



**Minutes of the Campus Curricula Committee Meeting**

**October 31, 2018**

**9:00am, Bertelsmeyer 110H**

**(For Faculty Senate Meeting of November 15, 2018)**

**Attendees:** Steve Raper, Barry Flachsbart, Petra Dewitt, Katie Shannon, Ashok Midha, Kyle Perry, Kristy Giacomelli and Brittany Parnell

The following curriculum forms were discussed and approved:

**Course Change Forms:**

File: 2032.1	BIO SCI 1982: Introduction to Biomedical Problems
File: 1186.1	CIV ENG 5513: Traffic Engineering
File: 4070.15	CIV ENG 5515: Advanced Traffic Operations and Capacity Analysis
File: 4562	EDUC 3290: Coordination of Cooperative Education
File: 1314.1	ENGLISH 2243: Science Fiction
File: 4379.5	EXP ENG 5914: Explosives Manufacturing
File: 4499.4	FINANCE 5310: Financial Technology and Analytics
File: 1211.10	GEOLOGY 4630: Systematic Paleontology
File: 2420.1	NUC ENG 4365: Radiation Protection Engineering
File: 424.1	NUC ENG 6211: Computational Methods In Nuclear Engineering
File: 2033.1	NUC ENG 6221: Advanced Nuclear Reactor Design
File: 738.1	NUC ENG 6281: Probabilistic Risk Assessment II

**Experimental Course Forms:**

File: 4573	BIO SCI 5001.003: Forest Insect Diversity & Ecology
File: 4574	CER ENG 3001.001: Engineering Leadership and Case Studies in Materials Engineering
File: 4565	ECON 3001.002: Advancing Innovation in Rural Economic Ecosystems
File: 4572	GEO ENG 5001.003: Geological and Civil Engineering Issues in Southern Africa
File: 4571	GEO ENG 6001.002: Geological and Civil Engineering Practices in Southern Africa
File: 4558	GEOLOGY 5001.002: Introduction to Geoscience Research Methodologies
File: 4576	GEOLOGY 6001.002: Applied Petroleum System Analysis
File: 4575	GEOLOGY 6001.003: Fossils, Deep Time and Extinctions

**Informational discussion on certificates and Core 42.**

The meeting adjourned at 9:45am.

Stephen A. Raper, Chair  
Missouri S&T Campus Curricula Committee

## Course Change Request

Date Submitted: 09/28/18 8:53 am

Viewing: **BIO SCI 1982 1993-: Introduction to Biomedical Problems**

File: 2032.1

Last edit: 10/15/18 2:28 pm

Changes proposed by: shannonk

Requested **Spring 2019** ~~08/01/2014~~  
 Effective Change  
 Date  
 Department Biological Sciences  
 Discipline Biological Sciences (BIO SCI)  
 Course Number **1982** ~~1993~~  
 Title Introduction to Biomedical Problems  
 Abbreviated Intro to Biomed Problems  
 Course 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. CAT entry
11. Peoplesoft

Catalog Description Problem based learning approach to issues in medical science. Students will work in groups and individually to answer problems related to diagnostic testing and evaluation of diseases and other medical conditions.

Prerequisites ~~Bio-Sci 1953-~~

Field Trip Statement

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

Required for Majors No

Elective for Majors **Yes** ~~No~~

Approval Path

1. 09/28/18 8:56 am  
David Duvernell (duvernell):  
Approved for RBIOLSCI Chair
2. 09/28/18 10:06 am  
Brittany Parnell (ershenb):  
Approved for CCC Secretary
3. 10/16/18 11:42 am  
Katie Shannon (shannonk):  
Approved for Sciences DSCC Chair
4. 10/16/18 12:01 pm  
Brittany Parnell (ershenb):  
Approved for Pending CCC Agenda post
5. 10/31/18 10:00 am  
Brittany Parnell (ershenb):

Justification for change: Course number should be lower than 1983, remove prereq that is no longer required

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer Comments

Key: 2032

Approved for CCC  
Meeting Agenda  
6. 10/31/18 10:07  
am  
Stephen Raper  
(sraper):  
Approved for  
Campus Curricula  
Committee Chair

[Preview Bridge](#)

## Course Change Request

Date Submitted: 09/07/18 5:01 pm

Viewing: **CIV ENG 5513 : Traffic Engineering**

File: 1186.1

Last edit: 10/05/18 9:29 am

Changes proposed by: huxian

Other Courses referencing this course	In The Prerequisites: <a href="#">CIV ENG 5515 : Advanced Traffic Operations and Capacity Analysis</a> <a href="#">CIV ENG 6501 : Transportation Planning</a> <a href="#">CIV ENG 6505 : Traffic Modeling and Simulation</a> <a href="#">CIV ENG 6509 : Traffic Flow Theory and Characteristics</a> <a href="#">CIV ENG 6511 : Transportation Systems Analysis</a>
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Requested Effective Change Date	<b>Fall 2019</b> <del>08/14/2018</del>
Department	Civil, Architectural, and Environmental Engineering
Discipline	Civil Engineering (CIV ENG)
Course Number	5513
Title	Traffic Engineering
Abbreviated Course Title	Traffic Engineering

Catalog Description	<p><b>Introduction to multimodal transportation systems and the factors that influence the planning, design, control, operation and safety of the systems will be made. This course will also include the discussion of Intelligence Transportation Systems and how emerging technologies are changing transportation systems. <del>Driver, vehicle, and roadway characteristics; traffic control devices; traffic studies; intersection capacity, intersection design, traffic safety, and evaluation of traffic improvements. Traffic laws and ordinances, traffic engineering, traffic circulation, parking design, and forecasting traffic impacts.</del></b></p>
Prerequisites	Civ Eng 3500 with a grade of "C" or better.
Field Trip Statement	
Credit Hours	LEC: 3      LAB: 0      IND: 0      RSD: 0      Total: 3
Required for Majors	No
Elective for Majors	<b>Yes</b> <del>No</del>

Justification for change:	Instructor of this course has changed to be a TT faculty, who is systematically redesigning this course and reorganizing the content into five modules, including planning, design, control, operation and safety
Semesters previously offered as an	

### 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. **FS Meeting Agenda**
8. Faculty Senate Chair
9. Registrar
10. CAT entry
11. Peoplesoft

### Approval Path

1. 09/24/18 5:54 am  
Joel Burken (burken):  
Approved for RCIVILEN Chair
2. 09/24/18 11:29 am  
Brittany Parnell (ershenb):  
Approved for CCC Secretary
3. 10/08/18 12:35 pm  
Stephen Raper (sraper):  
Approved for Engineering DSCC Chair
4. 10/08/18 2:16 pm  
Brittany Parnell (ershenb):  
Approved for Pending CCC Agenda post
5. 10/31/18 10:02 am  
Brittany Parnell (ershenb):  
Approved for CCC Meeting Agenda

experimental  
course  
Co-Listed  
Courses:

6. 10/31/18 10:07  
am  
Stephen Raper  
(sraper):  
Approved for  
Campus Curricula  
Committee Chair

Course Reviewer **sraper (09/27/18 9:13 am)**: checked elective for majors.  
Comments

Key: 1186

[Preview Bridge](#)

## Course Change Request

Date Submitted: 09/07/18 5:02 pm

Viewing: **CIV ENG 5515 : Advanced Traffic Operations and Capacity Analysis**

File: 4070.15

Last approved: 02/05/18 3:29 am

Last edit: 10/31/18 10:04 am

Changes proposed by: huxian

Requested **Fall 2019** ~~08/14/2018~~

Effective Change

Date

Department Civil, Architectural, and Environmental Engineering

Discipline Civil Engineering (CIV ENG)

Course Number 5515

Title Advanced Traffic Operations and Capacity Analysis

Abbreviated Adv Traf Ops & CA **Anly Anlys**

Course Title

**Catalog Description** This course will introduce students to advanced traffic operation and capacity analysis as applied to an urban highway network. It will focus on the operations and management of freeway and arterials where a signalized intersection is one of the key elements affecting traffic flow operation and determining highway capacity.

**Prerequisites** **Civ Eng 3500 with a grade of "C" or better.** ~~Civ Eng 5513.~~

**Field Trip Statement**

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

**Required for Majors** No

**Elective for Majors** Yes

**Justification for change:** Both CIV\_ENG 5513 and 5515 are being redesigned by new transportation faculty, with different focuses. CIV\_ENG 5513 will aim to provide a holistic view of traffic engineering, while CIV\_ENG 5515 will focus on traffic operation and capacity analysis. With this, it is not necessary for students to take CIV\_ENG 5513 prior to taking this course. Additionally, the enrollment of 5515 is usually low due to this prerequisite requirement, hopefully we can attract more students' interest in transportation engineering and better serve employer's needs

Semesters previously offered as an experimental course

Co-Listed Courses:

**Course Reviewer Comments** **sraper (09/25/18 9:09 am):** added CE 3500 as prerequisite course per instructions from Civ Eng.

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. **FS Meeting Agenda**
8. Faculty Senate Chair
9. Registrar
10. CAT entry
11. Peoplesoft

Approval Path

1. 09/24/18 5:54 am  
Joel Burken (burken):  
Approved for RCIVILEN Chair
2. 09/24/18 11:28 am  
Brittany Parnell (ershenb):  
Approved for CCC Secretary
3. 10/08/18 12:36 pm  
Stephen Raper (sraper):  
Approved for Engineering DSCC Chair
4. 10/08/18 2:17 pm  
Brittany Parnell (ershenb):  
Approved for Pending CCC Agenda post
5. 10/31/18 10:05 am  
Brittany Parnell (ershenb):  
Approved for CCC Meeting Agenda

**sraper (09/26/18 9:35 am):** changed prereq according to instructor email.  
**ershenb (10/31/18 10:04 am):** changed "and" to "&" in the abbreviated title.

Key: 4070

6. 10/31/18 10:07 am  
Stephen Raper (sraper):  
Approved for Campus Curricula Committee Chair

#### History

1. Sep 22, 2014 by Debbie Benenati (dbenenat)
2. Feb 5, 2018 by seelyj (4070.7)

[Preview Bridges](#)

## Course Change Request

### New Course Proposal

Date Submitted: 09/12/18 10:20 am

Viewing: **EDUC 3290 : Coordination of Cooperative Education**

File: 4562

Last edit: 10/31/18 10:06 am

Changes proposed by: barryf

Programs [BUS&MS-BS: Business and Mgmt Systems BS](#)  
referencing this course

Requested Spring 2019  
Effective Change Date  
Department Teacher Education and Certification  
Discipline Education (EDUC)  
Course Number 3290  
Title Coordination of Cooperative Education  
Abbreviated Course Title Coord Coop Education

Catalog Description Explore the coordination and delivery of work-based learning experiences for student learners, including legal aspects, methods, materials, selecting work sites, placement, evaluation of expectations and student follow-up. Develop an implementation plan for cooperative education.  
Prerequisites Educ 1040 and Educ 1104 and Educ 1174.  
Field Trip Statement  
Credit Hours LEC: 3      LAB: 0      IND: 0      RSD: 0      Total: 3  
Required for Majors Yes  
Elective for Majors No

Justification for new course: This course is a requirement of the Missouri Department of Elementary and Secondary Education for certification to teach Business Education at the high school level.

Semesters previously offered as an experimental course

Co-Listed Courses:

#### In Workflow

1. REDUCATION Chair
2. CCC Secretary
3. Social 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. CAT entry
11. Peoplesoft

#### Approval Path

1. 09/12/18 10:25 am  
Kelly Carter (carterke): Approved for REDUCATION Chair
2. 09/12/18 2:58 pm  
Brittany Parnell (ershenb): Approved for CCC Secretary
3. 09/25/18 9:05 pm  
Barry Flachsbart (barryf): Approved for Social Sciences DSCC Chair
4. 10/08/18 2:22 pm  
Brittany Parnell (ershenb): Approved for Pending CCC Agenda post
5. 10/31/18 10:07 am  
Brittany Parnell (ershenb):

ershenb (10/31/18 10:06 am): Added "and" between the required prerequisites.



Course Reviewer Comments	Approved for CCC Meeting Agenda 6. 10/31/18 10:11 am Stephen Raper (sraper): Approved for Campus Curricula Committee Chair
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Key: 4562

[Preview Bridge](#)

## Course Change Request

Date Submitted: 10/12/18 10:19 am

Viewing: **ENGLISH 2243 : Science Fiction ~~And Fantasy Literature~~**

File: 1314.1

Last edit: 10/31/18 10:09 am

Changes proposed by: kswenson

Requested **Fall 2019** ~~08/14/2018~~  
 Effective Change  
 Date  
 Department English and Technical Communication  
 Discipline English (ENGLISH)  
 Course Number 2243  
 Title Science Fiction ~~And Fantasy Literature~~  
 Abbreviated Sci **Fiction** ~~Fiction&Fantasy Lit~~  
 Course Title

In Workflow

1. **RENGLISH Chair**
2. **CCC Secretary**
3. **Arts & Humanities 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

Catalog Description A study of short stories, poems, or novels which represent the development and the techniques of the science **fiction** ~~fiction-fantasy~~ genre.  
 Prerequisites English 1120 and a semester of college literature.  
 Field Trip Statement  
 Credit Hours LEC: 3      LAB: 0      IND: 0      RSD: 0      Total: 3  
 Required for Majors No  
 Elective for Majors **Yes** ~~No~~

Approval Path

1. 10/12/18 10:19 am  
Kristine Swenson (kswenson): Approved for RENG LISH Chair
2. 10/12/18 11:24 am  
Brittany Parnell (ershenb): Approved for CCC Secretary
3. 10/12/18 12:04 pm  
Petra Dewitt (dewittp): Approved for Arts & Humanities DSCC Chair
4. 10/16/18 9:18 am  
Brittany Parnell (ershenb): Approved for Pending CCC Agenda post
5. 10/31/18 10:10 am  
Brittany Parnell (ershenb):

Justification for change: We have a separate "Fantasy Literature" course, so 2243 is now simply Science Fiction and including "fantasy" in the title is misleading, inaccurate, unnecessary.

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer **ershenb (10/31/18 10:09 am)**: Checked "yes" elective for majors.  
 Comments

Key: 1314

Approved for CCC  
Meeting Agenda  
6. 10/31/18 10:11  
am  
Stephen Raper  
(sraper):  
Approved for  
Campus Curricula  
Committee Chair

[Preview Bridge](#)

## Course Change Request

Date Submitted: 09/14/18 3:51 pm

Viewing: **EXP ENG 5914 : Explosives Manufacturing**

File: 4379.5

Last approved: 03/20/17 3:14 am

Last edit: 10/31/18 10:11 am

Changes proposed by: pworsey

Catalog Pages referencing this course [Explosives Engineering](#) [Explosives Engineering](#)

Requested ~~Fall 2017~~ **Fall 2019**  
 Effective Change Date  
 Department Mining & Nuclear Engineering  
 Discipline Explosives Engineering (EXP ENG)  
 Course Number 5914  
 Title Explosives Manufacturing  
 Abbreviated Course Title Explosives Manufacturing

Catalog Description History of industrial explosives from discovery to what is used today. Manufacturing processes for packaged and bulk explosives are explored along with specialty explosives such as detonating cord, cast boosters, detonators, shaped charges, and commercial fireworks. Field manufacturing of explosives by mixing or gassing is also covered.

Prerequisites **Successful background check, consent of instructor.**

Field Trip Statement

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

Required for Majors **No ~~Yes~~**

Elective for Majors Yes

Justification for change: In order to make sure students have a successful background check before taking the course, this and consent of instructor has been added as a prerequisite so that students need a permission number before they can enroll for the class. Once they have a background check file they will be approved so that they remain in the class.

Semesters previously offered as an experimental course

Co-Listed Courses:

- In Workflow
1. MINEXP ENG 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. 09/15/18 1:50 pm Kwame Awuah-Offei (kwamea): Approved for MINEXP ENG Chair
  2. 09/18/18 9:42 am Brittany Parnell (ershenb): Approved for CCC Secretary
  3. 10/08/18 12:36 pm Stephen Raper (sraper): Approved for Engineering DSCC Chair
  4. 10/08/18 2:23 pm Brittany Parnell (ershenb): Approved for Pending CCC Agenda post
  5. 10/31/18 10:11 am Brittany Parnell (ershenb):

Course Reviewer	<b>sraper (09/27/18 9:15 am)</b> : removed required for majors.	Approved for CCC Meeting Agenda
Comments	<b>ershenb (10/31/18 10:11 am)</b> : Changed effective date to Fall 2019.	6. 10/31/18 10:14 am Stephen Raper (sraper): Approved for Campus Curricula Committee Chair
<small>Key: 4379</small>		<b>History</b>
		1. Mar 20, 2017 by Kyle Perry (kapqh4)

[Preview Bridges](#)

## Course Change Request

Date Submitted: 09/13/18 9:44 am

Viewing: **FINANCE 5310 : Financial Technology and Analytics** ~~Financial Modeling~~

File: 4499.4

Last approved: 02/05/18 3:29 am

Last edit: 09/13/18 9:44 am

Changes proposed by: ershenb

Catalog Pages referencing this course

[Business Administration](#)

Requested **Spring 2019** ~~08/14/2018~~  
 Effective Change Date  
 Department Business and Information Technology  
 Discipline Finance (FINANCE)  
 Course Number 5310  
 Title **Financial Technology and Analytics** ~~Financial Modeling~~  
 Abbreviated Course Title **Tech and Analytics** ~~Financial Modeling~~

**Catalog Description** This course is built on finance theory, financial analysis, and quantitative methods from prerequisite courses. **Students** ~~The course will extensively use Excel spreadsheets to~~ design and construct integrated financial models. The objective is to offer students opportunities to experience hands-on numerical analyses, company valuation, and dynamic projections.

**Prerequisites** Finance 2150 or Graduate Standing.

**Field Trip Statement**

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

**Required for Majors** No

**Elective for Majors** Yes

**Justification for change:** Instructor suggested description and title changes to more accurately describe the course.

**Semesters previously offered as an experimental course**

**Co-Listed Courses:**

- In Workflow
1. RBUSADMN Chair
  2. CCC Secretary
  3. Social 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. CAT entry
  11. Peoplesoft

- Approval Path
1. 09/13/18 12:40 pm  
siauk: Approved for RBUSADMN Chair
  2. 09/13/18 1:26 pm  
Brittany Parnell (ershenb): Approved for CCC Secretary
  3. 09/25/18 9:05 pm  
Barry Flachsbart (barryf): Approved for Social Sciences DSCC Chair
  4. 10/08/18 3:17 pm  
Brittany Parnell (ershenb): Approved for Pending CCC Agenda post
  5. 10/31/18 10:17 am  
Brittany Parnell (ershenb): Approved for CCC Meeting Agenda

Course Reviewer  
Comments

Key: 4499

6. 10/31/18 10:40  
am  
Stephen Raper  
(sraper):  
Approved for  
Campus Curricula  
Committee Chair

History

1. Feb 5, 2018 by  
Barry Flachsbart  
(barryf)

[Preview Bridge](#)

## Course Change Request

Date Submitted: 09/26/18 4:08 pm

Viewing: **GEOLOGY 4630** ~~3631~~: Systematic Paleontology

File: 1211.10

Last approved: 03/26/18 3:33 am

Last edit: 10/31/18 10:18 am

Changes proposed by: ershenb

Requested	<b>Fall 2019</b> <del>08/14/2018</del>
Effective Change Date	
Department	Geosciences and Geological and Petroleum Engineering
Discipline	Geology (GEOLOGY)
Course Number	<b>4630</b> <del>3631</del>
Title	Systematic Paleontology
Abbreviated Course Title	Systematic Paleontology

In Workflow

1. **RGEOSENG 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. CAT entry
11. Peoplesoft

<p>Catalog Description</p> <p>Prerequisites</p> <p>Field Trip Statement</p> <p>Credit Hours</p> <p>Required for Majors</p> <p>Elective for Majors</p>	<p>Provide understanding of paleontological principles, morphological concepts, evolution of life, and applications/uses of fossils. Chronicles evolution and classification of microfossils, invertebrates, plants and palynomorphs. Emphasis on <b>communication skills writing</b> and <b>team work. oral skills</b>. A compulsory field trip to The Field Museum (Chicago) may be at student expense.</p> <p>Geology 1110 or Geology 1120 or Bio Sci 1113.</p> <p>LEC: 2      LAB: 1      IND: 0      RSD: 0      Total: 3</p> <p>No</p> <p>Yes</p>	<p>Approval Path</p> <ol style="list-style-type: none"> <li>1. 10/01/18 8:06 am David Borrok (borrokd): Approved for RGEOSENG Chair</li> <li>2. 10/01/18 9:27 am Brittany Parnell (ershenb): Approved for CCC Secretary</li> <li>3. 10/16/18 11:45 am Katie Shannon (shannonk): Approved for Sciences DSCC Chair</li> <li>4. 10/16/18 12:02 pm Brittany Parnell (ershenb): Approved for Pending CCC Agenda post</li> <li>5. 10/31/18 10:25 am Brittany Parnell (ershenb): Approved for CCC Meeting Agenda</li> </ol>
<p>Justification for change:</p> <p>Semesters previously offered as an experimental course</p> <p>Co-Listed Courses:</p>	<p>The lecture and lab section of this course have been substantially revised to include intensive communication components, and is more aligned to a senior-level course.</p>	
<p>Course Reviewer Comments</p>	<p><b>ershenb (09/26/18 4:14 pm)</b>: Changed course number to "4630,"; edited description with "Emphasis on communication skills and teamwork."; added " or consent of instructor" to prerequisite per the request of Francisca Oboh-Ikuenobe (for technical Courseleaf issues).</p> <p><b>ershenb (10/31/18 10:18 am)</b>: Removed "consent of instructor" from prerequisite.</p>	

Key: 1211



6. 10/31/18 10:40  
am  
Stephen Raper  
(sraper):  
Approved for  
Campus Curricula  
Committee Chair

#### History

1. Jun 27, 2016 by  
ikuenobe  
(1211.1)
2. Mar 26, 2018 by  
ikuenobe  
(1211.6)

[Preview Bridge](#)

## Course Change Request

A deleted record cannot be edited

### Course Deactivation Proposal

Date Submitted: 06/06/18 3:35 pm

Viewing: **NUC ENG 4365 : Radiation Protection Engineering**

File: 2420.1

Last edit: 08/14/18 2:26 pm

Changes proposed by: tibbetstmg

Requested **Spring 2019** ~~08/01/2014~~

Effective Change

Date

Department Mining & Nuclear Engineering

Discipline Nuclear Engineering (NUC ENG)

Course Number 4365

Title Radiation Protection Engineering

Abbreviated Radiation Protection Eng

Course Title

In Workflow

1. **NUC ENG 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

Catalog Description Radiation fields and sources including nuclear reactors, radioactive wastes, x-ray machines, and accelerators. Stopping of radiation (Charges particles, photons, and neutrons) by matter. Radiation transport methods. Radiation shielding design. Dose rate calculations. Biological effects of radiation. Regulatory guides (10CFR20).

Prerequisites Nuc Eng 3205.

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: Elimination of courses that have not been taught for 10 or more years per Registrar.

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer Comments

#### Approval Path

1. 09/25/18 2:21 pm  
Hyoung-Koo Lee (leehk): Approved for NUC ENG Chair
2. 09/25/18 3:15 pm  
Brittany Parnell (ershenb): Approved for CCC Secretary
3. 10/08/18 12:36 pm  
Stephen Raper (sraper): Approved for Engineering DSCC Chair
4. 10/08/18 3:37 pm  
Brittany Parnell (ershenb): Approved for Pending CCC Agenda post
5. 10/31/18 10:25 am  
Brittany Parnell (ershenb): Approved for CCC Meeting Agenda

Key: 2420

6. 10/31/18 10:40  
am  
Stephen Raper  
(sraper):  
Approved for  
Campus Curricula  
Committee Chair

[Preview Bridge](#)

## Course Change Request

A deleted record cannot be edited

### Course Deactivation Proposal

Date Submitted: 06/06/18 3:36 pm

Viewing: **NUC ENG 6211 : Computational Methods In Nuclear Engineering**

File: 424.1

Last edit: 08/14/18 2:26 pm

Changes proposed by: tibbetstmg

Requested **Spring 2019** ~~08/01/2014~~  
 Effective Change  
 Date  
 Department Mining & Nuclear Engineering  
 Discipline Nuclear Engineering (NUC ENG)  
 Course Number 6211  
 Title Computational Methods In Nuclear Engineering  
 Abbreviated Course Title Comp Mthds In Nucl Engr

In Workflow

1. **NUC ENG 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

Catalog Description Numerical solution of the neutron diffusion and transport equations utilizing the computer. The Sn and Pn methods are studied in detail.  
 Prerequisites Nuc Eng 4211 and Comp Sci 3200.  
 Field Trip Statement  
 Credit Hours LEC: 3      LAB: 0      IND: 0      RSD: 0      Total: 3  
 Required for Majors No  
 Elective for Majors No

Approval Path

1. 09/25/18 2:21 pm  
Hyoung-Koo Lee (leehk): Approved for NUC ENG Chair
2. 09/25/18 3:15 pm  
Brittany Parnell (ershenb): Approved for CCC Secretary
3. 10/08/18 12:37 pm  
Stephen Raper (sraper): Approved for Engineering DSCC Chair
4. 10/08/18 3:37 pm  
Brittany Parnell (ershenb): Approved for Pending CCC Agenda post
5. 10/31/18 10:26 am  
Brittany Parnell (ershenb): Approved for CCC Meeting Agenda

Justification for change: Elimination of courses that have not been taught for 10 or more years per Registrar.

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer Comments

Key: 424

6. 10/31/18 10:40  
am  
Stephen Raper  
(sraper):  
Approved for  
Campus Curricula  
Committee Chair

[Preview Bridge](#)

## Course Change Request

A deleted record cannot be edited

### Course Deactivation Proposal

Date Submitted: 06/06/18 3:36 pm

Viewing: **NUC ENG 6221 : Advanced Nuclear Reactor Design**

File: 2033.1

Last edit: 08/14/18 2:26 pm

Changes proposed by: tibbetstmg

Requested **Spring 2019** ~~08/01/2014~~

Effective Change

Date

Department Mining & Nuclear Engineering

Discipline Nuclear Engineering (NUC ENG)

Course Number 6221

Title Advanced Nuclear Reactor Design

Abbreviated Adv Nuc Reactor Design

Course Title

In Workflow

1. **NUC ENG 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

Catalog Description Complete design of a nuclear power reactor, including analysis of reactor physics and engineering; layout and design of primary and secondary cooling systems, pressure vessel and thermal shields, control systems; introduction to the economics of nuclear power.

Prerequisites Nuc Eng 4211 and 3229.

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: Elimination of courses that have not been taught for 10 or more years per Registrar.

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer Comments

Approval Path

1. 09/25/18 2:22 pm  
Hyoung-Koo Lee (leehk): Approved for NUC ENG Chair
2. 09/25/18 3:15 pm  
Brittany Parnell (ershenb): Approved for CCC Secretary
3. 10/08/18 12:37 pm  
Stephen Raper (sraper): Approved for Engineering DSCC Chair
4. 10/08/18 3:37 pm  
Brittany Parnell (ershenb): Approved for Pending CCC Agenda post
5. 10/31/18 10:26 am  
Brittany Parnell (ershenb): Approved for CCC Meeting Agenda

Key: 2033

6. 10/31/18 10:40  
am  
Stephen Raper  
(sraper):  
Approved for  
Campus Curricula  
Committee Chair

[Preview Bridge](#)

## Course Change Request

A deleted record cannot be edited

### Course Deactivation Proposal

Date Submitted: 06/06/18 3:36 pm

Viewing: **NUC ENG 6281 : Probabilistic Risk Assessment II**

File: 738.1

Last edit: 08/14/18 2:27 pm

Changes proposed by: tibbetstmg

Requested **Spring 2019** ~~08/01/2014~~

Effective Change

Date

Department Mining & Nuclear Engineering

Discipline Nuclear Engineering (NUC ENG)

Course Number 6281

Title Probabilistic Risk Assessment II

Abbreviated Prob Risk Assessment II

Course Title

In Workflow

1. **NUC ENG 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

**Catalog Description** A continuation of Nuc Eng 4281 with emphasis on reliability, importance, availability and frequency of occurrence. Advanced topics of phased mission analysis and dynamic fault tree analysis will be considered. The use of fault tree results with respect to risk calculations will be studied.

**Prerequisites** Nuc Eng 4281.

**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:** Elimination of courses that have not been taught for 10 or more years per Registrar.

**Semesters previously offered as an experimental course**

**Co-Listed Courses:**

**Course Reviewer Comments**

Approval Path

1. 09/25/18 2:22 pm  
Hyoung-Koo Lee (leehk): Approved for NUC ENG Chair
2. 09/25/18 3:15 pm  
Brittany Parnell (ershenb): Approved for CCC Secretary
3. 10/08/18 12:37 pm  
Stephen Raper (sraper): Approved for Engineering DSCC Chair
4. 10/08/18 3:38 pm  
Brittany Parnell (ershenb): Approved for Pending CCC Agenda post
5. 10/31/18 10:26 am  
Brittany Parnell (ershenb): Approved for CCC Meeting Agenda

Key: 738



6. 10/31/18 10:41  
am  
Stephen Raper  
(sraper):  
Approved for  
Campus Curricula  
Committee Chair

[Preview Bridge](#)

## Course Change Request

### New Experimental Course Proposal

Date Submitted: 09/24/18 2:13 pm

Viewing: **BIO SCI 5001.003 : Forest Insect Diversity & Ecology**

File: 4573

Last edit: 10/16/18 1:10 pm

Changes proposed by: verbler

Requested	Summer 2019
Effective Change Date	
Department	Biological Sciences
Discipline	Biological Sciences (BIO SCI)
Course Number	5001
Topic ID	003
Experimental Title	Forest Insect Diversity & Ecology
Experimental Abbreviated Course Title	Insect Div and Ecol
Instructors	Dr. Robin Verble

#### 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. **CAT entry**
8. **Registrar**

#### Approval Path

1. 09/24/18 2:28 pm  
David Duvernell (duverneld):  
Approved for  
RBIOLSCI Chair
2. 09/24/18 3:34 pm  
Brittany Parnell (ershenb):  
Approved for CCC Secretary
3. 10/16/18 11:42 am  
Katie Shannon (shannonk):  
Approved for Sciences DSCC Chair
4. 10/16/18 12:01 pm  
Brittany Parnell (ershenb):  
Approved for Pending CCC Agenda post
5. 10/31/18 10:27 am  
Brittany Parnell (ershenb):  
Approved for CCC Meeting Agenda
6. 10/31/18 10:40 am  
Stephen Raper (sraper):  
Approved for

Experimental Catalog Description	In this course, you will learn key insect characteristics, common forest insects, insect life history and ecology, and entomological collection techniques. This course will be taught at the Ozark Research Field Station and will consist of several field trips to collecting sites and laboratory identification of insects.
Prerequisites	Bio Sci 2263
Field Trip Statement	This course will be held at the Ozark Field Research Station in Newburg, Missouri. Students are expected to provide their own transportation to and from the Station.
Credit Hours	LEC: 1      LAB: 2      IND: 0      RSD: 0      Total: 3

Justification for new course: This course increases the summer offerings for the Department of Biological Sciences and utilizes the new Ozark Research Field Station. In addition, this course diversifies the offerings in the Department and addresses ecological, organismal, and field-based topics, thus strengthening our overall program.

Semester(s) previously taught: None at Missouri S&T. Taught a similar course at Texas Tech University for three semesters.

Co-Listed Courses:

Course Reviewer Comments

Key: 4573

Campus Curricula  
Committee Chair

7. 10/31/18 11:25  
am

Marita Tibbetts

(tibbettsmg):

Approved for CAT  
entry

[Preview Bridge](#)

## Course Change Request

### New Experimental Course Proposal

Date Submitted: 09/26/18 8:13 am

Viewing: **CER ENG 3001.001 : Engineering Leadership and Case Studies in Materials Engineering**

File: 4574

Last edit: 10/08/18 2:15 pm

Changes proposed by: schwartzrob

Requested	Spring 2019
Effective Change Date	
Department	Materials Science & Engineering
Discipline	Ceramic Engineering (CER ENG)
Course Number	3001
Topic ID	001
Experimental Title	Engineering Leadership and Case Studies in Materials Engineering
Experimental Abbreviated Course Title	Materials Case Studies
Instructors	Robert W. Schwartz

#### 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. **CAT entry**
8. **Registrar**

#### Approval Path

1. 09/26/18 8:14 am  
Greg Hilmas (ghilmas):  
Approved for RMATSENG Chair
2. 09/26/18 8:49 am  
Brittany Parnell (ershenb):  
Approved for CCC Secretary
3. 10/08/18 12:34 pm  
Stephen Raper (sraper):  
Approved for Engineering DSCC Chair
4. 10/08/18 2:15 pm  
Brittany Parnell (ershenb):  
Approved for Pending CCC Agenda post
5. 10/31/18 10:28 am  
Brittany Parnell

**Experimental Catalog Description**  
The application of materials engineering principles to materials development with a focus on real-world materials applications. Case studies of materials engineering development challenges and leadership in engineering organizations will be used to develop a comprehensive perspective of societal, environmental, global, and economic influences.

**Prerequisites**  
Junior Standing in ceramic or metallurgical engineering.

**Field Trip Statement**

Credit Hours      LEC: 3.0      LAB: 0.0      IND: 0.0      RSD: 0.0      Total: 3.0

Justification for

new course:

The existing capstone design course is an avenue for students to further develop as engineers and put together what they have learned in their earlier courses to begin to solve more complex engineering problems. While the course contributes to the attainment of these objectives, the focus on a specific and narrow design project does not enable the students to gain the broad perspective needed to perform effectively from day one at the level expected by employers. This course will thus supplement the current required senior design course and provide an avenue for students who take this elective course to further develop their professional abilities across the spectrum of ABET and HLC/Missouri S&T campus-wide student learning outcomes.

Semester(s)

previously taught

None.

Co-Listed

Courses:

(ershenb):

Approved for CCC

Meeting Agenda

6. 10/31/18 10:40  
am

Stephen Raper

(sraper):

Approved for

Campus Curricula

Committee Chair

7. 10/31/18 11:20  
am

Marita Tibbetts

(tibbettsmg):

Approved for CAT

entry

Course Reviewer **sraper (10/08/18 12:34 pm):** Removed last part of prereq statement.

Comments

Key: 4574

[Preview Bridge](#)

## Course Change Request

### New Experimental Course Proposal

Date Submitted: 09/05/18 8:09 am

Viewing: **ECON 3001.002 : Advancing Innovation in Rural**

### Economic Ecosystems

File: 4565

Last edit: 10/31/18 10:43 am

Changes proposed by: schwartzrob

Requested	Spring 2019
Effective Change Date	
Department	Economics
Discipline	Economics (ECON)
Course Number	3001
Topic ID	002
Experimental Title	Advancing Innovation in Rural Economic Ecosystems
Experimental Abbreviated Course Title	Innovate in Rural Areas
Instructors	Robert Schwartz, Bonnie Bachman and Caprice Moore

#### In Workflow

1. **RECONOMI Chair**
2. **CCC Secretary**
3. **Social Sciences DSCC Chair**
4. **Pending CCC Agenda post**
5. **CCC Meeting Agenda**
6. **Campus Curricula Committee Chair**
7. **CAT entry**
8. **Registrar**

#### Approval Path

1. 09/18/18 1:20 pm  
Gregory Gelles (gelles):  
Approved for RECONOMI Chair
2. 09/18/18 1:41 pm  
Brittany Parnell (ershenb):  
Approved for CCC Secretary
3. 09/25/18 9:06 pm  
Barry Flachsbart (barryf):  
Approved for Social Sciences DSCC Chair
4. 09/26/18 9:01 am  
Brittany Parnell (ershenb):  
Approved for Pending CCC Agenda post
5. 09/26/18 9:03 am  
Brittany Parnell (ershenb):  
Rollback to

#### Experimental

##### Catalog

##### Description

This experiential learning course allows students to perform a local ecosystem map and/or further develop an innovation (including their own) in a rural Missouri community. Course instructors identify host communities to facilitate partnerships with local business leaders to enable student progress on commercialization of the innovation.

##### Prerequisites

One of Econ 1100, Econ 1200 or Eng Mgt 1210.

##### Field Trip

##### Statement

While there are no formal field trips, students complete their independent study off-campus in a rural community in Missouri.

Credit Hours      LEC: 1.0      LAB: 0      IND: 1 - 2      RSD: 0      Total: 2 - 3

Justification for  
new course:

The development of this course is funded by a grant from VentureWell to enable the development of student-driven innovations in rural settings. It will provide a unique opportunity for students interested in innovation to learn about rural economic ecosystems and to further develop their innovative concepts in a rural setting, meeting the need for economic development in these regions of the state. There are no similar courses offered at Missouri S&T, our sister campuses, or elsewhere. A course in Rural Entrepreneurship is offered at MU, but the proposed course is focused on aiding students in furthering their own technical innovations. The course will complement courses being developed for the Applied Innovation Minor offered through the Economics department.

Semester(s)  
previously taught  
None

Please note - the course should be co-listed in ENG MGT as a 3001 experimental course.

Co-Listed  
Courses:

Eng Mgt 3001 - **Course Not Found**

Course Reviewer  
Comments

**ershenb (09/26/18 9:03 am):** Rollback: .  
**ershenb (10/31/18 10:43 am):** Added "One of" and removed the following from the prerequisite statement: "Have completed at least one of the following: Permission of instructor. It is recommended, but not required, that students seeking to enroll in the course will have completed one of the courses in the Applied Innovation Minor and/or a communications course."

Pending CCC  
Agenda post for  
CCC Meeting  
Agenda

6. 10/08/18 2:20 pm  
Brittany Parnell  
(ershenb):  
Approved for  
Pending CCC  
Agenda post
7. 10/31/18 10:44  
am  
Brittany Parnell  
(ershenb):  
Approved for CCC  
Meeting Agenda
8. 10/31/18 10:54  
am  
Stephen Raper  
(sraper):  
Approved for  
Campus Curricula  
Committee Chair
9. 10/31/18 11:18  
am  
Marita Tibbetts  
(tibbettsmg):  
Approved for CAT  
entry

Key: 4565

[Preview Bridge](#)

## Course Change Request

### New Experimental Course Proposal

Viewing: **GEO ENG 5001.003 : Geological and Civil Engineering Issues in Southern Africa**

File: 4572.3

Changes proposed by: nanders

Requested Spring 2019

Effective Change

Date

Department

Geosciences and Geological and Petroleum Engineering

Discipline

Geological Engineering (GEO ENG)

Course Number 5001

Topic ID 003

Experimental

Title

Completed Workflow

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

Approval Path

1. 09/19/18 11:12 am  
David Borrok (borrokd):  
Approved for RGEOSENG Chair
2. 09/19/18 3:46 pm  
Brittany Parnell (ershenb):  
Approved for CCC Secretary



3. 10/08/18 12:36 pm  
Stephen Raper  
(sraper):  
Approved for  
Engineering DSCC  
Chair
4. 10/08/18 3:32 pm  
Brittany Parnell  
(ershenb):  
Approved for  
Pending CCC  
Agenda post
5. 10/31/18 10:46 am  
Brittany Parnell  
(ershenb):  
Approved for CCC  
Meeting Agenda
6. 10/31/18 10:54 am  
Stephen Raper  
(sraper):  
Approved for  
Campus Curricula  
Committee Chair
7. 10/31/18 11:10 am  
Marita Tibbetts  
(tibbettsmg):  
Approved for CAT  
entry

8. 10/31/18 3:40 pm  
 Kristy Giacomelli  
 (kristyg):  
 Approved for  
 Registrar

#### History

1. **Oct 31, 2018 by  
 nanders**

### Geological and Civil Engineering Issues in Southern Africa

Experimental          Engineering in Africa

Abbreviated

Course Title

Instructors          Neil Anderson and Eric Showalter

Experimental

Catalog

Description

Registrants will travel to southern Africa and will visit sites, people and institutions with a view to learning about geological and civil engineering issues in southern Africa. Emphasis will be placed issues related to mining, water resources and the environment in countries where water, in places, is in short supply.

Prerequisites

Permission of instructor.

Field Trip

Statement

A field trip to southern Africa is a course requirement.

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

Total: 3

Justification for

new course:

This is an experiential learning course.

Semester(s)

previously taught

Offered previously (twice) as GE 5001 (or equivalent).

Co-Listed

Courses:

CIV ENG 5001 - Special Topics

Course Reviewer

Comments

Key: 4572

## Course Change Request

### New Experimental Course Proposal

Date Submitted: 09/19/18 9:41 am

Viewing: **GEO ENG 6001.002 : Geological and Civil Engineering Practices in Southern Africa**

File: 4571

Last edit: 10/31/18 10:47 am

Changes proposed by: nanders

Requested	Spring 2019
Effective Change Date	
Department	Geosciences and Geological and Petroleum Engineering
Discipline	Geological Engineering (GEO ENG)
Course Number	6001
Topic ID	002
Experimental Title	Geological and Civil Engineering Practices in Southern Africa
Experimental Abbreviated Course Title	Eng Practices in Africa
Instructors	Neil Anderson and Eric Showalter

Experimental Catalog Description	Registrants will travel to southern Africa and will visit sites, people and institutions with a view to learning about geological and civil engineering practices in southern Africa. Emphasis will be placed on construction, mining and environmental practices in countries where the cost of labor is relatively low and the cost of equipment is relatively high.	<p>In Workflow</p> <ol style="list-style-type: none"> <li>1. <b>RGEOENG Chair</b></li> <li>2. <b>CCC Secretary</b></li> <li>3. <b>Engineering DSCC Chair</b></li> <li>4. <b>Pending CCC Agenda post</b></li> <li>5. <b>CCC Meeting Agenda</b></li> <li>6. <b>Campus Curricula Committee Chair</b></li> <li>7. <b>CAT entry</b></li> <li>8. <b>Registrar</b></li> </ol> <p>Approval Path</p> <ol style="list-style-type: none"> <li>1. 09/19/18 11:12 am David Borrok (borrokd): Approved for RGEOENG Chair</li> <li>2. 09/19/18 3:49 pm Brittany Parnell (ershenb): Approved for CCC Secretary</li> <li>3. 10/08/18 12:36 pm Stephen Raper (sraper): Approved for Engineering DSCC Chair</li> <li>4. 10/08/18 3:33 pm Brittany Parnell (ershenb): Approved for Pending CCC Agenda post</li> <li>5. 10/31/18 10:47 am Brittany Parnell (ershenb): Approved for CCC Meeting Agenda</li> <li>6. 10/31/18 10:54 am Stephen Raper (sraper): Approved for</li> </ol>
Prerequisites	Permission of Instructor.	
Field Trip Statement	A field trip to southern Africa is a course requirement.	
Credit Hours	LEC: 3      LAB: 0      IND: 0      RSD: 0      Total: 3	
Justification for new course:	This course is an experiential learning course.	
Semester(s) previously taught	Offered previously (twice) as GE 6000.	
Co-Listed Courses:	CIV ENG 6001 - Special Topics	
Course Reviewer Comments	<b>ershenb (10/31/18 10:47 am):</b> Added field trip statement.	

Key: 4571

Campus Curricula  
Committee Chair

7. 10/31/18 11:08  
am

Marita Tibbetts

(tibbettsmg):

Approved for CAT  
entry

[Preview Bridge](#)

## Course Change Request

### New Experimental Course Proposal

Date Submitted: 08/28/18 11:42 pm

Viewing: **GEOLOGY 5001.002 : Introduction to Geoscience Research**

### Methodologies

File: 4558

Last edit: 10/31/18 10:50 am

Changes proposed by: liukh

Requested Spring 2019

Effective Change

Date

Department Geosciences and Geological and Petroleum Engineering

Discipline Geology (GEOLOGY)

Course Number 5001

Topic ID 002

Experimental Title Introduction to Geoscience Research Methodologies

Experimental Abbreviated Course Title Intro Geosci Res Method

Instructors Andreas Eckert, John Hogan, Marek Locmelis

Experimental Catalog Description Students will receive hands-on training in fundamental aspects of geoscience research, ranging from (i) thorough literature review techniques to (ii) the use of sophisticated geoscience instrumentation, (iii) specialized software, (iv) database management, geoscience-specific proposal/manuscript preparation, and (vi) presentation of results at conferences.

Prerequisites Instructor approval.

Field Trip Statement

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

Justification for new course: Students need hands-on training and experience using sophisticated geoscience instrumentation and software, large data sets and publication databases, and numerical modeling tools. They also need experience in researching papers and presenting results to larger groups of peers.

Semester(s) previously taught This is a new course. This course is necessary to meet obligations of NSF grant 1801598

Co-Listed Courses:

Course Reviewer Comments

In Workflow

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

Approval Path

1. 08/29/18 7:59 am  
David Borrok (borrokd):  
Approved for RGEOSENG Chair
2. 08/29/18 12:28 pm  
Brittany Parnell (ershenb):  
Approved for CCC Secretary
3. 09/21/18 12:51 pm  
Katie Shannon (shannonk):  
Approved for Sciences DSCC Chair
4. 10/08/18 3:36 pm  
Brittany Parnell (ershenb):  
Approved for Pending CCC Agenda post
5. 10/31/18 10:51 am  
Brittany Parnell (ershenb):  
Approved for CCC Meeting Agenda
6. 10/31/18 10:54 am  
Stephen Raper (sraper):  
Approved for

Key: 4558

Campus Curricula  
Committee Chair

7. 10/31/18 11:04  
am

Marita Tibbetts

(tibbettsmg):

Approved for CAT  
entry

[Preview Bridge](#)

## Course Change Request

### New Experimental Course Proposal

Date Submitted: 10/09/18 10:39 am

Viewing: **GEOLOGY 6001.002 : Applied Petroleum System Analysis**

File: 4576

Last edit: 10/16/18 1:25 pm

Changes proposed by: johfb

Requested	Spring 2019
Effective Change Date	
Department	Geosciences and Geological and Petroleum Engineering
Discipline	Geology (GEOLOGY)
Course Number	6001
Topic ID	002
Experimental Title	Applied Petroleum System Analysis
Experimental Abbreviated Course Title	Applied Petro Sys Anlys
Instructors	Jonathan Obrist-Farner

Experimental Catalog Description	Prospective basin evaluation for geoscience graduate students. An industry dataset will be analyzed using geological, geophysical, and engineering methods and software. Students will analyze and interpret well logs, interpret 3D seismic datasets, integrate knowledge from literature, and construct a 3D geomodel for volumetric estimations.				
Prerequisites	Geo 5513, Geophys 4231, Pet Eng 3330; consent of instructor.				
Field Trip Statement					
Credit Hours	LEC: 3	LAB: 3	IND: 0	RSD: 0	Total: 6

Justification for new course: This course is imperative to prepare geoscience graduate students for the integrative and interdisciplinary workforce requirements in the oil industry. Part of the course will be to prepare the students for the AAPG Imperial Barrel Award World Competition, which will provide an opportunity for students to present their work in front of a panel of industry experts. This course will promote the university and its teaching excellence in petroleum geoscience.

Semester(s) previously taught  
Co-Listed Courses:

Course Reviewer Comments

- In Workflow
1. **RGEOSENG Chair**
  2. **CCC Secretary**
  3. **Sciences DSCC Chair**
  4. **Pending CCC Agenda post**
  5. **CCC Meeting Agenda**
  6. **Campus Curricula Committee Chair**
  7. **CAT entry**
  8. **Registrar**

- Approval Path
1. 10/09/18 10:41 am  
David Borrok (borrokd):  
Approved for RGEOSENG Chair
  2. 10/09/18 2:02 pm  
Brittany Parnell (ershenb):  
Approved for CCC Secretary
  3. 10/16/18 11:45 am  
Katie Shannon (shannonk):  
Approved for Sciences DSCC Chair
  4. 10/16/18 12:02 pm  
Brittany Parnell (ershenb):  
Approved for Pending CCC Agenda post
  5. 10/31/18 10:54 am  
Brittany Parnell (ershenb):  
Approved for CCC Meeting Agenda
  6. 10/31/18 10:54 am  
Stephen Raper (sraper):

Key: 4576



Approved for  
Campus Curricula  
Committee Chair

7. 10/31/18 11:02  
am

Marita Tibbetts  
(tibbettsmg):  
Approved for CAT  
entry

[Preview Bridge](#)

# Course Change Request

## New Experimental Course Proposal

Viewing: **GEOLOGY 6001.003 : Fossils, Deep Time and Extinctions**

File: 4575.5

Changes proposed by: ikuenobe

Requested Spring 2019

Effective Change

Date

Department

Geosciences and Geological and Petroleum  
Engineering

Discipline

Geology (GEOLOGY)

Course Number 6001

Topic ID 003

Experimental

Title

Completed  
Workflow

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

Approval Path

1. 10/01/18 8:06 am  
David Borrok  
(borrokd):  
Approved for  
RGEOSENG Chair
2. 10/01/18 9:29 am  
Brittany Parnell  
(ershenb):  
Approved for CCC  
Secretary
3. 10/16/18 11:57  
am

Katie Shannon

(shannonk):

Approved for  
Sciences DSCC  
Chair

4. 10/16/18 12:02  
pm

Brittany Parnell  
(ershenb):

Approved for  
Pending CCC  
Agenda post

5. 10/31/18 10:56  
am

Brittany Parnell  
(ershenb):

Approved for CCC  
Meeting Agenda

6. 10/31/18 11:04  
am

Stephen Raper  
(sraper):

Approved for  
Campus Curricula  
Committee Chair

7. 11/02/18 11:28  
am

Marita Tibbetts  
(tibbettsmg):

Approved for CAT  
entry

8. 11/02/18 11:29  
am

Kristy Giacomelli

(kristyg):

Approved for

Registrar

### History

1. **Nov 2, 2018 by Francisca Oboh-Ikuenobe (ikuenobe)**

### Fossils, Deep Time and Extinctions

Experimental      Fossils and Extinctions

Abbreviated

Course Title

Instructors      Francisca Oboh-Ikuenobe

Experimental

Catalog

Description

Evolutionary development and stratigraphic distribution of macrofossil and microfossil groups, interpretation of geological (deep) time, and discussion of driving forces for major extinction events. Module includes practical exercises. Emphasis on communication skills and team work. Major focus on industrial applications.

Prerequisites

Field Trip

Statement

Optional field trip

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

Total: 3

Justification for

new course:

Understanding how macrofossils and microfossils evolved through geological (deep) time is critical for dating and correlation in exploration of fossil fuels. An advanced course such as the proposed course will give students the critical skills they need for employment in such industries. An additional benefit is the understanding of the drivers behind the major extinction events in the geologic past and how they enable more precise biostratigraphic dating. This course will be marketed to Earth Science teachers (for MST course credit) and industry personnel, and will be taught in distance learning and classroom formats.

Semester(s)

previously taught

N/A

Co-Listed

Courses:

Course Reviewer

Comments

**ershenb (10/31/18 10:55 am):** Removed "consent of instructor" from prerequisite.

Key: 4575