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OFFICE OF THE
SENATE COUNCIL

1. General Information

1a. Submitted by the College of: ENGINEERING

Date Submitted: 9/10/2014

1b. Department/Division: Mining Engineering

1c. Contact Person

Name: Kyle Perry

Email: kyle.perry@uky.edu

Phone: 859-257-0133

Responsible Faculty ID (if different from Contact)

Name: n/a

Email: n/a

Phone: n/a

1d. Requested Effective Date: Specific Term/Year¹ Spring 2015

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

2. Designation and Description of Proposed Course

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

2b. Prefix and Number: MNG 552

2c. Full Title: Ground Control Software and Analysis

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: Evaluation and design of ground control plans for various mining conditions through the use of several computer programs with an emphasis placed on sedimentary tabular deposits. Variables including pillar stress, pillar strength, convergence, and others are investigated.

2k. Prerequisites, if any: MNG 551 - Rock Mechanics or Consent of Instructor

2l. Supplementary Teaching Component:

3. Will this course taught off campus? No

If YES, enter the off campus address:

4. Frequency of Course Offering: Spring,

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?: 15

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: Not Yet Found in Many (or Any) Other Universities ,

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?: No

If YES, list affected programs:

10. Information to be Placed on Syllabus.

a. Is the course 400G or 500?: Yes

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|HONAKER|Rick Honaker|MNG 552 NEW Dept Review|20140829

SIGNATURE|HONAKER|Rick Honaker|MNG 552 NEW Dept Review|20140910

SIGNATURE|BJSTOK0|Barbara J Brandenburg|MNG 552 NEW College Review|20150313

SIGNATURE|JMETT2|Joanie Ett-Mims|MNG 552 NEW Undergrad Council Review|20150707

SIGNATURE|ZNNIKO0|Roshan Nikou|MNG 552 NEW Graduate Council Review|20150922

New Course Form

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

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

Generate F

Attachments:

[Browse...](#)

Upload File

	ID	Attachment
Delete	4792	MNG 552 UGC Review Checklist.docx
Delete	5023	MNG 552 Revised Syllabus.docx

First 1 Last

(*denotes required fields)

1. General Information

- a. * Submitted by the College of: Submission Date: 9/10/2014
- b. * Department/Division:
- c.
- * Contact Person Name: Kyle Perry Email: kyle.perry@uky.edu Phone: 859-257-0133
- * Responsible Faculty ID (if different from Contact): n/a Email: n/a Phone: n/a
- d. * Requested Effective Date: Semester following approval OR Specific Term/Year ¹ Spring 2015
- 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 ⁴ 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 ¹ | <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: | | |
- 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:

Evaluation and design of ground control plans for various mining conditions through the use of several computer programs with an emphasis placed on sedimentary tabular deposits. Variables including pillar stress, pillar strength, convergence, and others are investigated.

k. Prerequisites, if any:

MNG 551 - Rock Mechanics
or Consent of Instructor

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? 15

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:

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 apply 10.a above) are attached.

¹ Courses are typically made effective for the semester following approval. No course will be made effective until all approvals are received.
² The chair of the cross-listing department must sign off on the Signature Routing Log.

¹¹¹ 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)

¹¹² You must also submit the Distance Learning Form in order for the proposed course to be considered for DL delivery.

¹¹³ In order to change a program, a program change form must also be submitted.

Rev 8/09

General Course Information

- Full and accurate title of the course
- Departmental and college prefix
- Course prefix, number and section number
- Scheduled meeting day(s), time and place

Instructor Contact Information (if specific details are unknown, "TBA" is acceptable for one or more fields)

- Instructor name
- Contact information for teaching/graduate assistant, etc.
- Preferred method for reaching instructor
- Office phone number
- Office address
- UK email address
- Times of regularly scheduled office hours and if prior appointment is required

Course Description

- Reasonably detailed overview of the course (course description should match on syllabus and eCATS form)
- Prerequisites, if any (should match on syllabus and eCATS form)
- Student learning outcomes
- Course goals/objectives
- Required materials (textbook, lab materials, etc.)
- Outline of the content, which must conform to the Bulletin description
- Summary description of the components that contribute to the determination of course grade
- Tentative course schedule that clarifies topics, specifies assignment due dates, examination date(s)
- Final examination information: date, time, duration and location
- For 100-, 200-, 300-, 400-, 400G- and 500-level courses, numerical grading scale and relationship to letter grades for undergraduate students
- For 400G-, 500-, 600- and 700-level courses, numerical grading scale and relationship to letter grades for graduate students. (Graduate students cannot receive a "D" grade.)
- Relative value given to each activity in the calculation of course grades (Midterm=30%; Term Project=20%, etc.)
- Note that undergraduate students will be provided with a Midterm Evaluation (by the midterm date) of course performance based on criteria in syllabus
- Policy on academic accommodations due to disability. Standard language is below:

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.

UGE Review ()

Correct both grading scales (percentages overlap)

Clarify how many homework assignments and quizzes will be given, how points will be broken down; add due dates to tentative course schedule

Add midterm grading statement, disability statement, attendance policy, excused absence policy, academic integrity policy, make up opportunities

Course Policies

- Attendance
- Excused absences
- Make-up opportunities
- Verification of absences
- Submission of assignments
- Academic integrity, cheating & plagiarism**
- Classroom behavior, decorum and civility
- Professional preparations
- Group work & student collaboration

Committee Review ()

Comments

COURSE SYLLABUS
Spring Semester 20XX

MNG 552 - Ground Control Software and Analysis
Department of Mining Engineering
University of Kentucky

Number of Credit Hours: 3 Hours
Meeting Time: Tues & Thurs @ 12:30 - 1:45
Meeting Location: 125 MMRB

Instructor: Dr. Kyle Perry, P.E.
Office: 234 J MMRB
Phone: 859-257-0133
Email: kyle.perry@uky.edu

Course Description: Evaluation and design of ground control plans for various mining conditions through the use of several computer programs with an emphasis placed on sedimentary tabular deposits. Variables including pillar stress, pillar strength, convergence, and others are investigated.

Prerequisites: MNG 551 or Consent of Instructor

Course Goals: Upon completion of this course, students will understand several ground response computer programs which are currently being used by mining engineers in industry. Students will understand the background behind each program, how to apply each program correctly, and understand the calculated results to prevent mis-application and mis-interpretation.

Textbook: None. Course notes will be distributed throughout the semester.

Software: ARMPS (Analysis of Retreat Mining Pillar Stability)
ALPS (Analysis of Longwall Pillar Stability)
AMSS (Analysis of Multiple Seam Systems)
LaModel (Laminated Model)
FLAC 3D (Fast Lagrangian Analysis of Continua, if time allows)

Course and Program Learning Outcomes

The following items will be used to assess the achievement of specific program outcomes:

Course Outcome	Program Outcome	Assessment Method
Ability to properly use software packages which are currently the standard in the mining industry to evaluate a mine's ground control plan and analyze the results to determine the mine's stability and safety.	K	Final Project Report

Program outcomes are available at the mining engineering website:
<http://www.engr.uky.edu/mng/undergraduate/outcomes.html>

Student Learning Outcomes

1. Ability to take into account global, regional, and local geotechnical influences (topography, horizontal stresses, geology, etc.) and properly account for them in an underground mine design.
2. Ability to properly use ARMPS, ALPS, & AMSS to evaluate a mine design and interpret results.
3. Ability to properly calibrate the LaModel software for local conditions and extrapolate the calibration throughout the mine.
4. Understand the basic principles of finite difference modeling, have the ability to code basic models, and analyze the results.

Course Topics:

ARMPS (Approx 3 weeks)
 Introduction & Background
 How it works
 Examples and using the software

ALPS (Approx 3 weeks)
 Introduction & Background
 How it works
 Examples and using the software

AMSS (Approx 2 weeks)
 Introduction & Background
 How it works
 Examples and using the software

LaModel (Approx 4 weeks)
 Introduction & Background
 How it works
 Practical Application

FLAC 3D (Remainder of semester)
 Introduction
 Examples and using the software

Course Projects:

Mid-term project using ARMPS, ALPS, & AMSS
 Final Project using LaModel and FLAC 3D

Course Grading:

Homeworks and Quizzes	50%
Mid-term Project	20%
Final Project	30%

There will be approximately 4 in-class assignments worth a total of 100 points, 3 homeworks worth a total 180 points, and 2 quizzes worth a total 90 points for a total point value of 370 with the "Homeworks and Quizzes" category.

Undergraduate students will be paired to complete their projects. To receive graduate level credit, students must complete and present each project as individuals. Graduate students will also be assigned one additional project using FLAC3D which will be geared toward their individual ground control interests. The

project will take additional geotechnical considerations into the models which are beyond the scope of the undergraduate FLAC3D project.

The midterm project is due the Tuesday before spring break. The Final project is due the Tuesday prior to dead week. The additional project for graduate students is due at the beginning of the Final Exam Period.

Grade Scale:

Undergraduate		Graduate	
90-100%	A	92-100%	A
80-89%	B	80-91%	B
70-79%	C	68-79%	C
60-69%	D	<68%	E
<60%	E		

Office Hours: Contact instructor via email to make an appointment.

Software Downloads: NIOSH Software
<http://www.cdc.gov/niosh/mining/works/productlist.html>

LaModel (case sensitive)
<http://www2.cemr.wvu.edu/~kheasley/LaModelDownloads/>

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

Excused Absences:
 Students need to notify the professor of absences prior to class when possible. 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.

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 may be asked to verify their absences in order for them 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.

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 website: <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).

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.