

1. General Information

1a. Submitted by the College of: ENGINEERING

Date Submitted: 8/29/2014

1b. Department/Division: Mining Engineering

1c. Contact Person

Name: Rick Honaker

Email: rick.honaker@uky.edu

Phone: 257-1108

Responsible Faculty ID (if different from Contact)

Name: Rick Honaker

Email: rick.honaker@uky.edu

Phone: 257-1108

1d. Requested Effective Date: Semester following approval

1e. Should this course be a UK Core Course? No

RECEIVED

FEB 26 2015

OFFICE OF THE
SENATE COUNCIL**2. Designation and Description of Proposed Course**

2a. Will this course also be offered through Distance Learning?: No

2b. Prefix and Number: MNG 201

2c. Full Title: Mining Engineering Fundamentals

2d. Transcript Title:

2e. Cross-listing:

2f. Meeting Patterns

LECTURE: 3

2g. Grading System: Letter (A, B, C, etc.)

2h. Number of credit hours: 3

2i. Is this course repeatable for additional credit? No

If Yes: Maximum number of credit hours:

If Yes: Will this course allow multiple registrations during the same semester?

2j. Course Description for Bulletin: Introduction to the fundamentals of mining engineering and the profession. Prospecting and exploration concepts introduced including ore reserve estimation techniques. Underground and surface mining methods will be studied with emphasis to applications to given deposit types and spatial constraints. General mine plan, sequence of development and cycle of operations for each method evaluated along with required auxiliary operations and equipment.

2k. Prerequisites, if any: None.

2l. Supplementary Teaching Component:

3. Will this course taught off campus? No

If YES, enter the off campus address:

4. Frequency of Course Offering: Fall,

Will the course be offered every year?: Yes

If No, explain:

5. Are facilities and personnel necessary for the proposed new course available?: Yes

If No, explain:

6. What enrollment (per section per semester) may reasonably be expected?: 60

7. Anticipated Student Demand

Will this course serve students primarily within the degree program?: Yes

Will it be of interest to a significant number of students outside the degree pgm?: No

If Yes, explain:

8. Check the category most applicable to this course: Traditional – Offered in Corresponding Departments at Universities Elsewhere,

If No, explain:

9. Course Relationship to Program(s).

a. Is this course part of a proposed new program?: No

If YES, name the proposed new program:

b. Will this course be a new requirement for ANY program?: Yes

If YES, list affected programs: Mining Engineering

10. Information to be Placed on Syllabus.

a. Is the course 400G or 500?: No

b. The syllabus, including course description, student learning outcomes, and grading policies (and 400G-/500-level grading differentiation if applicable, from **10.a** above) are attached: Yes

Distance Learning Form

Instructor Name:

Instructor Email:

Internet/Web-based: No

Interactive Video: No

Hybrid: No

1. How does this course provide for timely and appropriate interaction between students and faculty and among students? Does the course syllabus conform to University Senate Syllabus Guidelines, specifically the Distance Learning Considerations?

2. How do you ensure that the experience for a DL student is comparable to that of a classroom-based student's experience? Aspects to explore: textbooks, course goals, assessment of student learning outcomes, etc.

3. How is the integrity of student work ensured? Please speak to aspects such as password-protected course portals, proctors for exams at interactive video sites; academic offense policy; etc.

4. Will offering this course via DL result in at least 25% or at least 50% (based on total credit hours required for completion) of a degree program being offered via any form of DL, as defined above?

If yes, which percentage, and which program(s)?

5. How are students taking the course via DL assured of equivalent access to student services, similar to that of a student taking the class in a traditional classroom setting?

6. How do course requirements ensure that students make appropriate use of learning resources?

7. Please explain specifically how access is provided to laboratories, facilities, and equipment appropriate to the course or program.

8. How are students informed of procedures for resolving technical complaints? Does the syllabus list the entities available to offer technical help with the delivery and/or receipt of the course, such as the Information Technology Customer Service Center (<http://www.uky.edu/UKIT/>)?

9. Will the course be delivered via services available through the Distance Learning Program (DLP) and the Academic Technology Group (ATL)? NO

If no, explain how student enrolled in DL courses are able to use the technology employed, as well as how students will be provided with assistance in using said technology.

10. Does the syllabus contain all the required components? NO

11. I, the instructor of record, have read and understood all of the university-level statements regarding DL.

Instructor Name:

SIGNATURE|CHE202|Kimberly W Anderson|MNG 201 NEW College Review|20140908


SIGNATURE|JMETT2|Joanie Ett-Mims|MNG 201 NEW Undergrad Council Review|20150226

College of Engineering
Department of Mining Engineering
230 Mining and Mineral Resources Bldg.
504 Rose Street
Lexington, KY 40506-0107
859 257-8026
fax 859 323-1962

Date: March 2, 2015

To: Jane Ellis
University Senate

From: Rick Honaker 
Professor and Chair

Joseph Sottile 
Professor and Director of Undergraduate Studies

RE: MNG 201 Department Approval

This memorandum is to confirm that the faculty of the mining engineering department met on August 20, 2014 to address curriculum changes as well as course additions and modifications. During the meeting, the new course application for MNG 201 was reviewed and approved unanimously.

If you have any questions regarding this memorandum or MNG 201, please feel free to contact me at any time.

Courses	Request Tracking
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New Course Form

<https://myuk.uky.edu/sap/bc/soap/rfc?services=>

[Open in full window to print or save](#)

Generate R

Attachments:

Upload File

ID	Attachment
Delete 3966	MNG 201 SYLLABUS Revised.doc

1

Select saved project to retrieve...

(*denotes required fields)

1. General Information

a. * Submitted by the College of: Submission Date:

b. * Department/Division:

c.

* Contact Person Name: Email: Phone:

* Responsible Faculty ID (if different from Contact): Email: Phone:

d. * Requested Effective Date: Semester following approval OR Specific Term/Year

e. Should this course be a UK Core Course? Yes No

If YES, check the areas that apply:

Inquiry - Arts & Creativity Composition & Communications - II

Inquiry - Humanities Quantitative Foundations

Inquiry - Nat/Math/Phys Sci Statistical Inferential Reasoning

Inquiry - Social Sciences U.S. Citizenship, Community, Diversity

Composition & Communications - I Global Dynamics

2. Designation and Description of Proposed Course.

a. * Will this course also be offered through Distance Learning? Yes No

b. * Prefix and Number:

c. * Full Title:

d. Transcript Title (if full title is more than 40 characters):

e. To be Cross-Listed ² with (Prefix and Number):

f. * Courses must be described by at least one of the meeting patterns below. Include number of actual contact hours³ for each meeting pattern type.

<input type="text" value="3"/> Lecture	<input type="text"/> Laboratory ⁴	<input type="text"/> Recitation	<input type="text"/> Discussion
<input type="text"/> Indep. Study	<input type="text"/> Clinical	<input type="text"/> Colloquium	<input type="text"/> Practicum
<input type="text"/> Research	<input type="text"/> Residency	<input type="text"/> Seminar	<input type="text"/> Studio
<input type="text"/> Other	If Other, Please explain: <input type="text"/>		

g. * Identify a grading system:

Letter (A, B, C, etc.)

Pass/Fail

Medicine Numeric Grade (Non-medical students will receive a letter grade)

Graduate School Grade Scale

h. * Number of credits:

i. * Is this course repeatable for additional credit? Yes No

If YES: Maximum number of credit hours:

If YES: Will this course allow multiple registrations during the same semester? Yes No

j. * Course Description for Bulletin:

Introduction to the fundamentals of mining engineering and the profession. Prospecting and exploration concepts introduced including ore reserve estimation techniques. Underground and surface mining methods will be studied with emphasis to applications to given deposit types and spatial constraints. General mine plan, sequence of development and cycle of operations for each method evaluated along with required auxiliary operations and equipment.

k. Prerequisites, if any:

None.

l. Supplementary teaching component, if any: Community-Based Experience Service Learning Both3. * Will this course be taught off campus? Yes No

If YES, enter the off campus address:

4. Frequency of Course Offering.

a. * Course will be offered (check all that apply): Fall Spring Summer Winter

b. * Will the course be offered every year? Yes No

If No, explain:

5. * Are facilities and personnel necessary for the proposed new course available? Yes No

If No, explain:

6. * What enrollment (per section per semester) may reasonably be expected? 60

7. Anticipated Student Demand.

a. * Will this course serve students primarily within the degree program? Yes No

b. * Will it be of interest to a significant number of students outside the degree pgm? Yes No

If YES, explain:

8. * Check the category most applicable to this course:

Traditional – Offered in Corresponding Departments at Universities Elsewhere

Relatively New – Now Being Widely Established

Not Yet Found in Many (or Any) Other Universities

9. Course Relationship to Program(s).

a. * Is this course part of a proposed new program? Yes No

If YES, name the proposed new program:

b. * Will this course be a new requirement⁵ for ANY program? Yes No

If YES⁵, list affected programs:

Mining Engineering

10. Information to be Placed on Syllabus.

a. * Is the course 400G or 500? Yes No

If YES, the *differentiation for undergraduate and graduate students must be included* in the information required in 10.b. You must include: (i) identify additional assignments by the graduate students; and/or (ii) establishment of different grading criteria in the course for graduate students. (See SR

b. * The syllabus, including course description, student learning outcomes, and grading policies (and 400G-/500-level grading differentiation if applicable 10.a above) are attached.

⁵ Courses are typically made effective for the semester following approval. No course will be made effective until all approvals are received.
⁶ The chair of the cross-listing department must sign off on the Signature Routing Log.

In general, undergraduate courses are developed on the principle that one semester hour of credit represents one hour of classroom meeting per week for a semester, exclusive of any laboratory meeting. Laboratory meeting, generally, is two hours per week for a semester for one credit hour. (from SR 5 2.1)

You must also submit the Distance Learning Form in order for the proposed course to be considered for DL delivery.

In order to change a program, a program change form must also be submitted.

Rev 8/09

[Submit as New Proposal](#) [Save Current Changes](#)

COURSE SYLLABUS

MNG 201: Mining Engineering Fundamentals

Department of Mining Engineering
University of Kentucky

3 Credit Hours

Instructor: Zach Agioutantis

Office: Room 230 MMRB

Phone: 257-8026

Catalog Description: Introduction to the fundamentals of mining engineering and the profession. Prospecting and exploration concepts introduced including ore reserve estimation techniques. Underground and surface mining methods will be studied with emphasis to applications to given deposit types and spatial constraints. General mine plan, sequence of development and cycle of operations for each method evaluated along with required auxiliary operations and equipment.

Prerequisites: none.

Course Goals:

1. Provide an introduction the mining engineering profession.
2. Develop an understanding of surface and underground operations.
3. Achieve the ability to classify and select surface and underground mining methods.

Student Learning Outcomes:

Student Learning Outcome	ABET* Outcome	Implementation Strategy
1. Learn and demonstrate a working knowledge of mining engineering terms, mining regulations and the impact of mining on the society.	(h)	Quiz Average
2. Preliminary selection of the mining method based on ore grade, grade uniformity, strength, shape, dip, depth, and surrounding rock strength.	(a), (b)	Final Exam
3. Recognize the sequence of development, unit operations, and equipment employed for each major mining method.	(c)	Final Exam

*Student Learning Outcome map to student outcomes required by the Accreditation Board for Engineering & Technology (ABET)

Textbook: Introductory Mining Engineering, H. L. Hartman, J. M. Mutmanský, 2nd Edition, John Wiley & Sons, 2002.

References: SME Mining Engineering Handbook, 3rd Edition, SME, Vol. 1 and 2, 2011.

Topics:

1. Introduction (Chapter 1)
 - Program Introduction
 - Mining Engineering Profession
 - Mining Contributions to Society
 - Elements of Mining
2. Stages of a Mine
 - Prospecting and Exploration (Chapter 2)
 - Development and Exploitation (Chapter 3)
3. Unit Operations of Surface and Underground Mining (Chapter 4)
 - Drilling and Rock Penetration
 - Blasting and Rock Fragmentation
 - Loading and Hauling
 - Auxiliary Operations
4. Surface Mining Development (Chapter 5)
 - Nature and Scope of the Task
 - Pit Planning and Design
 - Equipment and System Selection
 - Stripping Ratios and Limits
5. Mechanical Extraction Methods (Chapter 6)
 - Open Pit Mining
 - Quarrying
 - Open Cast Mining
 - Auger Mining
6. Reclamation Operations, Slope Stability, and Equipment Selection
7. Underground Mine Development (Chapter 9)
 - Mine Design and Development
 - Mine Plant Layout
 - Development Openings
8. Self-Support Mining Methods (Chapter 10)
 - Room-and-Pillar
 - Stope-and-Pillar
 - Shrinkage Stopping
 - Sublevel Stopping
 - Vertical Crater Retreat
9. Supported Mining Methods (Chapter 11)
 - Cut-and-Fill Stopping
 - Stull Stopping
 - Square Set Stopping
10. Caving Methods (Chapter 12)
 - Longwall Mining
 - Sublevel Caving
 - Block Caving

11. Comparison of Methods and Method Selection (Chapters 13 & 15)

Course Assignments

Quizzes (8 Quizzes)	10%
Exam 1	20% (February 21)
Exam 2	20% (April 4)
Final Exam	30%
Assignments	15%
Project	5%

Assignments: An assignment will be provided for each of the engineering topics covered in class. Assignments will consist of one or more problems that will utilize principles discussed in class. A total of around eight assignments will be provided and an arithmetic average of the scores achieved on each assignment used to account for the 15% of the total course grade.

Project: Students will be required to prepare a PowerPoint presentation covering the various mining methods discussed in class. The presentation will provide a description of each method along with their respective applications.

Grading Scale

90 – 100	A
80 – 89	B
70 – 79	C
60 – 69	D
< 60	E

Mid-Term Grades

Mid-term grades will be posted on myUK by the deadline established in the Academic Calendar (<http://www.uky.edu/Registrar/AcademicCalendar.htm>).

Course Policies

Course Assignments: No late assignments will be accepted with the exception of the occasions when submission is delayed due to an excused absence as defined by S.R. 5.2.4.2.

Electronics Policy: The use of computers and cell phones will not be permitted during the scheduled class time. If you are observed sending text messages during class, you will be asked to leave. If you are observed sending text messages or talking on a phone during a quiz or exam, the quiz/exam will be collected and you will be assigned a zero as a grade.

Attendance Policy: As per departmental policy, class attendance is required. A student must arrive within 5 minutes of the scheduled start of the class period and must stay for the remainder of the period to be credited for attendance. Your grade will be reduced by 5 percentage points for each week-equivalent of class that is missed because of unexcused absences. For example, since MNG 201 meets 3 times per week, the following grade reductions would be incurred:

<u>Number of unexcused absences</u>	<u>Grade Reduction</u>
1-3	0%
4-6	5%
6-9	10% Etc.

Excused absences are not counted in this total. Evidence explain the excused absence must be provided within one week of the absence. Tests can only be made up for excused absences or by pre-arrangement with the course instructor. The instructor has complete authority regarding the issue of allowing test make-up and scheduling of such test.

Excused Absences: Students need to notify the professor of absences prior to class when possible or within one week of the absence. S.R. 5.2.4.2 defines the following as acceptable reasons for excused absences: (a) serious illness, (b) illness or death of family member, (c) University-related trips, (d) major religious holidays, and (e) other circumstances found to fit “reasonable cause for nonattendance” by the professor. The professor must be notified in advance of the missed class for reasons (c) and (d).

Students anticipating an absence for a major religious holiday are responsible for notifying the instructor in writing of anticipated absences due to their observance of such holidays no later than the last day in the semester to add a class. Information regarding dates of major religious holidays may be obtained through the religious liaison, Mr. Jake Karnes (859-257-2754).

Students are expected to withdraw from the class if more than 20% of the classes scheduled for the semester are missed (excused or unexcused) per university policy.

Verification of Absences: Students verify their absences in order to be considered excused. Senate Rule 5.2.4.2 states that faculty have the right to request “appropriate verification” when students claim an excused absence because of illness or death in the family. Appropriate notification of absences due to university-related trips is required prior to the absence.

Academic Integrity: Per university policy, students shall not plagiarize, cheat, or falsify or misuse academic records. Students are expected to adhere to University policy on cheating and plagiarism in all courses. The minimum penalty for a first offense is a zero on the assignment on which the offense occurred. If the offense is considered severe or the student has other academic offenses on their record, more serious penalties, up to suspension from the university may be imposed.

Cheating on the first or second exam will result in a grade of zero. Cheating any additional exams including the final exam will result in failing the course.

Individuals who purposely allow others to cheat from their work will realize the same penalty as those who cheated.

Plagiarism and cheating are serious breaches of academic conduct. Each student is advised to become familiar with the various forms of academic dishonesty as explained in the Code of Student Rights and Responsibilities. Complete information can be found at the following web site: <http://www.uky.edu/ombud>. A plea of ignorance is not acceptable as a defense against the charge of academic dishonesty. It is important that you review this information as all ideas borrowed from others need to be properly credited.

Part II of *Student Rights and Responsibilities* (available online <http://www.uky.edu/StudentAffairs/Code/part2.html>) states that all academic work, written or otherwise, submitted by students to their instructors or other academic supervisors, is expected to be the result of their own thought, research, or self-expression. In cases where students feel unsure about the question of plagiarism involving their own work, they are obliged to consult their instructors on the matter before submission.

When students submit work purporting to be their own, but which in any way borrows ideas, organization, wording or anything else from another source without appropriate acknowledgement of the fact, the students are guilty of plagiarism. Plagiarism includes reproducing someone else's work, whether it be a published article, chapter of a book, a paper from a friend or some file, or something similar to this. Plagiarism also includes the practice of employing or allowing another person to alter or revise the work which a student submits as his/her own, whoever that other person may be.

Students may discuss assignments among themselves or with an instructor or tutor, but when the actual work is done, it must be done by the student, and the student alone. When a student's assignment involves research in outside sources of information, the student must carefully acknowledge exactly what, where and how he/she employed them. If the words of someone else are used, the student must put quotation marks around the passage in question and add an appropriate indication of its origin. Making simple changes while leaving the organization, content and phraseology intact is plagiaristic. However, nothing in these Rules shall apply to those ideas which are so generally and freely circulated as to be a part of the public domain (Section 6.3.1).

Please note: Any assignment you turn in may be submitted to an electronic database to check for plagiarism.

Accommodations Due To Disability

If you have a documented disability that requires academic accommodations, please see me as soon as possible during scheduled office hours. In order to receive accommodations in this course, you must provide me with a Letter of Accommodation from the Disability Resource Center (Room 2, Alumni Gym, 257-2754, email address: jkarnes@email.uky.edu) for coordination of campus disability services available to students with disabilities.