



**Campus Curricula Committee Meeting Agenda**

**December 1, 2015**

**12:30-2:00 p.m., 106B Parker Hall**

**Discussion of whether to count Business courses for Social Science credit**

**Review of submitted Course Change forms:**

- File #4265 Explosives Engineering 6050: Continuous Registration
- File #1234.1 Explosives Engineering 6070: Graduate Cooperative Experience
- File #1911.1 Mechanical Engineering 5449: Robotic Manipulators and Mechanisms
- File #1903.4 Metallurgical Engineering 3220: Introduction to Extractive Metallurgy
- File #2009.1 Physics 1119: General Physics Laboratory
- File #1738.1 Physics 2119: General Physics Laboratory

**Review of submitted Degree Change forms:**

- File #147.10 Biological Sciences: Biological Sciences BS

**Review of submitted Experimental Course forms:**

- File #4266 Civil Engineering 6001.004: Physicochemical Effects in Soils
- File #4251 Engineering Management 6001.002: Financial Data Analysis
- File #4267 Materials Science & Engineering 5001.001: Chemistry of Construction Materials

# Course Inventory Change Request

## New Course Proposal

Date Submitted: 10/08/15 1:04 pm

Viewing: **EXP ENG 6050 : Continuous**

## Registration

File: 4265

Last edit: 10/08/15 1:04 pm

Changes proposed by: pworsey

Requested Spring 2016

Effective Change

Date

Department

Mining & Nuclear Engineering

Discipline

Explosives Engineering (EXP ENG)

Course Number 6050

Title

### 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. Ishelton
11. Peoplesoft

### Approval Path

1. 10/08/15 3:29 pm  
reflori: Approved for RMINNUCL Chair
2. 10/09/15 7:38 am  
Kaylon Buckner (kleb6b):  
Approved for CCC

- Secretary
- 3. 11/02/15 9:43 am  
sraper: Approved  
for Engineering  
DSCC Chair
- 4. 11/11/15 3:39 pm  
Kaylon Buckner  
(kleb6b):  
Approved for  
Pending CCC  
Agenda post

### Continuous Registration

Abbreviated                      Continuous Registration  
Course Title

#### Catalog

#### Description

Doctoral candidates who have completed all requirements for the degree except the dissertation and are away from the campus must continue to enroll for at least one hour of credit each registration period until the degree is completed. Failure to do so may invalidate the candidacy. Billing will be automatic as will registration upon payment.

#### Prerequisites

#### Field Trip Statement

Credit Hours	LEC: 0	LAB: 0	IND: 1.0	RSD: 0
Total: 1.0				

Required for                      No  
Majors

Elective for            No  
Majors

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Justification for  
new course:

Course is not available for Explosives Engineering doctoral candidates to enroll in once they have completed all requirements for the degree except the dissertation.

Semesters  
previously  
offered as an  
experimental  
course

Co-Listed  
Courses:

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Course Reviewer  
Comments

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Key: 4265

[Preview Bridge](#)

# Course Inventory Change Request

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Date Submitted: 10/07/15 2:41 pm

Viewing: **EXP ENG 6070 ~~6002~~: Graduate Cooperative Experience**

File: 1234.1

Last edit: 10/09/15 7:39 am

Changes proposed by: pworsey

Requested **Spring 2016** ~~Fall 2014~~

Effective Change

Date

Department

Mining & Nuclear Engineering

Discipline

Explosives Engineering (EXP ENG)

Course Number **6070** ~~6002~~

Title

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. Ishelton
  11. Peoplesoft
- 

Approval Path

1. 10/08/15 3:29 pm  
reflori: Approved for RMINNUCL Chair
2. 10/09/15 7:39 am  
Kaylon Buckner (kleb6b):  
Approved for CCC

- Secretary
- 3. 11/02/15 9:44 am  
sraper: Approved  
for Engineering  
DSCC Chair
- 4. 11/11/15 3:39 pm  
Kaylon Buckner  
(kleb6b):  
Approved for  
Pending CCC  
Agenda post

Graduate Cooperative Experience

Abbreviated Course Title      Graduate Coop Experience

Catalog

Description

Students on an approved internship will complete a project designed by the advisor and employer. The project selected must require that student apply critical thinking skills and discipline specific knowledge in the work setting. A major report and a formal presentation are required.

Prerequisites

12 hours Exp Eng coursework.

Field Trip

Statement

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

Total: 3

Required for      No

Majors

Elective for      No

## Majors

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Justification for  
change:

Registrar's office has requested a change in number because the course apparently does not fit the 6002 designation.

Semesters  
previously  
offered as an  
experimental  
course

Co-Listed  
Courses:

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Course Reviewer  
Comments

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Key: 1234

[Preview Bridge](#)

# Course Inventory Change Request

Date Submitted: 10/28/15 1:58 pm

Viewing: **MECH ENG 5449 : Robotic Manipulators and ~~And~~ Mechanisms**

File: 1911.1

Last edit: 11/11/15 3:37 pm

Changes proposed by: nisbett

Programs  
referencing this  
course

[AUTOENG-MI: Minor in Automation Engineering](#)

[MC ENG-BS: Mechanical Engineering BS](#)

Other Courses  
referencing this  
course

In The Catalog Description:

[AERO ENG 5449 : Robotic Manipulators & Mechanisms](#)

In The Prerequisites:

[COMP ENG 6880 : Advanced Topics in Robotics](#)

[COMP SCI 6403 : Advanced Topics in Robotics](#)

[ELEC ENG 6880 : Advanced Topics in Robotics](#)

Requested **Summer 2016** ~~Fall 2014~~

Effective Change

Date

Department

In Workflow

1. **RMECHENG 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. Ishelton
11. Peoplesoft

Approval Path

1. 10/28/15 2:04 pm  
drallmei:  
Approved for  
RMECHENG Chair
2. 10/28/15 2:15 pm  
Kaylon Buckner  
(kleb6b):  
Approved for CCC



Mechanical & Aerospace Engineering  
 Discipline  
 Mechanical Engineering (MECH ENG)  
 Course Number 5449  
 Title

Secretary  
 3. 11/02/15 11:04  
 am  
 sraper: Approved  
 for Engineering  
 DSCC Chair  
 4. 11/11/15 3:39 pm  
 Kaylon Buckner  
 (kleb6b):  
 Approved for  
 Pending CCC  
 Agenda post

Robotic Manipulators **and** ~~And~~ Mechanisms

Abbreviated Robotic Manipulat & Mech  
 Course Title

## Catalog

### Description

Overview of industrial applications, manipulator systems and geometry. Manipulator kinematics; hand location, velocity and acceleration. Basic formulation of manipulator dynamics and control. Introduction to machine vision. Projects include robot programming, vision-aided inspection and guidance, and system integration.

### Prerequisites

**Mech Eng 3313; Comp Sci 1970 or Comp Sci 1971 or Comp Sci 1972 or Comp Sci 1570.** ~~1970, Mech Eng 3313.~~

### Field Trip

### Statement

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

Required for  
Majors

No

Elective for  
Majors

Yes ~~No~~

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Justification for  
change:

Adding option for other programming languages to satisfy the prerequisite.

Semesters  
previously  
offered as an  
experimental  
course

Co-Listed

Courses:

AERO ENG 5449 - Robotic Manipulators & Mechanisms

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Course Reviewer

Comments

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# Course Inventory Change Request

Date Submitted: 11/05/15 12:32 pm

Viewing: **MET ENG 3220 : Introduction To Extractive Metallurgy**

File: 1903.4

Last approved: 11/03/14 3:53 am

Last edit: 11/05/15 1:16 pm

Changes proposed by: smiller

Programs

referencing this  
course

[MT ENG-BS: Metallurgical Engineering BS](#)

Other Courses

referencing this  
course

In The Prerequisites:

[MET ENG 3225 : Extractive Metallurgy Laboratory](#)

Requested **Summer 2016**~~Spring 2015~~

Effective Change

Date

Department

Materials Science & Engineering

Discipline

Metallurgical Engineering (MET ENG)

In Workflow

1. **RMATSENG 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. Ishelton
11. Peoplesoft

Approval Path

1. 11/05/15 1:11 pm  
Richard Brow  
(brow): Approved for RMATSENG Chair
2. 11/05/15 1:16 pm  
Kaylon Buckner  
(kleb6b):

Course Number 3220

Title

Approved for CCC  
Secretary

3. 11/12/15 1:43 pm  
sraper: Approved  
for Engineering  
DSCC Chair

4. 11/12/15 1:52 pm  
Kaylon Buckner  
(kleb6b):  
Approved for  
Pending CCC  
Agenda post

### History

1. Nov 3, 2014 by  
smiller (1903.1)

Introduction To Extractive Metallurgy

Abbreviated Intro Extractive Met  
Course Title

### Catalog

#### Description

Production and refining of metals by pyrometallurgy, hydrometallurgy, and electrometallurgy. Emphasis on heat and mass balance calculations for the unit processes of metals extraction. Introduction to the principles of combustion, heat utilization and recovery.

#### Prerequisites

"C" or better grade in Met Eng 1210. Preceded or accompanied by Met Eng 3330 or Cer Eng **3230** ~~3240~~ or Chem Eng 2210.

#### Field Trip

#### Statement

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

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Justification for  
change:

Prerequisites had a typo (Cer 3240 instead of Cer 3230) and now none of our students can enroll.

Semesters  
previously  
offered as an  
experimental  
course

Co-Listed  
Courses:

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Course Reviewer  
Comments

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# Course Inventory Change Request

Date Submitted: 10/15/15 10:54 am

Viewing: **PHYSICS 1119 : General Physics**

## Laboratory

File: 2009.1

Last edit: 10/30/15 10:16 am

Changes proposed by: waddill

Programs  
referencing this  
course

[AP MATH-BS: Applied Mathematics BS](#)

[BIO SC-BA: Biological Sciences BA](#)

[BIO SC-BS: Biological Sciences BS](#)

[CHEM-BA: Chemistry BA](#)

[CHEM-BS: Chemistry BS](#)

[CMP SC-BS: Computer Science BS](#)

[CP ENG-BS: Computer Engineering BS](#)

[EL ENG-BS: Electrical Engineering BS](#)

[GL&GPH-BS: Geology and Geophysics BS](#)

[PHYSIC-BS: Physics BS](#)

[PRE-MED-MI: Pre-Medicine Minor](#)

Requested **Spring 2016** ~~Fall 2014~~

Effective Change

Date

Department

Physics

In Workflow

1. **RPHYSICS Chair**

2. **CCC Secretary**

3. **Sciences 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. Ishelton

11. Peoplesoft

Approval Path

1. 10/15/15 10:57  
am

waddill:

Approved for  
RPHYSICS Chair

2. 10/15/15 11:13  
am

Kaylon Buckner

Discipline

Physics (PHYSICS)

Course Number 1119

Title

(kleb6b):

Approved for CCC  
Secretary

3. 11/05/15 3:28 pm

imorgan:

Approved for  
Sciences DSCC  
Chair

4. 11/11/15 3:39 pm

Kaylon Buckner

(kleb6b):

Approved for  
Pending CCC  
Agenda post

General Physics Laboratory

Abbreviated General Physics Lab

Course Title

Catalog

Description

Experiments related to topics studied in Physics **1111 and Physics 1145.. ~~1111.~~**

Prerequisites

Preceded or accompanied by **either Physics 1111 or Physics 1145. ~~1111.~~**

Field Trip

Statement

Credit Hours

LEC: 0

LAB: 1

IND: 0

RSD: 0

Total: 1

Required for

No

Majors

Elective for

No

## Majors

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Justification for  
change:

Physics 1119 has always been the lab course for both Physics 1111 and Physics 1145.  
Physics 1145 was inadvertently omitted in the original prerequisites.

Semesters  
previously  
offered as an  
experimental  
course

Co-Listed  
Courses:

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Course Reviewer  
Comments

**imorgan (10/30/15 10:16 am):** Edited slightly based on DSCC discussion.

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# Course Inventory Change Request

Date Submitted: 10/15/15 10:56 am

Viewing: **PHYSICS 2119 : General Physics Laboratory**

File: 1738.1

Last edit: 10/30/15 10:17 am

Changes proposed by: waddill

Programs  
referencing this  
course

[AP MATH-BS: Applied Mathematics BS](#)

[BIO SC-BA: Biological Sciences BA](#)

[BIO SC-BS: Biological Sciences BS](#)

[CHEM-BA: Chemistry BA](#)

[CHEM-BS: Chemistry BS](#)

[CMP SC-BS: Computer Science BS](#)

[CP ENG-BS: Computer Engineering BS](#)

[EL ENG-BS: Electrical Engineering BS](#)

[GL&GPH-BS: Geology and Geophysics BS](#)

[PHYSIC-BS: Physics BS](#)

[PRE-MED-MI: Pre-Medicine Minor](#)

Requested **Spring 2016** ~~Fall 2014~~

Effective Change

Date

Department

Physics

In Workflow

1. **RPHYSICS Chair**

2. **CCC Secretary**

3. **Sciences 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. Ishelton

11. Peoplesoft

Approval Path

1. 10/15/15 10:57  
am

waddill:

Approved for  
RPHYSICS Chair

2. 10/15/15 11:13  
am

Kaylon Buckner

Discipline

Physics (PHYSICS)

Course Number 2119

Title

(kleb6b):

Approved for CCC  
Secretary

3. 11/05/15 3:29 pm

imorgan:

Approved for  
Sciences DSCC  
Chair

4. 11/11/15 3:39 pm

Kaylon Buckner

(kleb6b):

Approved for  
Pending CCC  
Agenda post

General Physics Laboratory

Abbreviated General Physics Lab

Course Title

Catalog

Description

Experiments related to topics studied in Physics **2111 and Physics 2145.** ~~2111.~~

Prerequisites

Preceded or accompanied by **either** Physics **2111 or Physics 2145.** ~~2111.~~

Field Trip

Statement

Credit Hours

LEC: 0

LAB: 1

IND: 0

RSD: 0

Total: 1

Required for

No

Majors

Elective for

No

## Majors

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Justification for  
change:

Physics 2119 has always been the lab associated with Physics 2111 and Physics 2145. Physics 2145 was originally omitted from the prerequisite list by mistake. This is to add it where it belongs.

Semesters  
previously  
offered as an  
experimental  
course

Co-Listed  
Courses:

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Course Reviewer  
Comments

**imorgan (10/30/15 10:17 am):** Edited slightly based on DSCC comments.

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## Program Change Request

Date Submitted: 10/30/15 10:23 am

Viewing: **BIO SC-BS : Biological Sciences  
BS**

File: 147.10

Last approved: 08/01/14 3:02 pm

Last edit: 10/30/15 11:20 am

Changes proposed by: imorgan

Catalog Pages

Using this

Program

[Biological Sciences](#)

Start Term **Fall 2016** ~~8/1/2014~~

Program Code

BIO SC-BS

Department

Biological Sciences

Title

### In Workflow

1. **RBIOLSCI Chair**
2. **CCC Secretary**
3. **Sciences 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. kristyg

### Approval Path

1. 10/30/15 11:07 am  
huangy: Approved  
for RBIOLSCI Chair
2. 10/30/15 11:20 am  
Kaylon Buckner  
(kleb6b): Approved  
for CCC Secretary
3. 11/05/15 3:28 pm  
imorgan: Approved  
for Sciences DSCC  
Chair
4. 11/11/15 3:39 pm  
Kaylon Buckner  
(kleb6b): Approved  
for Pending CCC  
Agenda post

### History

1. Aug 1, 2014 by  
shannonk

## Biological Sciences BS

## Program Requirements and Description

### Bachelor of Science Biological Sciences Degree Requirements

A minimum of 130 credit hours is required for a Bachelor of Science degree in Biological Science.

A minimum grade of "C" is required for each Biological Science course used to fulfill the B.S. degree requirements.

These requirements for the B.S. degree are in addition to credit that is received for basic ROTC.

The Biological Science B.S. degree must include ~~49~~ 46 semester hours of biological sciences course work, to include:

<a href="#">BIO SCI 1201</a>	Introduction To Biological Science	1
<a href="#">BIO SCI 1113</a>	General Biology	3
or <a href="#">BIO SCI 1213</a>	Principles of Biology	
<a href="#">BIO SCI 1219</a>	General Biology Lab	2
<a href="#">BIO SCI 1223</a>	Biodiversity	3
<a href="#">BIO SCI 1229</a>	Biodiversity Lab	1
<a href="#">BIO SCI 2213</a>	Cell Biology	3
<a href="#">BIO SCI 2219</a>	Cell Biology Laboratory	1
<a href="#">BIO SCI 2223</a>	General Genetics	3
<a href="#">BIO SCI 2233</a>	Evolution	3
<a href="#">BIO SCI 2263</a>	Ecology	3
<a href="#">BIO SCI 4010</a>	Seminar	1
<del>Advanced biological sciences or approved course work in other departments for a total of 46 credit hours of biology-related classes to include at least one laboratory course from the following:-</del>		<del>22</del>
<b>Advanced biological sciences or approved course work in other departments for a total of 49 credit hours of biology-related classes to include at least one laboratory course from the following:</b>		<b>25</b>
<a href="#">BIO SCI 3319</a>	Microbiology Lab	
or <a href="#">BIO SCI 3339</a>	Human Anatomy Physiology I Lab	
or <a href="#">BIO SCI 3349</a>	Human Anatomy and Physiology II Laboratory	
or <a href="#">BIO SCI 4329</a>	Molecular Genetics Laboratory	
<del>22 semester hours of chemistry to include general chemistry</del>		<del>22</del>

<b>19 semester hours of chemistry to include general chemistry</b>		<b>19</b>
<u>CHEM 1310</u> & <u>CHEM 1319</u> & <u>CHEM 1320</u> & <u>CHEM 1100</u>	General Chemistry I and General Chemistry Laboratory and General Chemistry II and Introduction To Laboratory Safety & Hazardous Materials	
<u>CHEM 2210</u> & <u>CHEM 2219</u> & <u>CHEM 2220</u> & <u>CHEM 2229</u>	Organic Chemistry I and Organic Chemistry I Lab and Organic Chemistry II and Organic Chemistry II Lab	
<del>CHEM 4610</del>	<del>General Biochemistry</del>	
<del>2 semesters of College (General) Physics and labs</del>		<del>8-10</del>
<b>2 semesters of College (Engineering) Physics and labs</b>		<b>8</b>
<u>PHYSICS 1145</u> & <u>PHYSICS 1119</u>	College Physics I and General Physics Laboratory	
or <u>PHYSICS 1135</u>	Engineering Physics I	
<u>PHYSICS 2145</u> & <u>PHYSICS 2119</u>	College Physics II and General Physics Laboratory	
or <u>PHYSICS 2135</u>	Engineering Physics II	
Math and Statistics		8-9
<u>MATH 1208</u>	Calculus With Analytic Geometry I	
or <u>MATH 1214</u>	Calculus For Engineers I	
or <u>MATH 1212</u>	Business Calculus	
<u>STAT 5425</u>	Introduction to Biostatistics	
12 semester hours of humanities, excluding foreign language, and to include:		12
<u>ENGLISH 1120</u> & <u>ENGLISH 1160</u>	Exposition And Argumentation and Writing And Research (entering students will normally take ENGLISH 1120 either semester of the first year)	
9 hours of social sciences, to include		9
<u>HISTORY 1200</u>	Modern Western Civilization (or equivalent)	
or <u>HISTORY 1300</u>	American History To 1877	
or <u>HISTORY 1310</u>	American History Since 1877	
or <u>POL SCI 1200</u>	American Government	
Total Credits		105-106

**Elective credits:** In consultation with his or her advisor, each student will elect sufficient additional courses to complete a minimum of 130 credit hours.

Justification for  
request

(Original change needed to be shredded. This version matches Bio Sci's intentions. I've included their justification below.)

We are removing Biochemistry, CHEM 4610 as a requirement, although it can still count as an upper level Biology elective. The number of required Chemistry hours will decrease to 19 from 22, while number of elective Biology hours will increase from 22 to 25.

We removed Physics 1111 and 2111, General Physics, since they are no longer offered, and provided the option of Engineering Physics I and II instead. Total Physics hours will be 8.

Supporting  
Documents  
Course Reviewer  
Comments

**kleb6b (10/30/15 11:20 am):** Update effective term

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Key: 147

# Course Inventory Change Request

## New Experimental Course Proposal

Date Submitted: 10/27/15 9:47 am

Viewing: **CIV ENG 6001.004 : Physicochemical Effects in Soils**

File: 4266

Last edit: 10/27/15 10:19 am

Changes proposed by: brackenl

Requested Spring 2016

Effective Change

Date

Department

Civil, Architectural, and Environmental Engineering

Discipline

Civil Engineering (CIV ENG)

Course Number 6001

Topic ID 004

Experimental

Title

In Workflow

1. **RCIVILEN Chair**
2. **CCC Secretary**
3. **Engineering DSCC Chair**
4. **Pending CCC Agenda post**
5. **CCC Meeting Agenda**
6. Campus Curricula Committee Chair
7. Registrar

Approval Path

1. 10/27/15 10:01 am  
Douglas Carroll (dougc):  
Approved for RCIVILEN Chair
2. 10/27/15 10:19 am  
Kaylon Buckner (kleb6b):  
Approved for CCC Secretary
3. 11/02/15 11:04 am



sraper: Approved  
for Engineering  
DSCC Chair

4. 11/11/15 3:39 pm  
Kaylon Buckner  
(kleb6b):  
Approved for  
Pending CCC  
Agenda post

## Physicochemical Effects in Soils

Experimental      Physicochem Soils  
Abbreviated  
Course Title  
Instructors      Dr. Bate Bate

### Experimental

### Catalog

### Description

Soils are multi-phase particulate materials. The unique and inherent aspects of macro-scale soil behavior and associated phenomena are explored at the micro-scale.

### Prerequisites

Civ Eng 3715.

### Field Trip

### Statement

None

### Credit Hours

LEC: 3

LAB: 0

IND: 0

RSD: 0

Total: 3

Justification for  
new course:

There is lack of a course, which integrates the microscopic properties into the macroscopic behaviors of geomaterials in geotechnical engineering. However, multi-disciplinary research is the future of geotechnical engineering. This course fills in the gap and fosters the next generation geotechnical engineers with knowledge in geochemistry, physico-chemistry, and in-depth understanding of the emerging geotechnical areas, such as soil stabilization of polymers and biomediation.

All the geotechnical colleagues in Geotechnical Program feel the needs of this course.

Wants this to be a distance course.

Semester(s)

previously taught

N/A

Co-Listed

Courses:

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Course Reviewer

Comments

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# Course Inventory Change Request

## New Experimental Course Proposal

Date Submitted: 09/25/15 2:47 pm

Viewing: **ENG MGT 6001.002 : Financial Data**

## Analysis

File: 4251

Last edit: 11/12/15 2:11 pm

Changes proposed by: qinr

Requested Spring 2016

Effective Change

Date

Department

Engineering Management and Systems Engineering

Discipline

Engineering Management (ENG MGT)

Course Number 6001

Topic ID 002

Experimental

Title

In Workflow

1. **RENGMNGT Chair**
2. **CCC Secretary**
3. **Engineering DSCC Chair**
4. **Sciences DSCC Chair**
5. **Pending CCC Agenda post**
6. **CCC Meeting Agenda**
7. Campus Curricula Committee Chair
8. Registrar

Approval Path

1. 09/25/15 2:57 pm  
Suzanna Long  
(longsuz):  
Approved for  
RENGMNGT Chair
2. 09/28/15 8:12 am  
Kaylon Buckner  
(kleb6b):  
Approved for CCC  
Secretary
3. 10/09/15 2:07 pm

- sraper: Approved  
for Engineering  
DSCC Chair
4. 10/09/15 2:35 pm  
Kaylon Buckner  
(kleb6b):  
Approved for  
Pending CCC  
Agenda post
5. 11/06/15 9:34 am  
Kristy Giacomelli  
(kristyg): Rollback  
to Engineering  
DSCC Chair for  
CCC Meeting  
Agenda
6. 11/12/15 1:42 pm  
sraper: Approved  
for Engineering  
DSCC Chair
7. 11/12/15 2:12 pm  
imorgan:  
Approved for  
Sciences DSCC  
Chair
8. 11/12/15 2:14 pm  
Kaylon Buckner  
(kleb6b):  
Approved for  
Pending CCC  
Agenda post
- 

## Financial Data Analysis

Experimental Financial Data Analysis

Abbreviated

Course Title

Instructors

Ruwen Qin

Experimental

Catalog

Description

Statistical analysis of financial markets data (e.g., equity prices, exchange rates, and interest rates). The application of exploratory data analysis as well as more formal statistical methods such as regression, time series, principal component analysis (PCA), factor models, and Bayesian data analysis in modeling financial data will be covered.

Prerequisites

ENG MGT 6212/SYS ENG 6612 or ENG MGT 6213/SYS ENG 6613, and an undergraduate calculus based statistics course.

Field Trip

Statement

Credit Hours

LEC: 3

LAB: 0

IND: 0

RSD: 0

Total: 3

Justification for

new course:

Students show great interest in hands-on experiences with statistical modeling and data analysis for financial markets using R (an open source software commonly used in various industries). With these experiences, students better prepare themselves for pursuing a career in financial engineering. The EMSE offers a Financial Engineering (FE) Certificate that is composed of four courses. This experimental course supplements the existing courses of FE certificate.

Semester(s)

previously taught

Co-Listed

Courses:

Stat 6001.002 - **Course Not Found**

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Course Reviewer

Comments

**sraper (10/06/15 10:06 am):** Changed wording of course description in consultation with Dr. Qin.

**kristyg (11/06/15 9:34 am):** Rollback: Rollback for modification.

**kleb6b (11/09/15 8:53 am):** Edits per Dr. Raper and create Stat Co-list

**sraper (11/12/15 1:42 pm):** corrected prereq per email from Dr. Qin.

**imorgan (11/12/15 2:07 pm):** Corrected the prerequisites to match Dr. Qin's e-mail.

**imorgan (11/12/15 2:11 pm):** Fixed one thing, broke something else. I think it's fixed now.

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Key: 4251

[Preview Bridge](#)

# Course Inventory Change Request

## New Experimental Course Proposal

Date Submitted: 10/29/15 9:41 am

Viewing: **MS&E 5001.001 : Chemistry of Construction Materials**

File: 4267

Last edit: 11/05/15 1:18 pm

Changes proposed by: kumarad

Requested Spring 2016

Effective Change

Date

Department

Materials Science & Engineering

Discipline

Materials Science & Eng (MS&E)

Course Number 5001

Topic ID 001

Experimental

Title

In Workflow

1. **RMATSENG Chair**
2. **CCC Secretary**
3. **Engineering DSCC Chair**
4. **Pending CCC Agenda post**
5. **CCC Meeting Agenda**
6. Campus Curricula Committee Chair
7. Registrar

Approval Path

1. 11/05/15 1:12 pm  
Richard Brow  
(brow): Approved for RMATSENG Chair
2. 11/05/15 1:18 pm  
Kaylon Buckner  
(kleb6b):  
Approved for CCC Secretary
3. 11/12/15 1:43 pm  
sraper: Approved for Engineering DSCC Chair

4. 11/12/15 1:53 pm  
 Kaylon Buckner  
 (kleb6b):  
 Approved for  
 Pending CCC  
 Agenda post

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## Chemistry of Construction Materials

Experimental          Constr. Mat. Chem.

Abbreviated

Course Title

Instructors          Aditya Kumar

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Experimental

Catalog

Description

The objective of the course is to utilize fundamental material science concepts to understand, analyze, and describe the chemistry of construction materials. Special attention will be paid to discuss mechanisms that describe composition-structure-property relations in cementitious materials.

Prerequisites

Field Trip

Statement

Credit Hours

LEC: 3

LAB: 0

IND: 0

RSD: 0

Total: 3

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Justification for

new course:

This is a necessary course for graduate students working in the area of construction materials. It is a basic course for other disciplines that are part of the Best-in-the-



Class initiative on Advanced Materials for Sustainable Infrastructure.

Semester(s)

previously taught

None

Co-Listed

Courses:

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Course Reviewer

Comments

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Key: 4267

[Preview Bridge](#)