</table>

Field Trip

Field trip to a nearby quarry required.

Credit Hours

<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>LEC: 2</th>
<th>LAB: 1</th>
<th>IND: 0</th>
<th>RSD: 0</th>
<th>Total: 3</th>
</tr>
</thead>
</table>

Required for Majors

<table>
<thead>
<tr>
<th>Required for Majors</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
</tr>
</tbody>
</table>

In Workflow

1. RMINNUCL Chair  
2. CCC Secretary  
3. Engineering DSCC Chair  
4. Pending CCC Agenda post  
5. CCC Meeting Agenda  
6. Campus Curricula Committee Chair  
7. FS Meeting Agenda  
8. Faculty Senate Chair  
9. Registrar  
10. CAT entry  
11. Peoplesoft

Approval Path

1. 11/27/17 7:15 pm  
   Braden lusk (blusk): Approved for RMINNUCL Chair  
2. 11/28/17 10:59 am  
   Brittany Parnell (ershenb): Approved for CCC Secretary  
3. 01/08/18 1:42 pm  
   Sraper: Approved for Engineering DSCC Chair  
4. 01/23/18 3:55 pm  
   Brittany Parnell (ershenb): Approved for Pending CCC Agenda post

https://nextcatalog.mst.edu/courseleaf/courseleaf.cgi?page=/courseadmin/1930/index.html... 1/23/2018
<table>
<thead>
<tr>
<th>Elective for Majors</th>
<th>Yes No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Justification for change:</td>
<td>Course was being offered to graduate and undergraduate students under two separate course numbers. 5412 was selected as the course number to utilize based on recommendations of the curriculum committee.</td>
</tr>
<tr>
<td>Semesters previously offered as an experimental course</td>
<td></td>
</tr>
<tr>
<td>Co-Listed Courses:</td>
<td></td>
</tr>
<tr>
<td>Course Reviewer Comments</td>
<td>sraper (11/29/17 10:57 am): checked &quot;Elective for majors&quot;</td>
</tr>
</tbody>
</table>

Key: 1930

Preview Bridge
Course Change Request

Date Submitted: 10/31/17 12:16 pm

Viewing: **MIN ENG 5413 : Material Processing by High Pressure Water Jet **

**Adv Mtl Proc Hghpres Wtr Jet**

File: 500.1
Last edit: 11/29/17 11:04 am
Changes proposed by: cifarellit

Requested Effective Change Date
Fall 2018 08/01/2014

Department Mining & Nuclear Engineering
Discipline Mining Engineering (MIN ENG)
Course Number 5413
Title **Material Processing by High Pressure Water Jet Adv Mtl Proc Hghpres Wtr Jet**
Abbreviated Course Title **Adv Mtl Proc Hghpres Wtr Jet**

Catalog Description
Methods of generating high pressure water jets; standard equipment, existing techniques and basic calculations. Applications of water jets to materials cutting and mineral processing. Safety rules. The course will be supported by laboratory demonstrations. Advanced methods for continuously generating high pressure, power calculations, applications of waterjets in the mining and manufacturing industries, and safety considerations.Research paper or design project required.

Prerequisites
Co-listed with Mech Eng 5606. Mi Eng 4413 or Consent of Instructor.

Field Trip Statement

Credit Hours LEC: 3 LAB: 0 IND: 0 RSD: 0 Total: 3
Required for Majors No
Elective for Majors Yes No

Justification for change:

In Workflow
1. RMINNUCL Chair
2. CCC Secretary
3. Engineering DSCC Chair
4. Pending CCC Agenda post
5. CCC Meeting Agenda
6. Campus Curricula Committee Chair
7. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. CAT entry
11. Peoplesoft

Approval Path
1. 11/27/17 7:15 pm Braden lusk (blusk): Approved for RMINNUCL Chair
2. 11/28/17 11:17 am Brittany Parnell (ershenb): Approved for CCC Secretary
3. 01/08/18 1:43 pm sraper: Approved for Engineering DSCC Chair
4. 01/23/18 4:01 pm Brittany Parnell (ershenb): Approved for Pending CCC Agenda post
Course was being offered to graduate and undergraduate students under two separate course numbers. 5413 was selected as the course number to utilize based on recommendations of the curriculum committee.

Semesters previously offered as an experimental course

Co-Listed Courses:

**MECH ENG 5606 - Material Processing By High-Pressure Water Jet**

**Course Reviewer Comments**

sraper (11/29/17 11:04 am): checked "elective for majors"
## Course Change Request

Date Submitted: 10/31/17 12:22 pm

Viewing: **MIN ENG 5422 : Advanced-Coal Preparation**

File: 2019.1

Last edit: 11/29/17 11:14 am

Changes proposed by: cifarellit

**Requested Effective Change Date**

<table>
<thead>
<tr>
<th>Requested Effective Change Date</th>
<th>Department</th>
<th>Discipline</th>
<th>Course Number</th>
<th>Title</th>
<th>Abbreviated Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2018 08/01/2014</td>
<td>Mining &amp; Nuclear Engineering</td>
<td>Mining Engineering (MIN ENG)</td>
<td>5422</td>
<td>Advanced-Coal Preparation</td>
<td>Advanced-Coal Preparation</td>
</tr>
</tbody>
</table>

**Catalog Description**

- Coal properties, sampling, testing, breaking, sizing, cleaning and dewatering.
- Disposal of refuse. Advanced methods for designing coal processing circuitry and practices, flowsheet design, sampling, advanced ash and moisture analyzers; coarse, intermediate, and fine coal cleaning; dewatering; dry coal cleaning research. Research paper or design project required.

**Prerequisites**

Min Mi Eng 2412 4422 or consent Consent of instructor. Instructor.

**Field Trip Statement**

**Credit Hours**

<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>LEC: 2</th>
<th>LAB: 1</th>
<th>IND: 0</th>
<th>RSD: 0</th>
<th>Total: 3</th>
</tr>
</thead>
</table>

Required for Majors: No

Elective for Majors: Yes

**Justification for change:**

Course was being offered to graduate and undergraduate students under two separate course numbers. 5422 was selected as the course number to utilize based on recommendations of the curriculum committee.

---

**Approval Path**

1. 11/27/17 7:16 pm  
   Braden lusk (blusk): Approved for RMINUCL Chair
2. 11/28/17 11:20 am  
   Brittany Parnell (ershenb): Approved for CCC Secretary
3. 01/08/18 1:43 pm  
   sraper: Approved for Engineering DSCC Chair
4. 01/23/18 4:03 pm  
   Brittany Parnell (ershenb): Approved for Pending CCC Agenda post

---

https://nextcatalog.mst.edu/courseleaf/courseleaf.cgi?page=/courseadmin/2019/index.html... 1/23/2018
Semesters previously offered as an experimental course

Co-Listed Courses:

**Course Reviewer** sraper (11/29/17 11:14 am): checked "elective for majors"
# Course Change Request

**Date Submitted:** 10/31/17 12:33 pm

**Viewing:** MIN ENG 5423 : Advanced-Flotation and Hydrometallurgy

**File:** 1028.1  
**Last edit:** 11/29/17 11:36 am  
**Changes proposed by:** cifarellit

**Requested Effective Change Date:** Fall 2018  
**Effective Change Date:** 08/01/2014

## Department
- Mining & Nuclear Engineering

## Discipline
- Mining Engineering (MIN ENG)

## Course Number
- 5423

## Title
- Advanced Flotation and Hydrometallurgy

## Abbreviated Course Title
- Flotation and Hydromet Adv

## Catalog Description
- Forth flotation including mineral surfaces, double layer theory, zeta potential, hydrophobicity, adsorption, collectors, frothers, modulation, kinetics, and sulphide and acid flotation systems. Hydrometallurgy including leaching, ion exchange and liquid/liquid extraction. Theoretical basis of froth flotation, electrical characteristics at interfaces, interfacial forces, adsorption kinetics and thermodynamics, flotation reagents, flotation process flowsheets. Physicochemical principles of hydrometallurgical processes, leaching methods and reagents. Hydrometallurgical processes flowsheets. Research paper or design project required.

## Prerequisites
- Min Mi Eng 2412 or consent of instructor.

## Field Trip Statement
- LEC: 2  
- LAB: 1  
- IND: 0  
- RSD: 0  
- Total: 3

## Credit Hours
- No

## Elective for Majors
- Yes  
- No

## Justification for change:
- Course was being offered to graduate and undergraduate students under two separate course numbers. 5423 was selected as the course number to utilize based on recommendations of the curriculum committee.

## Semesters previously offered as an experimental course
- Co-Listed Courses:

## Course Reviewer
- sraper (11/29/17 11:36 am): checked "elective for majors"

## Approval Path
1. 11/27/17 7:16 pm  
   Braden lusk (blusk): Approved for RMINNUCL Chair
2. 11/28/17 11:33 am  
   Brittany Parnell (ershemb): Approved for CCC Secretary
3. 01/08/18 1:43 pm  
   sraper: Approved for Engineering DSCC Chair
4. 01/23/18 4:05 pm  
   Brittany Parnell (ershemb): Approved for Pending CCC Agenda post
## Course Change Request

Date Submitted: 10/31/17 12:38 pm

Viewing: **MIN ENG 5424**: Mineral Processing II Advanced-Mechanics And Design

### File: 956.1
Last edit: 11/29/17 11:59 am
Changes proposed by: cifarellit

<table>
<thead>
<tr>
<th>Requested</th>
<th>Fall 2018 08/01/2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effective Change Date</td>
<td></td>
</tr>
<tr>
<td>Department</td>
<td>Mining &amp; Nuclear Engineering</td>
</tr>
<tr>
<td>Discipline</td>
<td>Mining Engineering (MIN ENG)</td>
</tr>
<tr>
<td>Course Number</td>
<td>5424</td>
</tr>
<tr>
<td>Title</td>
<td>Mineral Processing II Advanced-Mechanics And Design</td>
</tr>
<tr>
<td>Abbreviated Course Title</td>
<td>Mineral Processing II</td>
</tr>
<tr>
<td>Course Title</td>
<td>Advanced-Mechanics &amp; Design</td>
</tr>
<tr>
<td>Catalog Description</td>
<td>Strategy of beneficiation as a combination of unit operations: Mineral sampling and particle size distribution, mineral particle mechanics of comminution, sizing, comminution and energy requirement, mineral crushing and grinding circuits, classification, concentration, filtering and thickening, solid-liquid separation and instrumentation, Mineral processing plant flow sheet design. Mill and equipment selection and design including flowsheet, development and plant assessment. Research paper or design project required.</td>
</tr>
<tr>
<td>Prerequisites</td>
<td>Min Eng 2412. (Co-listed with Met Eng 5270). Mi Eng 4424 or Consent of Instructor.</td>
</tr>
<tr>
<td>Field Trip Statement</td>
<td></td>
</tr>
<tr>
<td>Credit Hours</td>
<td>LEC: 2</td>
</tr>
<tr>
<td>Required for Majors</td>
<td>No</td>
</tr>
<tr>
<td>Elective for Majors</td>
<td>Yes No</td>
</tr>
</tbody>
</table>

### Justification for change:
Course was being offered to graduate and undergraduate students under two separate course numbers. 5424 was selected as the course number to utilize based on recommendations of the curriculum committee.

### Semesters previously offered as an experimental course

### Co-Listed Courses:
MET ENG 5270 - Mineral Processing II (Mechanics and Design)

### Course Reviewer Comments
sraper (11/29/17 11:59 am): checked "elective for majors"

### Approval Path
1. 11/27/17 7:16 pm Braden lusk (blusk): Approved for RMINNUCL Chair
2. 11/28/17 11:37 am Brittany Parnell (ershenb): Approved for CCC Secretary
3. 01/08/18 1:43 pm sraper: Approved for Engineering DSCC Chair
4. 01/23/18 4:08 pm Brittany Parnell (ershenb): Approved for Pending CCC Agenda post
# Course Change Request

**Date Submitted:** 10/31/17 12:41 pm  
**Viewing:** MIN ENG 5522: **Advanced Ore Reserve Analysis and And Geostatistics**  
**File:** 1344.1  
**Last edit:** 01/08/18 1:44 pm  
**Changes proposed by:** cifarellit

<table>
<thead>
<tr>
<th>Programs referencing this course</th>
<th>MI ENG-BS: Mining Engineering BS</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Requested Effective Change Date</th>
<th>Fall 2018 08/01/2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department</td>
<td>Mining &amp; Nuclear Engineering</td>
</tr>
<tr>
<td>Discipline</td>
<td>Mining Engineering (MIN ENG)</td>
</tr>
<tr>
<td>Course Number</td>
<td>5522</td>
</tr>
<tr>
<td>Title</td>
<td><strong>Advanced Ore Reserve Analysis and And Geostatistics</strong></td>
</tr>
<tr>
<td>Abbreviated Course Title</td>
<td>Ore Rsr Anly &amp; Geostat Adv</td>
</tr>
<tr>
<td>Catalog Description</td>
<td>Principles Advanced discussions on principles of geostatistics, theory of spatially correlated random variables, variance and co-variances and their application on the evaluation of mineral resources, ore reserve estimation, strategic exploration, and production planning. Real case studies from mining industry will be presented. Course project.</td>
</tr>
<tr>
<td>Prerequisites</td>
<td>Math 3304 and &amp; Stat 3113 or Stat 3115 or consent of instructor. instructor consent</td>
</tr>
<tr>
<td>Field Trip Statement</td>
<td></td>
</tr>
<tr>
<td>Credit Hours</td>
<td>LEC: 2 LAB: 1 IND: 0 RSD: 0 Total: 3</td>
</tr>
<tr>
<td>Required for Majors</td>
<td>Yes No</td>
</tr>
<tr>
<td>Elective for Majors</td>
<td>No</td>
</tr>
<tr>
<td>Justification for change:</td>
<td>Course was being offered to graduate and undergraduate students under two separate course numbers. 5522 was selected as the course number to utilize based on recommendations of the curriculum committee.</td>
</tr>
<tr>
<td>Semesters previously offered as an experimental course</td>
<td></td>
</tr>
<tr>
<td>Co-Listed Courses:</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Approval Path</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>11/27/17 7:16 pm</td>
</tr>
<tr>
<td></td>
<td>Braden lusk (blusk): Approved for RMINNUCL Chair</td>
</tr>
<tr>
<td>2.</td>
<td>11/28/17 12:13 pm</td>
</tr>
<tr>
<td></td>
<td>Brittany Parnell (ershenb): Approved for CCC Secretary</td>
</tr>
<tr>
<td>3.</td>
<td>01/08/18 1:44 pm</td>
</tr>
<tr>
<td></td>
<td>sraper: Approved for Engineering DSCC Chair</td>
</tr>
<tr>
<td>4.</td>
<td>01/23/18 4:12 pm</td>
</tr>
<tr>
<td></td>
<td>Brittany Parnell (ershenb): Approved for Pending CCC Agenda post</td>
</tr>
</tbody>
</table>
sraper (01/08/18 1:44 pm): Change to "Required for Majors" as reflected on new DC.
# Course Change Request

Date Submitted: 10/31/17 12:50 pm

**Viewing:** MIN ENG 5742: Advanced Environmental Aspects of Mining

File: 1599.1  
Last edit: 01/08/18 1:45 pm  
Changes proposed by: cifarellit

<table>
<thead>
<tr>
<th>Catalog Pages referencing this course</th>
<th>Economics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programs referencing this course</td>
<td>MI ENG-BS: Mining Engineering BS</td>
</tr>
<tr>
<td>Other Courses referencing this course</td>
<td>In The Prerequisites: MI ENG 6712: Managing Social and Environmental Risks in Mining (Intro to Responsible Mining)</td>
</tr>
</tbody>
</table>

**Requested Effective Change Date:** Fall 2018 08/01/2014

<table>
<thead>
<tr>
<th>Department</th>
<th>Mining &amp; Nuclear Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discipline</td>
<td>Mining Engineering (MIN ENG)</td>
</tr>
<tr>
<td>Course Number</td>
<td>5742</td>
</tr>
<tr>
<td>Title</td>
<td>Advanced Environmental Aspects of Mining</td>
</tr>
<tr>
<td>Abbreviated Course Title</td>
<td>Adv-Aspects of Mining</td>
</tr>
</tbody>
</table>

**Catalog Description:**  
**Permitting:** permitting — Applied and fundamental research issues pertaining to the legal environment of reclamation and environmental impact assessment; post-mining land-use selection and mine planning for optimum reclamation of all mines: metal, nonmetal, and coal; unit operations of reclamation: drainage, backfill, soil replacement, revegetation, maintenance, etc.  
**Course project.**

**Prerequisites:**  
**Co-requisites:** Min Eng 5932 and 5933 or Geo Eng 5441 or Env Eng 5619 or consent of instructor. (Co-listed with Geo Eng 5276).

---

In Workflow  
1. RMINNUCL Chair  
2. CCC Secretary  
3. Engineering DSCC Chair  
4. Pending CCC Agenda post  
5. CCC Meeting Agenda  
6. Campus Curricula Committee Chair  
7. FS Meeting Agenda  
8. Faculty Senate Chair  
9. Registrar  
10. CAT entry  
11. Peoplesoft

**Approval Path:**  
1. 11/27/17 7:16 pm  
   Braden lusk (blusk): Approved for RMINNUCL Chair  
2. 11/28/17 11:53 am  
   Brittany Parnell (ershenb): Approved for CCC Secretary  
3. 01/08/18 1:45 pm  
   Brittany Parnell (ershenb): Approved for Pending CCC Agenda post  
4. 01/23/18 4:18 pm  
   Brittany Parnell (ershenb): Approved for Pending CCC Agenda post
Field Trip Statement

Credit Hours
- LEC: 3
- LAB: 0
- IND: 0
- RSD: 0
- Total: 3

Required for Majors Yes No

Elective for Majors No

Justification for change:
Course was being offered to graduate and undergraduate students under two separate course numbers. 5742 was selected as the course number to utilize based on recommendations of the curriculum committee.

Semesters previously offered as an experimental course

Co-Listed Courses:
GEO ENG 5276 - Advanced Environmental Aspects Of Mining

Course Reviewer Comments
sraper (01/08/18 1:45 pm): Changed to "Required for Majors" as reflected on new DC form.
# Course Change Request

**Date Submitted:** 10/31/17 11:02 am

**Viewing:** MIN ENG 5823 : Rock Mechanics III

**File:** 590.1

**Last edit:** 01/23/18 4:21 pm

**Changes proposed by:** cifarellit

## Programs referencing this course

<table>
<thead>
<tr>
<th>Program</th>
<th>MI ENG-BS: Mining Engineering BS</th>
</tr>
</thead>
</table>

## Requested Effective Change Date

<table>
<thead>
<tr>
<th>Date</th>
<th>Fall 2018 08/01/2014</th>
</tr>
</thead>
</table>

## Department

Mining & Nuclear Engineering

## Discipline

Mining Engineering (MIN ENG)

## Course Number

5823

## Title

Rock Mechanics III

## Abbreviated Course Title

Rock Mechanics III

## Catalog Description

Applications of the fundamental principles of mechanics to engineering problems of equilibrium, strength and stiffness of rock materials. Review of in-situ stresses, laboratory and field instrumentation, rock and rockmass properties. Advanced methods for designing rock excavation to resolve geotechnical and ground control problems. Topics including stress analysis, rock properties, instrumentation, pillar design, roof span design, rock reinforcement, surface subsidence, slope stability, rock burst, and violent failure. Slope stability. Research paper or design project required.

## Prerequisites

Physics 2135; Civ Eng 2210; Geology 3310. Field trip required. MI Eng 4823 or Consent of Instructor.

## Field Trip Statement

Field trip required.

## Credit Hours

<table>
<thead>
<tr>
<th>LEC</th>
<th>LAB</th>
<th>IND</th>
<th>RSD</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
</tbody>
</table>

## Required for Majors

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

## Elective for Majors

No

## Justification for change:

Existing 4823 was being taught to grad students under this description and course number. There is no need for duplicate course numbers and 5823 was selected on the recommendation of the curriculum committee. Degree changes are being applied to reflect this change as 4823 is a required undergraduate course.

---

**Approval Path**

1. 11/27/17 7:16 pm
   Braden lusk (blusk): Approved for RMINNUCL Chair

2. 11/28/17 11:57 am
   Brittany Parnell (ershenb): Approved for CCC Secretary

3. 01/08/18 1:46 pm
   sraper: Approved for Engineering DSCC Chair

4. 01/23/18 4:21 pm
   Brittany Parnell (ershenb): Approved for Pending CCC Agenda post
Co-Listed Courses:

<table>
<thead>
<tr>
<th>Course Reviewer</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>sraper (01/08/18 1:46 pm)</td>
<td>Changed to &quot;Required for Majors&quot; as reflected on new DC form.</td>
</tr>
</tbody>
</table>
## Course Change Request

**Date Submitted:** 10/31/17 11:55 am  
**Viewing:** MIN ENG 5912: Advanced Mine Power and Drainage  
**File:** 1696.1  
**Last edit:** 01/08/18 1:46 pm  
**Changes proposed by:** cifarellit

<table>
<thead>
<tr>
<th>Programs referencing this course</th>
<th>MIN ENG-BS: Mining Engineering BS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Requested Effective Change Date</strong></td>
<td>Fall 2018 08/01/2014</td>
</tr>
<tr>
<td><strong>Department</strong></td>
<td>Mining &amp; Nuclear Engineering</td>
</tr>
<tr>
<td><strong>Discipline</strong></td>
<td>Mining Engineering (MIN ENG)</td>
</tr>
<tr>
<td><strong>Course Number</strong></td>
<td>5912</td>
</tr>
<tr>
<td><strong>Title</strong></td>
<td>Advanced Mine Power and Drainage</td>
</tr>
<tr>
<td><strong>Abbreviated Course Title</strong></td>
<td>Adv Mine Power and Drainage</td>
</tr>
<tr>
<td><strong>Catalog Description</strong></td>
<td>Engineering principles of mine Advanced methods for evaluating electric power distribution requirements and application distribution mining geometries; Design and evaluation of mine drainage systems based on power requirements, layouts efficiency, hydraulic gradients, water-bearing formations; Risk evaluation of emergency power failures and mine dewatering, flooding. Basics of electrical circuits, AC/DC power, transformers, electric meters, power distribution, and power management. Hydraulic power systems. Compressed air in mines. Mine dewatering. Controlling water inflow. Dewatering wells. Water pumping and pumping systems. Research paper or project required.</td>
</tr>
<tr>
<td><strong>Prerequisites</strong></td>
<td>Mech Mi-Eng 2527 and Civ Eng 3330 4912 or Nuc Eng 3221. Consent of Instructor.</td>
</tr>
<tr>
<td><strong>Field Trip Statement</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Credit Hours</strong></td>
<td>LEC: 2</td>
</tr>
<tr>
<td><strong>Required for Majors</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Elective for Majors</strong></td>
<td>No</td>
</tr>
<tr>
<td><strong>Justification for change:</strong> Course was being offered to graduate and undergraduate students under two separate course numbers. 5912 was selected as the course number to utilize based on recommendations of the curriculum committee.</td>
<td></td>
</tr>
<tr>
<td><strong>Semesters previously offered as an experimental course</strong></td>
<td></td>
</tr>
</tbody>
</table>

| In Workflow | 1. RMINNUCL Chair  
2. CCC Secretary  
3. Engineering DSCC Chair  
4. Pending CCC Agenda post  
5. CCC Meeting Agenda  
6. Campus Curricula Committee Chair  
7. FS Meeting Agenda  
8. Faculty Senate Chair  
9. Registrar  
10. CAT entry  
11. Peoplesoft |
| Approval Path | 1. 11/27/17 7:17 pm  
Braden lusk (blusk): Approved for RMINUCL Chair  
2. 11/28/17 12:18 pm  
Brittany Parnell (ershenb): Approved for CCC Secretary  
3. 01/08/18 1:46 pm  
sraper: Approved for Engineering DSCC Chair  
4. 01/23/18 4:24 pm  
Brittany Parnell (ershenb): Approved for Pending CCC Agenda post |

Course Change Request
<table>
<thead>
<tr>
<th>Course Reviewer</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>sraper (01/08/18 1:46 pm)</td>
<td>Change to &quot;Required for Majors&quot; as reflected on new DC form.</td>
</tr>
</tbody>
</table>
MIN ENG 5932: Underground Mining Methods

Date Submitted: 10/31/17 12:59 pm

Requested Effective Change Date

Fall 2018 08/01/2014

Programs referencing this course

MI ENG-BS: Mining Engineering BS

In The Prerequisites:

MIN ENG 5742: Advanced Environmental Aspects of Mining

Other Courses referencing this course

In the Prerequisites:

MIN ENG 5742: Advanced Environmental Aspects of Mining

Prerequisites

Preceded Mi Eng 4932 or accompanied by Min Eng 3913 or consent of instructor. Instructor.

Catalog Description


Approval Path

1. 11/27/17 7:17 pm
   Braden lusk (blusk): Approved for RMINNUCL Chair
2. 11/28/17 12:22 pm
   Brittany Parnell (ershenb): Approved for CCC Secretary
3. 01/08/18 1:47 pm
   sraper: Approved for Engineering DSCC Chair
4. 01/23/18 4:28 pm
   Brittany Parnell (ershenb): Approved for Pending CCC Agenda post
### Field Trip Statement

<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>LEC: 3</th>
<th>LAB: 0</th>
<th>IND: 0</th>
<th>RSD: 0</th>
<th>Total: 3</th>
</tr>
</thead>
</table>

#### Required for Majors
- Yes
- No

#### Elective for Majors
- No

#### Justification for change:
Course was being offered to graduate and undergraduate students under two separate course numbers. 5932 was selected as the course number to utilize based on recommendations of the curriculum committee.

#### Semesters previously offered as an experimental course

#### Co-Listed Courses:

#### Course Reviewer
sraper (01/08/18 1:47 pm): Changed to "Required for Majors" as reflected on new DC form.

---

https://nextcatalog.mst.edu/courseleaf/courseleaf.cgi?page=/courseadmin/2264/index.html... 1/23/2018
## MIN ENG 5933: Advanced-Surface Mining Methods

**Catalog Description:** Principles of Advanced topics in surface mining planning, constructing, methods and operating economically viable surface mines. Equipment acquisition, and deployment in surface mining operations. Cost effective mining methods: placer mining, strip mining, open pit mining, quarrying. Selection of equipment for surface mining operations. Optimization of mine performance. Field trip required. Strategic and tactical mine planning with focus on efficiency, safety, environmental standards and economics. It will also focus on fleet management with emphasis on repair, rebuild and replacement for higher availability, utilization and production output. Students will complete a research paper or project report.

**Prerequisites:** Min Eng 3912; Min Eng 3512; preceded 4933 or accompanied by Min Eng 5823 or consent of instructor.

**Field Trip Statement:** Credit Hours

<table>
<thead>
<tr>
<th>LEC</th>
<th>LAB</th>
<th>IND</th>
<th>RSD</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
</tbody>
</table>

**Required for Majors:** Yes

**Elective for Majors:** No

**Justification for change:** Course was being offered to graduate and undergraduate students under two separate course numbers. 5933 was selected as the course number to utilize based on recommendations of the curriculum committee.

### Programs referencing this course

| MI ENG-BS: Mining Engineering BS |

### Approval Path

1. **11/27/17 7:17 pm**
   - Braden lusk (blusk): Approved for RMINNUCL Chair

2. **11/28/17 12:24 pm**
   - Brittany Parnell (ershenb): Approved for CCC Secretary

3. **01/08/18 1:48 pm**
   - sraper: Approved for Engineering DSCC Chair

4. **01/24/18 9:17 am**
   - Brittany Parnell (ershenb): Approved for Pending CCC Agenda post
<table>
<thead>
<tr>
<th>Course Reviewer</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>sraper (01/08/18 1:48 pm)</td>
<td>Changed to &quot;Required for Majors&quot; as reflected on new DC form.</td>
</tr>
</tbody>
</table>
Course Change Request

Date Submitted: 10/31/17 11:06 am

Viewing: **MIN ENG 6842 : Advanced Rock Mechanics**

File: 103.1
Last edit: 11/27/17 7:17 pm
Changes proposed by: cifarellit

In Workflow
1. RMINNUCL Chair
2. CCC Secretary
3. Engineering DSCC Chair
4. Pending CCC Agenda post
5. CCC Meeting Agenda
6. Campus Curricula Committee Chair
7. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. CAT entry
11. Peoplesoft

Approval Path
1. 11/27/17 7:17 pm Braden lusk (blusk): Approved for RMINNUCL Chair
2. 11/28/17 12:28 pm Brittany Parnell (ershenb): Approved for CCC Secretary
3. 01/08/18 1:48 pm sraper: Approved for Engineering DSCC Chair
4. 01/24/18 9:22 am Brittany Parnell (ershenb): Approved for Pending CCC Agenda post

Programs referencing this course

- GEOT-ME: Geotechnics ME

Requested Effective Change Date
- Fall 2018 08/01/2014

Department
- Mining & Nuclear Engineering

Discipline
- Mining Engineering (MIN ENG)

Course Number
- 6842

Title
- Advanced Rock Mechanics

Abbreviated Course Title
- Advanced Rock Mechanics

Catalog Description
- Advanced topics in static and dynamic rock mechanics; elasticity theory, failure theories and fracture mechanics applied to rock; stress wave propagation and dynamic elastic constants; rock mass classification methods for support design; pillar design in coal and metal mines; introduction to numerical models.

Prerequisites
- Min Eng 5823 4823 or Civ Eng 3715.

Field Trip Statement

Credit Hours
- LEC: 3 LAB: 0 IND: 0 RSD: 0 Total: 3

Required for Majors
- No

Elective for Majors
- No

Justification for change:
- pre-requisite change due to other course changes.

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer Comments

Key: 103

Date Submitted: 10/31/17 11:06 am

Viewing: MIN ENG 6842 : Advanced Rock Mechanics

File: 103.1
Last edit: 11/27/17 7:17 pm
Changes proposed by: cifarellit

https://nextcatalog.mst.edu/courseleaf/courseleaf.cgi?page=/courseadmin/103/index.html&
### Course Change Request

**Date Submitted:** 10/31/17 11:07 am

**Viewing:** *MIN ENG 6843: Dynamic Rock Mechanics*

**File:** 369.1  
**Last edit:** 11/27/17 7:17 pm  
**Changes proposed by:** cifarellit

**Requested Effective Change Date:** Fall 2018 08/01/2014

**Department:** Mining & Nuclear Engineering  
**Discipline:** Mining Engineering (MIN ENG)  
**Course Number:** 6843  
**Title:** Dynamic Rock Mechanics

**Abbreviated Course Title:** Dynamic Rock Mechanics

**Catalog Description:** Advanced topics in dynamic rock mechanics. Stress wave propagation in the earth, dynamic elastic constants in isotropic and anisotropic rock, Hopkinson bar impact analysis, spallation and radial fracturing caused by stress pulses, shock wave generation in rock by explosives, shock wave propagation and effects.

**Prerequisites:** Min Eng 5823 4823 or Civ Eng 3715.

**Field Trip Statement:** No

**Credit Hours:**  
<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEC</td>
<td>3</td>
</tr>
<tr>
<td>LAB</td>
<td>0</td>
</tr>
<tr>
<td>IND</td>
<td>0</td>
</tr>
<tr>
<td>RSD</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>3</td>
</tr>
</tbody>
</table>

**Required for Majors:** No  
**Elective for Majors:** No

**Justification for change:** There is no longer a rock mechanics three. Course change from 4823 to 5823 required pre-req change.

---

### Approval Path

1. **11/27/17 7:17 pm**  
   Braden lusk (blusk): Approved for RMINNUCL Chair

2. **11/28/17 1:00 pm**  
   Brittany Parnell (ershenb): Approved for CCC Secretary

3. **01/08/18 1:48 pm**  
   sraper: Approved for Engineering DSCC Chair

4. **01/24/18 9:25 am**  
   Brittany Parnell (ershenb): Approved for Pending CCC Agenda post

---

**Key:** 369  
**File:** 369.1  
**Last edit:** 11/27/17 7:17 pm  
**Changes proposed by:** cifarellit

---

**Course Reviewer Comments**
MI ENG-BS: MINING ENGINEERING BS

In Workflow
1. RMINNUCL Chair (blusk@mst.edu)
2. CCC Secretary (ershenb@mst.edu)
3. Engineering DSCC Chair (sraper@mst.edu)
4. Pending CCC Agenda post (ershenb@mst.edu)
5. CCC Meeting Agenda (ershenb@mst.edu)
6. Campus Curricula Committee Chair (sraper@mst.edu)
7. FS Meeting Agenda (ershenb@mst.edu)
8. Faculty Senate Chair (sedighs@mst.edu)
9. Registrar (kristyg@mst.edu)
10. Kristy Giacomelli (kristyg@mst.edu)

Approval Path
1. Fri, 08 Dec 2017 04:31:48 GMT
   Braden lusk (blusk): Approved for RMINNUCL Chair
2. Fri, 08 Dec 2017 16:08:00 GMT
   Brittany Parnell (ershenb): Approved for CCC Secretary
3. Mon, 08 Jan 2018 19:56:46 GMT
   sraper: Approved for Engineering DSCC Chair
4. Tue, 23 Jan 2018 20:00:42 GMT
   Brittany Parnell (ershenb): Approved for Pending CCC Agenda post

History
1. Apr 28, 2014 by Kwame Awuah-Offei (kabp3)
2. Jan 30, 2015 by Tina Alobaidan (cifarellit)
3. Jun 28, 2017 by Tina Alobaidan (cifarellit)

Date Submitted: Wed, 29 Nov 2017 20:49:38 GMT

Viewing: MI ENG-BS : Mining Engineering BS
File: 95.24
Last approved: Wed, 28 Jun 2017 15:13:50 GMT
Last edit: Mon, 08 Jan 2018 19:56:43 GMT
Changes proposed by: cifarellit

Start Term
Fall 2018

Program Code
MI ENG-BS

Department
Mining & Nuclear Engineering

Title
Mining Engineering BS
Program Requirements and Description

Bachelor of Science
Mining Engineering

Entering freshmen desiring to study Mining Engineering will be admitted to the Freshman Engineering Program. They will, however, be permitted, if they wish, to state a Mining Engineering preference, which will be used as a consideration for available freshman departmental scholarships. The focus of the Freshman Engineering program is on fundamental sciences and mathematics, enhanced advising and career counseling, with the goal of providing to the student the information necessary to make an informed decision regarding the choice of a major. In addition, students who state the Mining Engineering preference are required to complete Mining Engineering 2126 during the first or second semester on campus.

For the Bachelor of Science degree in Mining Engineering a minimum of 128 credit hours is required, although completion of an emphasis area may require up to 132 credits. These requirements are in addition to credit received for algebra, trigonometry, and basic ROTC courses. A student must maintain at least two grade points per credit hour for all courses taken in the student’s major department, and an average of at least two grade points per credit hour must be maintained in Mining Engineering.

Each student’s program of study must contain a minimum of 21 credit hours of course work in general education and must be chosen according to the following rules:

1. All students are required to take one American History course, two economics courses, one humanities course, ENGLISH 1120 and either ENGLISH 1160, ENGLISH 3560 or TCH COM 1600. The history course is to be selected from HISTORY 1200, HISTORY 1300, HISTORY 1310, or POL SCI 1200. The economics courses must be either ECON 1100 or ECON 1200, and ECON 3512. The humanities course must meet requirements as specified under "Engineering Degree Requirements" published in the current undergraduate catalog.

2. The remaining three credit hours must meet requirements as specified under "Engineering Degree Requirements" published in the current undergraduate catalog. Foreign language courses can be considered to be one of these courses. (Students may receive humanities credit for foreign language courses in their native tongue only if the course is at the 4000 or 5000 level.)

3. Special topics, special problems courses and honors seminars are allowed only by petition to and approval by the student’s department chairman.

The Mining Engineering program at Missouri S&T is characterized by its focus on the scientific basics of engineering and its innovative application; indeed, the underlying theme of this educational program is the application of the scientific basics to engineering practice through attention to problems and needs of the public. The necessary interrelations among the various topics, the engineering disciplines, and the other professions as they naturally come together in the solution of real world problems are emphasized as research, analysis, synthesis, and design are presented and discussed through classroom and laboratory instruction.

### Freshman Year

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Credits</th>
<th>Second Semester</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1214</td>
<td>4</td>
<td>MATH 1215</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 1310</td>
<td>4</td>
<td>PHYSICS 1135</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 1319</td>
<td>1</td>
<td>MECH ENG 1720</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1100</td>
<td>1</td>
<td>MIN ENG 1912</td>
<td>2</td>
</tr>
<tr>
<td>MIN ENG 2126</td>
<td>1</td>
<td>GEO ENG 1150</td>
<td>3</td>
</tr>
<tr>
<td>FR ENG 1100</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HISTORY 1200, or 1300, or POL SCI 1200</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENGLISH 1120</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>18</td>
<td></td>
<td>16</td>
</tr>
</tbody>
</table>

### Sophomore Year

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Credits</th>
<th>Second Semester</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIN ENG 2925</td>
<td>2</td>
<td>MIN ENG 2412</td>
<td>3</td>
</tr>
<tr>
<td>MIN ENG 3912</td>
<td>3</td>
<td>MATH 3304</td>
<td>3</td>
</tr>
<tr>
<td>MATH 2222</td>
<td>4</td>
<td>MECH ENG 2527</td>
<td>3</td>
</tr>
<tr>
<td>MIN ENG 3913</td>
<td>3</td>
<td>MECH ENG 2350</td>
<td>2</td>
</tr>
<tr>
<td>CIV ENG 2200</td>
<td>3</td>
<td>PHYSICS 2135</td>
<td>4</td>
</tr>
<tr>
<td>ECON 1100 or 1200</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>18</td>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

### Junior Year

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Credits</th>
<th>Second Semester</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT 3113 or 3115</td>
<td>3</td>
<td>MIN ENG 4512</td>
<td>3</td>
</tr>
<tr>
<td>NUC ENG 3221 or CIV ENG 3330</td>
<td>3</td>
<td>MIN ENG 5522</td>
<td>3</td>
</tr>
</tbody>
</table>
Explosives Engineering Emphasis: MIN ENG 5622 (Blasting Tech) and MIN ENG 5823 (Rock Mechanics) or MIN ENG 5922 (Tunneling/Construction) have to be taken as Technical Electives.

Quarrying Emphasis: Two of CIV ENG 3116 (Construction Materials); MIN ENG 5212 (Advanced Aggregate and Quarrying); and MIN ENG 5412 (Aggregate Materials) have to be taken as Technical Electives.

Coal Emphasis: Two of MIN ENG 5322 (Coal Mine Development and Production), MIN ENG 4414 (Mine Plant Management) or an approved substitute course must be taken as Technical Electives.

Mining and the Environment Emphasis: GEO ENG 5235 (Environmental Geological Engineering) and GEO ENG 5233 (Risk Assessment in Environmental Studies), or approved substitute courses have to be taken as Technical Electives.

Mining Health and Safety Emphasis: MIN ENG 3002 (Mine Rescue), ENG MGT 4330 (Human Factors), or other approved substitute courses must be taken as Technical Electives.

Sustainable Development Emphasis: POL SCI 3310 (Public Policy Analysis), ECON 4440 (Environmental and Natural Resource Economics), or other approved substitute courses must be taken as Technical Electives.

Graduating Mining Engineers Examination
Mining engineering students must complete the Fundamentals of Engineering Examination prior to graduation as a senior assessment requirement. A passing grade is not required to earn a B.S. degree in mining engineering; however it is the first step toward becoming a registered professional engineer. This requirement is part of the Missouri S&T assessment process.

Mining Health and Safety Emphasis
Junior and Senior Years
MIN ENG 3002 Mine Rescue (or approved substitute course in lieu of Technical Elective.) 3
ENG MGT 4330 Human Factors (or approved substitute course in lieu of Technical Elective.) 3

Sustainable Development Emphasis
Junior and Senior Years
POL SCI 3300 Principles Of Public Policy (or approved substitute course in lieu of Technical Elective.) 3
ECGN 4440 Environmental And Natural Resource Economics (or approved substitute course in lieu of Technical Elective.) 3

Quarrying Engineering Emphasis
Senior Year
CIV ENG 3116 Construction Materials, Properties And Testing (in lieu of Technical Elective.) 3
MIN ENG 5212 Advanced Aggregates and Quarrying 3

Explosives Engineering Emphasis
Junior and Senior Years
Choose one of the following courses in lieu of Technical Elective in Junior Year:
A three-credit hour explosives engineering (EXP ENG) course
EXP ENG 5922 Advanced Tunneling & Underground Construction Techniques 3
GEO ENG 5471 Rock Engineering
In lieu of Technical Elective in Senior Year:
## Coal Emphasis

**Junior and Senior Years**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIN ENG 5322</td>
<td>Advanced Coal Mining Methods</td>
<td>3</td>
</tr>
<tr>
<td>MIN ENG 4414</td>
<td>Mine Plant Management (or approved substitute course in lieu of Technical Elective.)</td>
<td>2</td>
</tr>
</tbody>
</table>

## Mining and the Environment Emphasis

**Junior and Senior Years**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENV ENG 5640</td>
<td>Environmental Law And Regulations</td>
<td>3</td>
</tr>
<tr>
<td>GEO ENG 5233</td>
<td>Risk Assessment In Environmental Studies (or approved substitute course in lieu of Technical Elective.)</td>
<td>3</td>
</tr>
</tbody>
</table>

### Justification for request

Multiple Courses in curriculum were being offered to graduate and undergraduate students under two separate course numbers at a 4000 level and a 5000 level. The 5000 level course numbers were chosen to be utilized and names were changed to remove the word advanced from description based on recommendations of the curriculum committee. 4000 levels will be deleted.

### Supporting Documents

**Course Reviewer Comments**

sraper (Mon, 08 Jan 2018 19:56:43 GMT): Modified statements for Humanities and Social science to reflect current language. Removed signed FE release requirements.

Key: 95