



**Minutes of the Campus Curricula Committee Meeting**

**May 10, 2016**

**12:30 p.m., Room 106B Parker Hall**

**Attendees:** Kylon Buckner, Barry Flachsbart, Petra DeWitt, Kristy Giacomelli, Gearoid MacSithigh, Ilene Morgan, Stephen Raper, and Thomas Schuman.

The following curriculum forms were discussed and approved:

**Course Change Forms:**

File #4056.6	File #4057.4
File #2077.1	File #1507.1
File #1308.1	File #25.1
File #563.1	File #1009.1
File #1949.1	File #4308
File #1211.1	File #214.1
File #381.1	File #2491.2
File #1920.1	File #1919.1

File #1596.1 was tabled. File #4315 was shredded.

**Degree Change Forms:**

File #224.1	File #7.11
File #17.4	File #44.23
File #157.12	File #242
File #84.4	File #85.8
File #138.6	File #102.13
File #115.17	

**Experimental Course Forms:**

File #4297	File #4312
File #4313	

The meeting adjourned at 1:20 p.m.

  
Ilene H. Morgan, Chair  
Missouri S&T Campus Curricula Committee

# Course Inventory Change Request

Date Submitted: 03/17/16 10:37 am

Viewing: **BIO SCI 4666 : Nanobiotechnology**

File: 4056.6

Last approved: 07/07/14 3:48 am

Last edit: 05/10/16 1:36 pm

Changes proposed by: huangy

Requested **Spring 2017-08/01/2014**

Effective Change  
Date

Department Biological Sciences

Discipline Biological Sciences (BIO SCI)

Course Number 4666

Title Nanobiotechnology

Abbreviated Nanobiotechnology  
Course Title

Catalog

Description

Nanotechnology has emerged to change human economy and society in many aspects. Applications of nanotechnology in life science is termed nanobiotechnology.

This course describes recent development of nanobiotechnology in **basic fundamental** biological research as well as biomedical **applications. studies.**

Prerequisites

**Bio Sci** ~~BIO-SCI-2213~~ or **Bio Sci** ~~BIO-SCI-2223~~.

Field Trip

Statement

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

Required for  
Majors No

Elective for  
Majors No

Justification for  
change:

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. Ishelton

11. Peoplesoft

Approval Path

1. 03/17/16 10:41  
am

huangy:

Approved for  
RBIOLSCI Chair

2. 03/21/16 7:00 am  
Kaylon Buckner

(kleb6b):

Approved for CCC  
Secretary

3. 04/19/16 12:45  
pm

imorgan:

Approved for  
Sciences DSCC  
Chair

4. 04/21/16 9:02 am  
Kaylon Buckner

The credit hours is increased from 2 to 3, as more materials will be covered.

A minor adjustment in Catalog Description: change from "...fundamental biological research as well as biomedical research." to "basic biological research as well as biomedical applications".

Semesters  
previously  
offered as an  
experimental  
course

Co-Listed  
Courses:

Course Reviewer  
Comments

(kleb6b):  
Approved for  
Pending CCC  
Agenda post

#### History

1. Jul 7, 2014 by  
huangy

Key: 4056  
[Preview Bridge](#)

# Course Inventory Change Request

Date Submitted: 03/17/16 10:39 am

Viewing: **BIO SCI 6666 : Advanced Nanotechnology in Biomedicine**

File: 4057.4

Last approved: 07/07/14 3:48 am

Last edit: 05/10/16 1:37 pm

Changes proposed by: huangy

Requested **Spring 2017** ~~08/01/2014~~

Effective Change

Date

Department Biological Sciences

Discipline Biological Sciences (BIO SCI)

Course Number 6666

Title Advanced Nanotechnology in Biomedicine

Abbreviated Advanced Nanobiotech

Course Title

Catalog

Description

Applications of nanotechnology in life science is termed nanobiotechnology. This course describes recent development of nanotechnology in basic biological research as well as biomedical applications. In addition to attending regular lectures, graduate students will be assigned to an independent research project and present the information in the class.

Prerequisites

**Bio Sci 2213** ~~Two biomedical science related courses at college level~~ and **Bio Sci 2223** and graduate standing.

Field Trip

Statement

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

Required for No

Majors

Elective for Yes

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. Ishelton

11. Peoplesoft

Approval Path

1. 03/17/16 10:41 am

huangy:

Approved for

RBIOLSCI Chair

2. 03/21/16 7:01 am

Kaylon Buckner

(kleb6b):

Approved for CCC

Secretary

3. 04/19/16 12:44

pm

imorgan:

Approved for

Sciences DSCC

Chair

4. 04/21/16 9:03 am

Kaylon Buckner

## Majors

### Justification for change:

The total credit hour is increased from 2 to 3, as more materials will be covered.

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer **imorgan (04/19/16 12:43 pm):** Changed effective date.  
Comments

(kleb6b):  
Approved for  
Pending CCC  
Agenda post

### History

1. Jul 7, 2014 by  
huangy

Key: 4057  
[Preview Bridge](#)

# Course Inventory Change Request

Date Submitted: 02/11/16 5:15 pm

Viewing: **BUS 2910 : Business Law**

File: 2077.1

Last edit: 05/10/16 1:37 pm

Changes proposed by: barryf

Programs  
referencing this  
course

[BUS&MS-BS: Business and Mgmt Systems BS](#)  
[MGMT-MI: Management Minor](#)  
[PRE LAW-MI: Pre Law Minor](#)  
[PRE MBA-MI: Pre MBA Minor](#)

Requested  
Effective Change  
Date

**Fall 2016** ~~08/01/2014~~

Department Business and Information Technology

Discipline Business (BUS)

Course Number 2910

Title Business Law

Abbreviated Business Law

Course Title

Catalog

Description

This course is an introduction to the nature and meaning of law and the legal environment of business. Topics include the legal process, sources of law, and institutions.

Prerequisites

~~Bus-1110 and Econ-1100.~~

Field Trip

Statement

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

Required for  
Majors No

Elective for  
Majors No

## 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. Ishelton

11. Peoplesoft

## Approval Path

1. 02/26/16 12:58  
am

siauk: Approved  
for RBUSADMN  
Chair

2. 02/26/16 7:34 am

Kaylon Buckner  
(kleb6b):  
Approved for CCC  
Secretary

3. 03/24/16 8:48 am

barryf: Approved  
for Social  
Sciences DSCC  
Chair

4. 04/18/16 9:02 am

Kaylon Buckner

Justification for  
change:

Instructor does not use material from the prerequisites.

Semesters  
previously  
offered as an  
experimental  
course

Co-Listed  
Courses:

(kleb6b):  
Approved for  
Pending CCC  
Agenda post

Course Reviewer  
Comments

Key: 2077  
[Preview Bridge](#)

## Course Inventory Change Request

Date Submitted: 03/22/16 2:14 pm

Viewing: **CER ENG 5220 : Advanced Mechanical Properties of Ceramics**

File: 1507.1

Last edit: 04/18/16 9:02 am

Changes proposed by: eddings

Requested	Fall <b>2016</b> <del>2014</del>
Effective Change Date	
Department	Materials Science & Engineering
Discipline	Ceramic Engineering (CER ENG)
Course Number	5220
Title	Advanced Mechanical Properties of Ceramics
Abbreviated Course Title	Adv Mech Prop Of Ceramics

### Catalog

#### Description

**An advanced course** ~~Particular emphasis is placed on how ceramic materials are altered to treat meet the theory and testing practice related to design based on the mechanical properties needs of ceramics. a specific application.~~ The course also includes a laboratory consisting ~~application and design of experiments~~ ceramics for the **characterization of the mechanical properties of ceramics.** ~~electrical industry is discussed. Particular emphasis is placed on how ceramic materials are altered to meet the needs of a specific application. The laboratory acquaints the student with measurements which are used for electrical property evaluation.~~

#### Prerequisites

**Graduate standing.** ~~Cer Eng 4210.~~

#### Field Trip

#### Statement

Credit Hours	LEC: 3	LAB: 1	IND: 0	RSD: 0	Total: 4
Required for Majors	No				

### 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. 03/30/16 10:01 am  
mjokeefe:  
Approved for  
RMATSENG Chair
2. 04/04/16 7:51 am  
Kaylon Buckner (kleb6b):  
Approved for CCC Secretary
3. 04/15/16 4:03 pm  
srafer: Approved for Engineering DSCC Chair



Elective for  
Majors

Yes ~~No~~

Justification for  
change:

Course description should be the same as Cer Eng 4220 (except advanced version)  
and the catalog shows the same description for this course as Cer Eng 5217.

Semesters  
previously  
offered as an  
experimental  
course

Co-Listed  
Courses:

Course Reviewer  
Comments

Key: 1507

[Preview Bridge](#)

# Course Inventory Change Request

A deleted record cannot be edited

## Course Deactivation Proposal

Date Submitted: 03/22/16 2:04 pm

Viewing: **CER ENG 5270 : Advanced Thermal Properties of Ceramics**

File: 1308.1

Last edit: 04/18/16 9:03 am

Changes proposed by: eddings

Requested	Fall <b>2016</b> <del>2014</del>
Effective Change Date	
Department	Materials Science & Engineering
Discipline	Ceramic Engineering (CER ENG)
Course Number	5270
Title	Advanced Thermal Properties of Ceramics
Abbreviated Course Title	Adv Thermal Prop of Cer

### Catalog

#### Description

This course will introduce senior undergraduate students to a broad array of topics in biomaterials, including ceramic, metallic, and polymeric biomaterials for in vivo use, basic concepts related to cells and tissues, host reactions to biomaterials, biomaterials-tissue compatibility, and degradation of biomaterials.

#### Prerequisites

Senior undergraduate standing.

#### Field Trip

#### Statement

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

### 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. 03/30/16 10:02 am  
mjokeefe:  
Approved for  
RMATSENG Chair
2. 04/04/16 7:51 am  
Kaylon Buckner  
(kleb6b):  
Approved for CCC  
Secretary
3. 04/15/16 4:03 pm  
sraaper: Approved  
for Engineering  
DSCC Chair

Justification for  
change:

course no longer taught

Semesters  
previously  
offered as an  
experimental  
course

Co-Listed  
Courses:

BIO SCI 5210 - Biomaterials I  
MET ENG 5210 - Biomaterials I  
CHEM ENG 5200 - Biomaterials I

Course Reviewer  
Comments

Key: 1308  
[Preview Bridge](#)

# Course Inventory Change Request

Date Submitted: 03/29/16 2:46 pm

Viewing: **ENG MGT 5330 : Advanced Human Factors**

File: 25.1

Last edit: 04/18/16 9:06 am

Changes proposed by: cornss

Catalog Pages referencing this course	<u>Engineering Management</u>				
Requested Effective Change Date	Fall <b>2016</b> <del>2014</del>				
Department	Engineering Management and Systems Engineering				
Discipline	Engineering Management (ENG MGT)				
Course Number	5330				
Title	Advanced Human Factors				
Abbreviated Course Title	Advanced Human Factors				
Catalog Description	<p>An in-depth review of the foundations of human factors, focusing on the interaction of people with various forms of technology in a variety of environments. Topics include research and evaluation methods, displays (e.g., visual, auditory), attention and information processing, decision making, motor skills, anthropometry, and <b>biomechanics</b>. <del>biomechanics, with a strong focus on application (e.g., environmental design, human error, safety).</del></p>				
Prerequisites					
Field Trip Statement					
Credit Hours	LEC: 3	LAB: 0	IND: 0	RSD: 0	Total: 3
Required for Majors	No				

## In Workflow

1. **RENGMNGT 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. 03/29/16 3:53 pm  
Suzanna Long (longsuz):  
Approved for RENG MNGT Chair
2. 04/04/16 7:52 am  
Kaylon Buckner (kleb6b):  
Approved for CCC Secretary
3. 04/15/16 4:03 pm  
sraaper: Approved for Engineering DSCC Chair

Elective for Majors	No
Justification for change:	Course is mirrored in the Psychology Department
Semesters previously offered as an experimental course	
Co-Listed Courses:	<b>PSYCH 5710-- Advanced Human Factors</b>
Course Reviewer Comments	

Key: 25

[Preview Bridge](#)

# Course Inventory Change Request

Date Submitted: 02/11/16 5:15 pm

Viewing: **ERP 5240 : Enterprise ~~Portal~~ and Mobile Application Development**

File: 563.1

Last edit: 05/10/16 1:38 pm

Changes proposed by: barryf

Catalog Pages  
referencing this  
course

[Information Science and Technology](#)

Programs  
referencing this  
course

[MOBLB&T-MI: Mobile Bus & Tech Minor](#)

Requested  
Effective Change  
Date

**Fall 2016** ~~08/01/2014~~

Department

Business and Information Technology

Discipline

Enterprise Resource Planning (ERP)

Course Number

5240

Title

Enterprise ~~Portal~~ and Mobile Application Development

Abbreviated

**Enterprise & Mobile Apps**

Course Title

~~Portal and Mobile App Dev~~

Catalog  
Description

This course provides conceptual foundation and hands on experience in web based applications development deployed through an Enterprise ~~Portal~~ and Mobile platform. SAP ~~Netweaver~~ Enterprise **development Portal and** tools **will be used to build these apps**, including **SAP Design Studio, HANA Cloud Platform, and SAP Mobile Platform**. ~~Visual Composer, Web Dynpro, and Sybase Unwired Platform will be used for apps.~~

Prerequisites

Programming knowledge and either ERP 2110 or preceded or accompanied by ERP 5110.

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. Ishelton

11. Peoplesoft

Approval Path

1. 02/26/16 12:59  
am

siauk: Approved  
for RBUSADMN  
Chair

2. 02/26/16 7:34 am  
Kaylon Buckner  
(kleb6b):

Approved for CCC  
Secretary

3. 03/24/16 8:48 am  
barryf: Approved  
for Social

Sciences DSCC  
Chair

4. 04/18/16 9:08 am  
Kaylon Buckner

Field Trip  
Statement

(kleb6b):  
Approved for  
Pending CCC  
Agenda post

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

Required for  
Majors      No

Elective for  
Majors      No

Justification for  
change:      Updating course to de-emphasize portal aspect

Semesters  
previously  
offered as an  
experimental  
course

Co-Listed  
Courses:

Course Reviewer  
Comments

Key: 563  
[Preview Bridge](#)

# Course Inventory Change Request

Date Submitted: 04/05/16 2:09 pm

Viewing: **FRENCH 1180 : Intermediate French**~~**French Readings And Composition**~~

File: 1009.1

Last edit: 04/18/16 9:08 am

Changes proposed by: denises

Programs  
referencing this  
course

MUL&DIV-MI: Multiculture & Diversity Minor

Other Courses  
referencing this  
course

In The Prerequisites:  
FRENCH 2170 : Masterpieces Of French Literature

Requested  
Effective Change  
Date

Fall **2016** ~~2014~~

Department

Arts, Languages, & Philosophy

Discipline

French (FRENCH)

Course Number

1180

Title

**Intermediate French**~~**French Readings And Composition**~~

Abbreviated

**Intermediate French**~~**Fr**~~

Course Title

**Readings & Compositi**~~**n**~~

Catalog  
Description

**Focuses on intermediate reading, writing, speaking, & listening skills in French.**  
~~**Readings in French narrative literature and composition.**~~

Prerequisites

French 1102.

Field Trip  
Statement

Credit Hours

LEC: 4      LAB: 0      IND: 0      RSD: 0      Total: 4

## In Workflow

1. **RPHILOSO 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. Ishelton
11. Peoplesoft

## Approval Path

1. 04/06/16 9:04 pm audram:  
Approved for RPHILOSO Chair
2. 04/07/16 8:07 am Kylon Buckner (kleb6b):  
Approved for CCC Secretary
3. 04/07/16 9:55 am dewittp:  
Approved for Arts & Humanities DSCC Chair



Required for  
Majors

No

Elective for  
Majors

No

Justification for  
change:

Course title and description changes more accurately reflect course content.  
Description & title were outdated.

Semesters  
previously  
offered as an  
experimental  
course

Co-Listed  
Courses:

Course Reviewer  
Comments

Key: 1009  
[Preview Bridge](#)

# Course Inventory Change Request

Date Submitted: 04/05/16 2:11 pm

Viewing: **FRENCH 4311 : Advanced French Conversation**

File: 1949.4

Last approved: 06/22/15 3:46 am

Last edit: 04/18/16 9:09 am

Changes proposed by: denises

Programs MUL&DIV-MI: Multiculture & Diversity Minor  
referencing this  
course

Requested **Fall 2016 2015**  
Effective Change  
Date  
Department Arts, Languages, & Philosophy  
Discipline French (FRENCH)  
Course Number 4311  
Title Advanced French Conversation  
Abbreviated Adv French Conversation  
Course Title

Catalog  
Description  
Advanced conversation and oral practice.

Prerequisites  
French 2170.

Field Trip  
Statement

Credit Hours LEC: **3-2** LAB: 0 IND: 0 RSD: 0 Total: **3-2**  
Required for  
Majors No  
Elective for  
Majors No

Justification for

## In Workflow

1. RPHILOSO 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. Ishelton
11. Peoplesoft

## Approval Path

1. 04/06/16 9:05 pm audram:  
Approved for RPHILOSO Chair
2. 04/07/16 8:08 am Kaylon Buckner (kleb6b):  
Approved for CCC Secretary
3. 04/07/16 9:56 am dewitt:  
Approved for Arts & Humanities DSCC Chair

## History

1. Jun 22, 2015 by

change:

denises (1949.1)

Course meeting times & amount of homework is worth 3 credits, not 2.

Semesters

previously

offered as an

experimental

course

Co-Listed

Courses:

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Course Reviewer

Comments

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Key: 1949

[Preview Bridge](#)

# Course Inventory Change Request

## New Course Proposal

Date Submitted: 04/05/16 1:56 pm

Viewing: **FRENCH 4330 : Business French**

File: 4308

Last edit: 04/07/16 7:56 pm

Changes proposed by: denises

Requested Fall 2016

Effective Change  
Date

Department Arts, Languages, & Philosophy

Discipline French (FRENCH)

Course Number 4330

Title Business French

Abbreviated Business French  
Course Title

Catalog

Description

This course addresses practical reading, speaking, listening, and writing strategies for conducting business in French-speaking countries. Students will also improve their knowledge of the contemporary Francophone world. Readings, lectures, and discussions are in French.

Prerequisites

French 2170.

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  
new course: Course has been offered twice and should be included in the catalog.

In Workflow

1. RPHILOSO 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. Ishelton

11. Peoplesoft

Approval Path

1. 04/06/16 9:05 pm  
audram:

Approved for  
RPHILOSO Chair

2. 04/07/16 8:08 am  
Kaylon Buckner  
(kleb6b):

Approved for CCC  
Secretary

3. 04/07/16 7:56 pm  
dewittp:

Approved for Arts  
& Humanities  
DSCC Chair

Semesters FS 2008, SP 2015  
previously  
offered as an  
experimental  
course

Co-Listed  
Courses:

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Course Reviewer **dewittp (04/07/16 7:55 pm):** Corrected grammar  
Comments **dewittp (04/07/16 7:56 pm):** Corrected to Fall 16

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Key: 4308  
[Preview Bridge](#)

# Course Inventory Change Request

Date Submitted: 03/24/16 2:27 pm

Viewing: **GEOLOGY 3631 : Systematic Paleontology**

File: 1211.1

Last edit: 04/21/16 9:03 am

Changes proposed by: ikuenobe

Programs referencing this course	<u>GL&amp;GPH-BS: Geology and Geophysics BS</u>
Other Courses referencing this course	<u>In The Prerequisites:</u> <u>GEOLOGY 5741 : Micropaleontology</u> <u>GEOLOGY 6611 : Advanced Palynology</u>
Requested Effective Change Date	<b>Fall 2016</b> <del>08/01/2014</del>
Department	Geosciences and Geological and Petroleum Engineering
Discipline	Geology (GEOLOGY)
Course Number	3631
Title	Systematic Paleontology
Abbreviated Course Title	Systematic Paleontology
Catalog Description	Introduction to <b>paleontological principles, biostratigraphy, paleoenvironments, and</b> the study of fossil <b>invertebrates, microfossils, plants and palynology.</b> <del>invertebrates.</del> Emphasis of the course is on fossil morphology, classification, and environmental relationships.
Prerequisites	<b>Geology 1110 or Geology 1120 or Bio Sci 1113.</b> <del>Geology 1120.</del>
Field Trip Statement	
Credit Hours	LEC: 2      LAB: 1      IND: 0      RSD: 0      Total: 3

## In Workflow

1. **RGEOENG 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. 03/24/16 2:28 pm  
ikuenobe:  
Approved for  
RGEOENG Chair
2. 03/24/16 3:05 pm  
Kaylon Buckner  
(kleb6b):  
Approved for CCC  
Secretary
3. 04/19/16 12:46  
pm  
imorgan:  
Approved for  
Sciences DSCC  
Chair

Required for Majors	No
Elective for Majors	No
Justification for change:	Description better reflects course content. Prerequisite change accommodates students with physical geology or introductory biology backgrounds.
Semesters previously offered as an experimental course	
Co-Listed Courses:	
Course Reviewer Comments	<b>ikuenobe (03/24/16 2:24 pm):</b> Rollback: Bio Sci 1110 should be Bio Sci 1113 <b>imorgan (04/19/16 12:46 pm):</b> Minor correction.

Key: 1211  
[Preview Bridge](#)

## Course Inventory Change Request

Date Submitted: 03/24/16 1:55 pm

Viewing: **GEOLOGY 4711 : Paleoclimatology and Paleoecology**

File: 214.1

Last edit: 04/21/16 9:04 am

Changes proposed by: ikuenobe

Programs referencing this course	<u>GL&amp;GPH-BS: Geology and Geophysics BS</u>				
Requested Effective Change Date	<b>Fall 2016</b> <del>08/01/2014</del>				
Department	Geosciences and Geological and Petroleum Engineering				
Discipline	Geology (GEOLOGY)				
Course Number	4711				
Title	Paleoclimatology and Paleoecology				
Abbreviated Course Title	Paleoclimatology				
Catalog Description	This course will introduce students to the elements of climate, evidence of climate changes, proxy measurements and paleoclimate models. There is a review of Holocene climates and Archean to Pleistocene paleoclimates.				
Prerequisites	<b>Geology 1110 or Geology 1120 or Geo Eng 1150.</b> <del>Geology 1120.</del>				
Field Trip Statement					
Credit Hours	LEC: 3	LAB: 0	IND: 0	RSD: 0	Total: 3
Required for Majors	No				
Elective for	No				

### In Workflow

1. **RGEOENG 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. 03/24/16 2:24 pm  
ikuenobe:  
Approved for  
RGEOENG Chair
2. 03/24/16 3:05 pm  
Kaylon Buckner  
(kleb6b):  
Approved for CCC  
Secretary
3. 04/19/16 12:47 pm  
imorgan:  
Approved for  
Sciences DSCC  
Chair



## Majors

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Justification for  
change:

Expanding prerequisite requirement to accommodate students who have taken  
Physical Geology.

Semesters  
previously  
offered as an  
experimental  
course

Co-Listed  
Courses:

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Course Reviewer  
Comments

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Key: 214

[Preview Bridge](#)

## Course Inventory Change Request

Date Submitted: 03/24/16 2:01 pm

Viewing: **GEOLOGY 6711 : Advanced Paleoclimatology and Paleoecology**

File: 381.1

Last edit: 05/12/16 7:09 am

Changes proposed by: ikuenobe

Requested	<b>Fall 2016</b> <del>08/01/2014</del>
Effective Change Date	
Department	Geosciences and Geological and Petroleum Engineering
Discipline	Geology (GEOLOGY)
Course Number	6711
Title	Advanced Paleoclimatology and Paleoecology
Abbreviated Course Title	Adv Paleoclimatology

Catalog Description  
Advanced study of paleoclimatic and paleoecologic processes since the Archean, and the interpretation of Holocene climate changes, including human impacts. Extensive presentations and discussions of current ideas and techniques in paleoclimatic studies.

Prerequisites  
**Geology 3620.**~~Geology 3620 and 3631.~~

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

### In Workflow

1. **RGEOENG 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. 03/24/16 2:25 pm  
ikuenobe:  
Approved for  
RGEOENG Chair
2. 03/24/16 3:05 pm  
Kaylon Buckner  
(kleb6b):  
Approved for CCC  
Secretary
3. 04/19/16 12:47 pm  
imorgan:  
Approved for  
Sciences DSCC  
Chair
4. 04/21/16 9:06 am  
Kaylon Buckner  
(kleb6b):

change:

Amended prerequisite to remove Geology 3621 requirement.

Semesters

previously

offered as an

experimental

course

Co-Listed

Courses:

Approved for

Pending CCC

Agenda post

Course Reviewer

Comments

Key: 381

[Preview Bridge](#)

## Course Inventory Change Request

Date Submitted: 03/25/16 12:29 pm

Viewing: **HISTORY 4097 : Senior Project**

File: 2491.2

Last approved: 10/19/15 3:34 am

Last edit: 04/18/16 9:12 am

Changes proposed by: dewittp

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

Effective Change

Date

Department History and Political Science

Discipline History (HISTORY)

Course Number 4097

Title Senior Project

Abbreviated Senior Project

Course Title

Catalog

Description

History majors **interested in graduate school or professional school, such as law school, should will** complete an extended research **project, or thesis, project** under the supervision of a department faculty member.

Prerequisites

History 2790 and senior **standing. history majors only.**

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:

After extensive discussion about how to make the senior thesis/project more

### In Workflow

1. RHISTORY 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. Ishelton
11. Peoplesoft

### Approval Path

1. 03/26/16 4:45 pm  
sfogg: Approved for RHISTORY Chair
2. 04/04/16 7:52 am  
Kaylon Buckner (kleb6b):  
Approved for CCC Secretary
3. 04/04/16 9:19 am  
dewittp:  
Approved for Arts & Humanities DSCC Chair

### History

1. Oct 19, 2015 by

dewittp (2491.1)

effective and the importance of meeting the experiential learning requirement, the history department decided to eliminate the senior thesis/project as a requirement for a degree in history, but keep it as an optional, one-semester course for students interested in graduate school or needing an acceptable experiential learning experience. History students seeking teacher certification or taking an internship meet the experiential learning requirement and do not require this additional experience. Removing the senior thesis/project requirement will allow them to take an additional content course.

Semesters  
previously  
offered as an  
experimental  
course

Co-Listed  
Courses:

Course Reviewer  
Comments

Key: 2491  
[Preview Bridge](#)

# Course Inventory Change Request

Date Submitted: 03/17/16 12:26 pm

Viewing: **PHYSICS 2111 : General Physics II**

File: 1920.1

Last edit: 04/21/16 9:06 am

Changes proposed by: waddill

Programs  
referencing this  
course

[AP MATH-BS: Applied Mathematics BS](#)  
[BIO SC-BA: Biological Sciences BA](#)  
[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](#)

Other Courses  
referencing this  
course

In The Catalog Description:  
[PHYSICS 2119 : General Physics Laboratory](#)  
 In The Prerequisites:  
[CHEM 3420 : Introduction To Quantum Chemistry](#)  
[CHEM 5420 : Elemental Quantum Chemistry](#)  
[CHEM 5710 : Environmental Monitoring](#)  
[PHYSICS 2119 : General Physics Laboratory](#)  
[PHYSICS 5413 : Chaos, Fractals, and Nonlinear Dynamics](#)

Requested  
Effective Change  
Date

**Fall 2016** ~~08/01/2014~~

Department

Physics

Discipline

Physics (PHYSICS)

Course Number

2111

Title

General Physics II

Abbreviated  
Course Title

General Physics II

Catalog

Description

An introduction to the fundamental ideas of physics including electricity, magnetism,

## 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. 03/17/16 12:27 pm  
waddill: Approved for RPHYSICS Chair
2. 03/21/16 7:01 am  
Kaylon Buckner (kleb6b):  
Approved for CCC Secretary
3. 04/19/16 12:48 pm  
imorgan:  
Approved for Sciences DSCC Chair

and light.

Prerequisites      Preceded by Physics 1111 ~~and preceded~~ or **Physics 1135 and preceded** ~~accompanied~~  
~~by Math 1221~~ or **accompanied by Math 1221 or** Math 1215.

Field Trip  
Statement

Credit Hours      LEC: 4      LAB: 0      IND: 0      RSD: 0      Total: 4

Required for  
Majors      No

Elective for  
Majors      No

Justification for  
change:      In the past Physics has offered two calculus-based introductory Physics sequences -  
Physics 1111/2111 and Physics 1135/2135. The proposed change allows the first  
semester of either sequence to serve as the prerequisite for 2111.

Semesters  
previously  
offered as an  
experimental  
course

Co-Listed  
Courses:

Course Reviewer  
Comments

Key: 1920  
[Preview Bridge](#)

# Course Inventory Change Request

Date Submitted: 03/17/16 12:22 pm

Viewing: **PHYSICS 2135 : Engineering Physics II**

File: 1919.1

Last edit: 04/21/16 9:07 am

Changes proposed by: waddill

Programs  
referencing this  
course

[AE ENG-BS: Aerospace Engineering BS](#)  
[AP MATH-BS: Applied Mathematics BS](#)  
[ARC ENG-BS: Architectural Engineering BS](#)  
[BIO SC-BS: Biological Sciences BS](#)  
[CH ENG-BS: Chemical Engineering BS](#)  
[CHEM-BS: Chemistry BS](#)  
[CMP SC-BS: Computer Science BS](#)  
[CP ENG-BS: Computer Engineering BS](#)  
[CR ENG-BS: Ceramic Engineering BS](#)  
[CV ENG-BS: Civil Engineering BS](#)  
[EL ENG-BS: Electrical Engineering BS](#)  
[ENG MG-BS: Engineering Management BS](#)  
[EV ENG-BS: Environmental Engineering BS](#)  
[GE ENG-BS: Geological Engineering BS](#)  
[GL&GPH-BS: Geology and Geophysics BS](#)  
[MC ENG-BS: Mechanical Engineering BS](#)  
[MI ENG-BS: Mining Engineering BS](#)  
[MT ENG-BS: Metallurgical Engineering BS](#)  
[NU ENG-BS: Nuclear Engineering BS](#)  
[PE ENG-BS: Petroleum Engineering BS](#)  
[PHYSIC-BS: Physics BS](#)

Other Courses  
referencing this  
course

In The Prerequisites:  
[ARCH ENG 3803 : Building Electrical Systems](#)  
[CER ENG 6220 : Optical Properties Of Materials](#)  
[CHEM 3420 : Introduction To Quantum Chemistry](#)  
[CHEM 5420 : Elemental Quantum Chemistry](#)  
[CHEM ENG 5340 : Principles Of Environmental Monitoring](#)  
[CIV ENG 3842 : Fundamentals of Building Systems](#)  
[ELEC ENG 2200 : Introduction to Electronic Devices](#)  
[ELEC ENG 2201 : Electronic Devices Laboratory](#)  
[ELEC ENG 2800 : Electrical Circuits](#)  
[ELEC ENG 3500 : Electromechanics](#)  
[ELEC ENG 3600 : Electromagnetics](#)

## 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. 03/17/16 12:27 pm  
waddill: Approved for RPHYSICS Chair
2. 03/21/16 7:01 am  
Kaylon Buckner (kleb6b): Approved for CCC Secretary
3. 04/19/16 12:48 pm  
imorgan: Approved for Sciences DSCC Chair



[ELEC ENG 5200 : Classical Optics](#)  
[ELEC ENG 5510 : Electric-Drive Vehicles](#)  
[ELEC ENG 5670 : Nondestructive Testing](#)  
[GEO ENG 5556 : Renewable Energy Systems](#)  
[GEOPHYS 2211 : Geophysical Imaging](#)  
[MECH ENG 3411 : Modeling and Analysis of Dynamic Systems](#)  
[MECH ENG 4840 : Mechanical Instrumentation](#)  
[MET ENG 5510 : Nondestructive Testing](#)  
[MET ENG 5627 : Electrical Systems and Controls for Materials](#)  
[MIN ENG 4823 : Rock Mechanics](#)  
[NUC ENG 3103 : Interactions Of Radiation With Matter](#)  
[PET ENG 3330 : Well Logging](#)  
[PHYSICS 2305 : Introduction To Modern Physics](#)  
[PHYSICS 2311 : Modern Physics I](#)  
[PHYSICS 2401 : Introduction To Theoretical Physics](#)  
[PHYSICS 4503 : Classical Optics](#)  
[PHYSICS 5413 : Chaos, Fractals, and Nonlinear Dynamics](#)

Requested **Fall 2016** ~~08/01/2014~~  
 Effective Change  
 Date

Department Physics  
 Discipline Physics (PHYSICS)  
 Course Number 2135  
 Title Engineering Physics II  
 Abbreviated Engineering Physics II  
 Course Title

Catalog Description An introduction to electricity, magnetism, and light, with emphasis on topics needed by engineering students.

Prerequisites Physics **1135** ~~1135, Math 1221~~ or **Physics 1111, Math 1221** or Math 1215.

Field Trip  
 Statement

Credit Hours LEC: 1.5 LAB: 1 IND: 0 RSD: 1.5 Total: 4

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

Elective for  
 Majors No

Justification for change: Physics had two introductory Physics course sequences for calculus-based physics. They were Physics 1111 and Physics 2111 or Physics 1135 and Physics 2135. We

recently stopped offering the 1111/2111 sequence due to enrollment issues. The proposed change would allow students who began the 1111/2111 sequence to finish with 2135.

Semesters  
previously  
offered as an  
experimental  
course

Co-Listed  
Courses:

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Course Reviewer  
Comments

Key: 1919  
[Preview Bridge](#)

## Program Change Request

A deleted record cannot be edited

### Program Deactivation Proposal

Date Submitted: 04/06/16 3:22 pm

Viewing: **AP MATH-MI : Applied Math Minor**

File: 224.1

Last edit: 04/21/16 9:08 am

Changes proposed by: imorgan

Start Term	Fall 2016
Program Code	AP MATH-MI
Department	Mathematics & Statistics
Title	Applied Math Minor

### In Workflow

1. **RMATHEMA 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

### Program Requirements and Description

Justification for request

There is not actually an Applied Math minor--I believe it was created when I erroneously approved a minor form labeled Applied Mathematics instead of Mathematics.

Supporting Documents

Course Reviewer Comments  
**kleb6b (04/21/16 9:08 am):** update effective term

### Approval Path

1. 04/06/16 4:49 pm  
sclark: Approved for RMATHEMA Chair
2. 04/07/16 8:07 am  
Kaylon Buckner (kleb6b): Approved for CCC Secretary
3. 04/19/16 12:42 pm  
imorgan: Approved for Sciences DSCC Chair
4. 04/21/16 8:57 am  
Kaylon Buckner (kleb6b): Approved for Pending CCC Agenda post

Key: 224  
[Preview Bridge](#)

## Program Change Request

Date Submitted: 04/06/16 3:20 pm

Viewing: **AP MATH-MS : Applied Mathematics MS**

File: 7.11

Last approved: 07/23/15 3:14 pm

Last edit: 04/21/16 9:09 am

Changes proposed by: imorgan

Catalog Pages [Mathematics and Statistics](#)  
Using this  
Program

Start Term **Fall 2016-08/17/2015**  
Program Code AP MATH-MS  
Department Mathematics & Statistics  
Title Applied Mathematics MS

## Program Requirements and Description

The program for the M.S. degree without a thesis must include at least 33 hours of graduate credit, nine hours of which must be lecture courses at the 6000-level. For the M.S. degree with thesis, the program must include at least 30 hours of graduate credit, at least six hours of which must be lecture courses at the 6000-level and six or more hours of which must be Graduate Research, [MATH 6099 or STAT 6099](#). ~~MATH 5099 or STAT 5099~~. Candidates in a ~~non-thesis program must pass a final comprehensive examination while candidates in a~~ thesis program must pass an oral thesis defense. All M.S. candidates are encouraged to include in their program courses in engineering and science which are closely related to their research in mathematics or statistics. For those intending to terminate study at the M.S. level, specializations supporting specific career goals are possible.

### Justification for request

We have replaced 5099 with 6099 based on the preferences of the Graduate Studies office. The department also voted to remove the master's comprehensive exam requirement for non-thesis students.

### Supporting Documents

Course Reviewer **kleb6b (04/07/16 8:07 am)**: Update effective term  
Comments **kleb6b (04/21/16 9:09 am)**: update effective term

### In Workflow

1. **RMATHEMA 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. 04/06/16 4:49 pm  
sclark: Approved for  
RMATHEMA Chair
2. 04/07/16 8:07 am  
Kaylon Buckner  
(kleb6b): Approved  
for CCC Secretary
3. 04/19/16 12:42 pm  
imorgan: Approved  
for Sciences DSCC  
Chair
4. 04/21/16 8:58 am  
Kaylon Buckner  
(kleb6b): Approved  
for Pending CCC  
Agenda post

### History

1. Sep 12, 2013 by  
pantaleoa
2. Mar 6, 2014 by  
imorgan
3. Jul 23, 2014 by  
imorgan
4. Jul 23, 2015 by  
pantaleoa

## Program Change Request

Date Submitted: 03/23/16 8:48 am

Viewing: **CHEM-MI : Chemistry Minor**

File: 17.4

Last approved: 04/28/14 10:22 am

Last edit: 05/10/16 1:58 pm

Changes proposed by: woelkk

Catalog Pages Using this Program	<a href="#">Chemistry</a>
Start Term	<b>Fall 2016</b> <del>8/1/2014</del>
Program Code	CHEM-MI
Department	Chemistry
Title	Chemistry Minor

## Program Requirements and Description

### Minor in Chemistry

A minor in chemistry requires a minimum of 19 hours of chemistry course work selected in conjunction with a chemistry faculty advisor. The required courses are [CHEM 1100](#) , ~~are CHEM 1310~~ , ~~CHEM 1319~~ , ~~CHEM 1320~~ , ~~CHEM 1400~~ , ~~CHEM 1510~~ , ~~CHEM 2210~~ and either [CHEM 2219](#) ~~CHEM 2289~~ or [CHEM 2289](#) ~~CHEM 2249~~ . ~~Five Three~~ additional hours of chemistry are to be selected from [CHEM 1510](#) or ~~CHEM 2510~~ , or other Chem 2000, 3000, and 4000-level courses. **A minimum grade of "C" is required for each course counted toward the minor.**

### Justification for request

(1) For years, the department has allowed students to substitute the formerly required CHEM 1510 course with other chemistry courses. This change makes CHEM 1510 optional (which is in line with the common departmental practice). (2) Requiring a "C" in all courses is in line with requirements for chem majors.. (3) CHEM 2510 does not need to be listed separately as an elective for it falls under the 2000-level courses.

### Supporting Documents

### Course Reviewer Comments

**woelkk (03/23/16 8:52 am):** Made minor edits to list courses in order of increasing course number.

**kleb6b (04/21/16 9:09 am):** update effective term

**imorgan (05/10/16 1:58 pm):** Changed the last word from "degree" to "minor".

### In Workflow

1. [RCHEMIST 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. 03/23/16 8:53 am  
woelk (woelkk):  
Approved for  
RCHEMIST Chair
2. 03/23/16 9:00 am  
Kaylon Buckner (kleb6b): Approved  
for CCC Secretary
3. 04/19/16 12:45 pm  
imorgan: Approved  
for Sciences DSCC Chair
4. 04/21/16 8:59 am  
Kaylon Buckner (kleb6b): Approved  
for Pending CCC Agenda post
5. 05/10/16 1:41 pm  
Kaylon Buckner (kleb6b): Approved  
for CCC Meeting Agenda
6. 05/10/16 1:59 pm  
imorgan: Approved  
for Campus Curricula Committee Chair

### History

1. Apr 28, 2014 by  
Thomas Schuman (tschuman)



## Program Change Request

Date Submitted: 04/01/16 12:50 pm

Viewing: **ENG MG-BS : Engineering Management BS**

File: 44.23

Last approved: 07/20/15 1:49 pm

Last edit: 04/21/16 9:10 am

Changes proposed by: sraper

Catalog Pages Using this Program	<a href="#">Engineering Management</a>
Start Term	<b>Fall 2016</b> <del>08/17/2015</del>
Program Code	ENG MG-BS
Department	Engineering Management and Systems Engineering
Title	Engineering Management BS

## Program Requirements and Description

### Bachelor of Science Engineering Management

Entering freshmen intending to study engineering management are admitted to the Freshman Engineering Program. They may, however, state an engineering management preference, which will be used as a consideration for available freshman departmental scholarships. The focus of the Freshman Engineering program is on enhanced advising and career counseling, with the goal of providing to the student the information necessary to make an informed decision regarding the choice of a major.

The bachelor of science degree in engineering management requires a minimum of 128 credit hours. These requirements are in addition to credit received for algebra, trigonometry, and basic ROTC courses. An average of at least two grade points per credit hour must be attained. At least two grade points per credit hour must also be attained in all courses taken in engineering management.

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

1. All students are required to take one American history course, one economics course, and [ENGLISH 1120](#). The history course is to be selected from [HISTORY 1200](#), [HISTORY 1300](#), [HISTORY 1310](#), or [POL SCI 1200](#). The economics course may be either [ECON 1100](#) or [ECON 1200](#). All students must choose one additional humanities or social science course from "The Approved List of Humanities and Social Sciences Courses for Engineering Degrees" maintained by the Office of Undergraduate Studies.
2. Depth requirement. Three credit hours must be taken in humanities or social sciences at the 2000-level or above and must be selected from the approved list. This course must have as a prerequisite one of the humanities or social sciences courses already taken. Foreign language courses numbered 1180 will be considered to satisfy this requirement. Students may receive humanities credit for foreign language courses in their native tongue only if the course is at the 4000-level or above. All courses taken to satisfy the depth requirement must be taken after graduating from high school.
3. The remaining two courses are to be chosen from the list of approved humanities/social sciences courses and may include one communications course in addition to [ENGLISH 1120](#).
4. Any specific departmental requirements in the general studies area must be satisfied.
5. Special topics, special problems and honors seminars are allowed only by petition to and approval by the student's department chair.

The engineering management program at Missouri S&T is characterized by its focus on the scientific basics of engineering and its innovative application; indeed, the underlying theme of this educational program is the application of the scientific basics to engineering practice through attention to problems and needs of the public. The

### In Workflow

1. [RENGMNGT 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. [kristyg](#)

### Approval Path

1. 04/01/16 6:53 pm  
Suzanna Long  
(longsuz): Approved for RENGNGT Chair
2. 04/04/16 7:51 am  
Kaylon Buckner (kleb6b): Approved for CCC Secretary
3. 04/15/16 4:03 pm  
sraper: Approved for Engineering DSCC Chair
4. 04/18/16 9:06 am  
Kaylon Buckner (kleb6b): Approved for Pending CCC Agenda post

### History

1. Sep 24, 2013 by lahne
2. Apr 28, 2014 by sraper
3. Jun 12, 2014 by pantaleoa
4. Nov 18, 2014 by Kaylon Buckner (kleb6b)
5. Jan 30, 2015 by sraper
6. Jul 20, 2015 by pantaleoa

necessary interrelations among the various topics, the engineering disciplines, and the other professions as they naturally come together in the solution of real world problems are emphasized as research, analysis, synthesis, and design are presented and discussed through classroom and laboratory instruction.

### Free Electives Footnote:

Free electives. Each student is required to take three hours of free electives in consultation with his/her academic advisor. Credits which do not count towards this requirement are deficiency courses (such as algebra and trigonometry), and extra credits in required courses. Any courses outside of engineering and science must be at least three credit hours.

Freshman Year			
First Semester	Credits	Second Semester	Credits
<a href="#">FR ENG 1100</a>	1	<a href="#">MECH ENG 1720</a>	3
<a href="#">CHEM 1310</a> <sup>1</sup>	4	<a href="#">MATH 1215</a> <sup>1</sup>	4
<a href="#">CHEM 1319</a>	1	<a href="#">PHYSICS 1135</a> <sup>1</sup>	4
<a href="#">CHEM 1100</a>	1	<a href="#">ECON 1100 or 1200</a>	3
<a href="#">MATH 1214</a> <sup>1</sup>	4	<a href="#">COMP SCI 1972</a> <sup>1</sup>	2
<a href="#">ENGLISH 1120</a>	3	<a href="#">COMP SCI 1982</a>	1
<a href="#">HISTORY 1200</a> , or <a href="#">1300</a> , or <a href="#">1310</a> , or <a href="#">POL SCI 1200</a>	3		
	17		17
Sophomore Year			
First Semester	Credits	Second Semester	Credits
<a href="#">MATH 2222</a> <sup>1</sup>	4	<a href="#">MATH 3304</a> <sup>1</sup>	3
<a href="#">PHYSICS 2135</a> <sup>1</sup>	4	<a href="#">STAT 3115 or 3117</a> <sup>1</sup>	3
<a href="#">CIV ENG 2200</a> <sup>1</sup>	3	<a href="#">ENG MGT 2110</a> <sup>1</sup>	3
<a href="#">ENG MGT 1210</a> <sup>1</sup>	2	<a href="#">ENG MGT 2211</a> <sup>1</sup>	3
<a href="#">ENG MGT 2310</a> <sup>1</sup>	3	<a href="#">MECH ENG 2350</a>	2
		<a href="#">PSYCH 1101</a>	3
	16		17
Junior Year			
First Semester	Credits	Second Semester	Credits
<a href="#">ENG MGT 3310</a> <sup>1</sup>	3	<a href="#">ENG MGT 4710</a> <sup>1</sup>	3
<a href="#">CIV ENG 2210</a>	3	<a href="#">MECH ENG 2527</a>	3
<a href="#">CIV ENG 2211</a>	1	<a href="#">ELEC ENG 2800</a>	3
<a href="#">ENG MGT 3510</a> <sup>1</sup>	3	<a href="#">ENGLISH 3560</a>	3
<a href="#">SP&amp;M S 1185 or 2181</a>	3	<a href="#">ENG MGT 3320</a> <sup>1</sup>	3
Humanities and Social Sciences <sup>2</sup>	3		
	16		15
Senior Year			
First Semester	Credits	Second Semester	Credits
Emphasis Area Required Course	3	ENG MGT Technical Elective	3
Emphasis Area Required Course	3	ENG MGT Technical Elective	3
Emphasis Area Required Course	3	<a href="#">ENG MGT 4907</a> <sup>1</sup>	3
<a href="#">ENG MGT 4110</a> <sup>1</sup>	3	Upper Level Hum/SS <sup>2</sup>	3
ENG MGT Technical Elective	3	Free Elective <sup>3</sup>	3
	15		15
Total Credits: 128			

### Example Emphasis Area Programs for Engineering Management Students



One unique aspect of the engineering management degree is the student's ability to select an established emphasis area or create a specialized emphasis. Two examples of established emphasis areas are shown below.

## Management of Technology

<a href="#">ENG MGT 5511</a>	Technical Entrepreneurship	3
<a href="#">ENG MGT 5512</a>	Legal Environment	3
<a href="#">ENG MGT 5410</a>	Industrial System Simulation	3
<a href="#">ENG MGT 5614</a>	Supply Chain Management Systems	3
ENG MGT Technical Electives (in consultation with your advisor)		6

## Industrial Engineering

<a href="#">ENG MGT 4310</a>	Materials Handling and Plant Layout	3
<a href="#">ENG MGT 4330</a>	Human Factors	3
<a href="#">ENG MGT 5410</a>	Industrial System Simulation	3
<a href="#">ENG MGT 5414</a>	Introduction To Operations Research	3
ENG MGT Technical Electives (in consultation with your advisor)		6

## General

Engineering Area Courses (Engineering Discipline)	15
ENG MGT-Technical Elective ( <b>in consultation with your advisor</b> )	3

**Note:** All electives must be chosen in consultation with the student's advisor. Students must satisfy the common engineering freshman year course requirements in addition to the sophomore, junior, and senior year requirements listed above with a minimum of 128 hours.

1	Must have a grade of "C" or better in these courses for graduation. <a href="#">MATH 1208</a> and <a href="#">MATH 1221</a> may be substituted for <a href="#">MATH 1214</a> and <a href="#">MATH 1215</a> , respectively.
2	Humanities and social science electives must be approved by the student's advisor. Students must comply with the general education requirements with respect to selection and depth of study. These requirements are specified in the current catalog.
3	Each student is required to take three hours of free electives in consultation with his/her academic advisor. Credits which do not count towards this requirement are deficiency courses (such as algebra and trigonometry), and extra credits in required courses. Any courses outside of engineering and science must be at least three credit hours.
4	Students are required to select an emphasis area and maintain a minimum 2.0 GPA for these courses.
5	All engineering management students must take the fundamentals of engineering (FE) exam prior to graduation. A passing grade on this examination is not required to earn a B.S. degree. This requirement is part of the Missouri S&T assessment process as described in assessment requirements found elsewhere in this catalog.

Justification for request      Emgt faculty voted to require the FE exam rather than the AEM exam. This change is more consistent with other engineering programs in the CEC.

Supporting Documents

Course Reviewer      **kleb6b (04/04/16 7:51 am):** Update effective term  
Comments      **kleb6b (04/21/16 9:10 am):** update effective term

## Program Change Request

Date Submitted: 04/05/16 10:39 am

Viewing: **HIST-BA : History BA**

File: 157.12

Last approved: 07/21/15 9:51 am

Last edit: 05/10/16 1:41 pm

Changes proposed by: dewittp

Catalog Pages [History](#)  
Using this  
Program

Start Term **Fall 2016-08/17/2015**  
Program Code HIST-BA  
Department History and Political Science  
Title History BA

## Program Requirements and Description

### Bachelor of Arts History

(In addition to general requirements for bachelor of arts degree.)

### In Workflow

1. RHISTORY 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. kristyg

### Approval Path

1. 04/06/16 8:47 am  
sfogg: Approved for  
RHISTORY Chair
2. 04/07/16 8:08 am  
Kaylon Buckner  
(kleb6b): Approved  
for CCC Secretary
3. 04/07/16 10:24 am  
dewittp: Approved  
for Arts &  
Humanities DSCC  
Chair
4. 04/18/16 9:11 am  
Kaylon Buckner  
(kleb6b): Approved  
for Pending CCC  
Agenda post

### History

1. Aug 6, 2014 by  
lahne
2. Jul 21, 2015 by  
pantaleoa

<a href="#">HISTORY 1790</a>	Introduction to History	1
<a href="#">HISTORY 1300</a>	American History To 1877	3
<a href="#">HISTORY 1310</a>	American History Since 1877	3
<a href="#">HISTORY 2790</a>	Historiography	3
2 American History Electives		6
2 European History Electives		6
<del>2 History Electives</del>		<del>6</del>
<del>HISTORY 4010</del>	<del>Seminar</del>	<del>3</del>
<del>or HISTORY 4097</del>	<del>Senior Project</del>	
<b>3 History Electives</b>		<b>9</b>

Total Credits	31
---------------	----

Note: History majors are also required to complete [HISTORY 1100](#) and [HISTORY 1200](#) as part of the general education requirements for the B.A. In addition, 9 hours of the 31 major hours must be taken at the 3000 or 4000 level.

Note: **History majors interested in graduate or professional school should take HISTORY 4097 as independent research under the guidance of a faculty member in a short period (one semester).**

**Note: History majors must complete an experiential learning requirement. They can meet this requirement by taking HISTORY 4085 or HISTORY 4097 or study abroad, among other options, in consultation with their advisor.**

**Note:** Entering students will normally take [ENGLISH 1120](#) either semester of the first year.

## Secondary Education Emphasis Area

You may earn a B.A. degree in history from Missouri S&T and certification to teach in the schools of Missouri. This program may be completed in four academic years and student teaching is arranged with public schools within 30 miles of the Rolla campus.

Students interested in the certification program should consult with the advisor for history/education majors in the department of history and political science for requirements particular to those interested in this degree. Students should process a change of major form to designate history with an emphasis area of secondary education.

History students must complete 124 credit hours, including the requirements of the teacher education program listed in this catalog. A minimum grade of "C" is required by the department in all history and political science courses counted towards this degree. Students must take the following courses:

Communication Skills: 9 hours		
<a href="#">ENGLISH 1120</a>	Exposition And Argumentation	3
<a href="#">ENGLISH 1160</a>	Writing And Research	3
<a href="#">SP&amp;M S 1185</a>	Principles Of Speech	3
Humanities: 12 hours with at least one course from the first three areas		
Art or Music or Theater Appreciation		
Philosophy		
Literature		
Foreign Language		
<a href="#">ETYM 4306</a>	Introduction To Etymology	3
Social Sciences: 15 hours		
<a href="#">POL SCI 1200</a>	American Government	3
<a href="#">POL SCI 2760</a>	Course POL SCI 2760 Not Found	3
or <a href="#">POL SCI 2210</a>	Course POL SCI 2210 Not Found	
or <a href="#">POL SCI 3300</a>	Principles Of Public Policy	
or <a href="#">POL SCI 3760</a>	The American Presidency	
<a href="#">POL SCI 3763</a>	Contemporary Political Thought	3
or <a href="#">POL SCI 3211</a>	American Political Parties	
<a href="#">ECON 1100</a>	Principles Of Microeconomics	3
or <a href="#">ECON 1200</a>	Principles Of Macroeconomics	
<a href="#">PSYCH 1101</a>	General Psychology	3
<a href="#">HISTORY 2110</a>	World Regional Geography	3
Natural Sciences: 7 hours = 2 courses and 1 lab		
One course in Physics or Chemistry or Geology and one course in Biology		
One laboratory in any of the above science courses		
Mathematics: 3 hours		
<a href="#">MATH 1120</a>	College Algebra (or higher)	3-5
or <a href="#">MATH 1103</a>	Fundamentals Of Algebra	

or <a href="#">MATH 1140</a>	College Algebra	
Clinical Experience: 16 hours		
<a href="#">EDUC 1104</a>	Teacher Field Experience	2
<a href="#">EDUC 1164</a>	Aiding Elementary, Middle And Secondary Schools	2
<a href="#">EDUC 4299</a>	Student Teaching	12
Professional Requirements: 26 hours		
<a href="#">EDUC 1040</a>	Perspectives In Education	2
<a href="#">EDUC 1174</a>	School Organization & Adm For Elementary & Secondary Teachers	2
<a href="#">EDUC 2216</a>	Teaching Reading In Content Area	3
<a href="#">ENGLISH 3170</a>	Teaching And Supervising Reading and Writing	3
<a href="#">EDUC 3280</a>	Teaching Methods And Skills In The Content Areas	6
<a href="#">EDUC 4298</a>	Student Teaching Seminar	1
<a href="#">PSYCH 2300</a>	Educational Psychology	3
<a href="#">PSYCH 3311</a>	Psychological & Educational Development Of The Adolescent	3
<a href="#">PSYCH 4310</a>	Psychology Of The Exceptional Child	3
History Requirements: 37 hours		
<a href="#">HISTORY 1790</a>	Introduction to History	1
<a href="#">HISTORY 1100</a>	Early Western Civilization	3
<a href="#">HISTORY 1200</a>	Modern Western Civilization	3
<a href="#">HISTORY 1300</a>	American History To 1877	3
<a href="#">HISTORY 1310</a>	American History Since 1877	3
<a href="#">HISTORY 2790</a>	Historiography	3
<del>HISTORY 4010</del>	<del>Seminar</del>	<del>3</del>
or <del>HISTORY 4097</del>	<del>Senior Project</del>	
American History Electives		6
European History Electives		6
History Electives		9

Justification for request

The History department has decided to no longer make HISTORY 4097 a requirement, instead offering it as an option for students wishing to go to graduate school. History majors or history majors with secondary education emphasis will now have to take an additional content course in the form of a history elective. We also added a note regarding experiential learning.

Supporting Documents

Course Reviewer Comments

**dewittp (04/07/16 10:13 am):** Updated POL SCI 2760 and POL SCI 2210 to recently updated and approved course numbers  
**dewittp (04/07/16 10:23 am):** Updated not found courses to new approved numbers  
**kleb6b (04/18/16 9:11 am):** Update effective term  
**kleb6b (05/10/16 1:41 pm):** Edits per CCC meeting

## Program Change Request

### New Program Proposal

Date Submitted: 01/27/16 4:08 pm

Viewing: **HISTORY-BS : Bachelor of Science in History**

File: 242

Last edit: 04/18/16 9:12 am

Changes proposed by: dewittp

Start Term	Fall 2016
Program Code	HISTORY-BS
Department	History and Political Science
Title	Bachelor of Science in History

### In Workflow

1. RHISTORY 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. kristygy

### Program Requirements and Description

Students must take a minimum of 120 hours for a Bachelor of Science degree in history, and obtain a grade point average of 2.0. These requirements for the B.S. are in addition to credit received for basic ROTC.

The B.S. in history requires the following:

1. ENGLISH 1120 (entering students will normally take ENGLISH 1120 within their first year of study) and one other writing intensive course outside their major, which may include ENGLISH 1160, ENGLISH 1170, or ENGLISH 3560. (6 hours)
2. Math and Sciences. The general requirements for a B.S. call for at least 18 hours in biological, physical (chemistry, geology, physics), and mathematical (mathematics, statistics, computer science, and information science and technology) sciences. The B.S. in history requires at least one course from each of the biological and physical sciences, one lab, and at least one math course at the level of college algebra or higher. In addition to these requirements, students may count STAT 1115, up to 3 hours from psychology classes (PSYCH 2200 preferred), and up to 3 hours from history of science and technology classes (HISTORY 2510, HISTORY 3510, or HISTORY 2530), but may not use them to satisfy another requirement. (18 hours)
3. Humanities. Students must take 12 hours in humanities other than history with at least one course from literature, philosophy, and fine arts (Art, Music, or Theater Appreciation). Students may take courses in language and humanities other than history to meet the 12 hours requirement. (12 hours)
4. Social Sciences. Students must take 12 hours in social sciences. Students must take POL SCI 1200 and at least one course in two from the three areas: economics, political science, and psychology. At the discretion of the major adviser, students may transfer up to 3 hours of Sociology to meet the 12 hours requirement. (12 hours)
5. History. Students must take 37 hours in required history courses, including HISTORY 1790, HISTORY 1100, HISTORY 1200, HISTORY 1300, HISTORY 1310, HISTORY 2790, and HISTORY 4097. The student must earn a grade of C or better in these required courses. (37)
6. History Electives. Students must take at least 18 hours in history electives, including at least 6 hours in American history and at least 6 hours in European history. Nine of these 18 hours of history electives must be at or above the 3000 level. (18 hours)
7. Electives Credit. Each student will elect sufficient additional courses to complete a minimum of 120 credit hours, which may include up to 12 hours in engineering courses at the discretion of the major adviser. At least 9 hours of these electives must be at the 3000 or above level, although substitutions may be permitted at the discretion of the major adviser. All electives must accumulate to at least a 2.0 grade point average.

### Approval Path

1. 01/28/16 8:08 am  
sfogg: Approved for  
RHISTORY Chair
2. 02/01/16 1:02 pm  
Kaylon Buckner  
(kleb6b): Approved  
for CCC Secretary
3. 02/01/16 2:59 pm  
dewittp: Rollback to  
CCC Secretary for  
Arts & Humanities  
DSCC Chair
4. 04/04/16 9:39 am  
Kaylon Buckner  
(kleb6b): Approved  
for CCC Secretary
5. 04/04/16 9:46 am  
dewittp: Approved  
for Arts &  
Humanities DSCC  
Chair
6. 04/07/16 8:33 am  
Kaylon Buckner  
(kleb6b): Rollback  
to Arts &  
Humanities DSCC  
Chair for Pending  
CCC Agenda post
7. 04/07/16 10:28 am  
dewittp: Approved  
for Arts &  
Humanities DSCC  
Chair
8. 04/18/16 9:13 am  
Kaylon Buckner  
(kleb6b): Approved  
for Pending CCC  
Agenda post

Justification for To offer history majors a BS in addition to a BA as this could provide additional

request                      employment opportunities especially in private industry and to offer science or engineering majors opportunity for a dual major. Dean Roberts approved via email and Provost Marley's approval is attached, as well as a copy of the CBHE forms.

Supporting  
Documents

Course Reviewer      **dewittp (02/01/16 2:59 pm):** Rollback: We do not yet have the CBHE forms approval.  
Comments              **dewittp (04/04/16 9:46 am):** CBHE forms and proposal have been approved by Provost.  
                             **kleb6b (04/07/16 8:33 am):** Rollback: Attach supporting documents  
                             **dewittp (04/07/16 10:27 am):** Attached proposal forms as well as Provost Marley's approval forms.  
                             **kleb6b (04/18/16 9:12 am):** Update effective term

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Key: 242  
[Preview Bridge](#)

## Program Change Request

Date Submitted: 04/06/16 3:16 pm

Viewing: **MATH-MST : Mathematics MST**

File: 84.4

Last approved: 07/23/15 3:16 pm

Last edit: 04/21/16 9:12 am

Changes proposed by: imorgan

Catalog Pages [Mathematics and Statistics](#)  
Using this  
Program

Start Term **Fall 2016-08/17/2015**  
Program Code MATH-MST  
Department Mathematics & Statistics  
Title Mathematics MST

## Program Requirements and Description

The master of science for teachers program is primarily designed for secondary school teachers in the physical sciences and mathematics. The program of study must include at least 32 hours of courses numbered above 2000 in science and mathematics, three hours of which must be at the 6000-level. No more than six hours may be at the 2000-level; any such courses must be from departments other than mathematics and statistics and are subject to the approval of the student's master's committee.

~~Candidates must pass a final comprehensive examination.~~

Justification for  
request

Department voted to remove the master's comprehensive exam requirement.

Supporting  
Documents

Course Reviewer **kleb6b (04/07/16 8:08 am):** Update effective term  
Comments **kleb6b (04/21/16 9:12 am):** update effective term

### In Workflow

1. **RMATHEMA 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. 04/06/16 4:50 pm  
sclark: Approved for  
RMATHEMA Chair
2. 04/07/16 8:08 am  
Kaylon Buckner  
(kleb6b): Approved  
for CCC Secretary
3. 04/19/16 12:47 pm  
imorgan: Approved  
for Sciences DSCC  
Chair
4. 04/21/16 9:00 am  
Kaylon Buckner  
(kleb6b): Approved  
for Pending CCC  
Agenda post

### History

1. Feb 20, 2014 by  
imorgan
2. Jul 23, 2015 by  
pantaleoa

## Program Change Request

Date Submitted: 04/06/16 3:15 pm

Viewing: **MATH-PHD : Mathematics PhD**

File: 85.8

Last approved: 07/23/15 3:22 pm

Last edit: 04/21/16 9:13 am

Changes proposed by: imorgan

Catalog Pages [Mathematics and Statistics](#)  
Using this  
Program

Start Term **Fall 2016-08/17/2015**  
Program Code MATH-PHD  
Department Mathematics & Statistics  
Title Mathematics PhD

## Program Requirements and Description

A program for the Ph.D. degree includes about 30 hours of breadth in graduate level mathematics and statistics, about 30 hours of courses in or outside of the department representing a field of specialization, and a minimum of 30 hours devoted to the dissertation. In particular, the Ph.D. requires a total of at least 30 hours of Math/Stat ~~5099 or 6099 of which at least 24 hours must be Math/Stat 6099.~~ **Math/Stat 6099 hours used to complete an M.S.** ~~Students must have passed at least three of the five individual exams in the Ph.D. qualifying exam to be eligible for 6099 credit. A student may be registered for 6099 credit during the semester of his or her qualifying exam, but he or she will need to switch from 6099 to 5099 if at least three individual exams are not passed. Math/Stat 5099 hours used to complete an M.S. thesis cannot be counted toward the~~ **toward the** doctoral research requirements.

The specific program for a candidate is designed jointly by the candidate and the candidate's advisory committee. A qualifying examination, usually taken soon after completion of the M.S. degree or equivalent course work, is required. For those obtaining a doctoral degree with emphasis in Mathematics a reading knowledge of one modern foreign language, typically either French, German, or Russian, is required. Those whose doctoral emphasis is computational and applied mathematics, statistics, knowledge in a programming language such as C, C++, or FORTRAN and programming expertise demonstrated through an approved project is required. At times approved by the advisory committee, candidates must pass both written and oral comprehensive examinations. These examinations may cover courses outside the department. The dissertation is expected to represent original research and to meet the standard ordinarily required for publication in one of the journals devoted to reporting research in the selected field.

Justification for request To comply with the preference of the Graduate Council to have all graduate research be 6099.

Supporting  
Documents

Course Reviewer **kleb6b (04/21/16 9:13 am):** update effective term  
Comments

### In Workflow

1. **RMATHEMA 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. kristygy

### Approval Path

1. 04/06/16 4:50 pm  
sclark: Approved for  
RMATHEMA Chair
2. 04/07/16 8:08 am  
Kaylon Buckner  
(kleb6b): Approved  
for CCC Secretary
3. 04/19/16 12:48 pm  
imorgan: Approved  
for Sciences DSCC  
Chair
4. 04/21/16 9:00 am  
Kaylon Buckner  
(kleb6b): Approved  
for Pending CCC  
Agenda post

### History

1. Sep 12, 2013 by  
pantaleoa
2. Jul 23, 2014 by  
imorgan
3. Jul 23, 2015 by  
pantaleoa





## Program Change Request

Date Submitted: 02/25/16 1:25 pm

Viewing: **MGMT-MI : Management Minor**

File: 138.6

Last approved: 07/14/15 3:40 pm

Last edit: 04/18/16 9:14 am

Changes proposed by: barryf

Catalog Pages [Business and Management Systems](#)  
Using this [Information Science and Technology](#)  
Program

Start Term Fall **2016** 2015  
Program Code MGMT-MI  
Department Business and Information Technology  
Title Management Minor

## Program Requirements and Description

### Minor in Management

The minor in management requires the following 15 hours of coursework:

<a href="#">BUS 1110</a>	Introduction to Management and Entrepreneurship	3
One course from the following list:		3
Four courses from the following list:		12
<a href="#">BUS 2910</a>	Business Law	
<a href="#">BUS 3115</a>	Introduction to Teambuilding and Leadership	
<a href="#">BUS 4111</a>	Business Negotiations	
<a href="#">BUS 4150</a>	Customer Focus and Satisfaction	
<a href="#">BUS 5360</a>	Business Operations	
<a href="#">BUS 5470</a>	Human Resource Management	
<a href="#">BUS 5580</a>	Strategic Management	
<a href="#">IS&amp;T 4261</a>	Information Systems Project Management	
Three courses from the following list:		9

### 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. [kristyg](#)

### Approval Path

1. 02/26/16 1:02 am  
siauk: Approved for  
RBUSADMN Chair
2. 02/26/16 7:34 am  
Kaylon Buckner  
(kleb6b): Approved  
for CCC Secretary
3. 03/24/16 8:48 am  
barryf: Approved for  
Social Sciences  
DSCC Chair

### History

1. Aug 5, 2014 by  
[pantaleoa](#)
2. Jun 17, 2015 by  
[pantaleoa](#)
3. Jun 17, 2015 by  
[pantaleoa](#)
4. Jul 14, 2015 by  
[pantaleoa](#)

Justification for request Put all courses besides BUS 1110 into one list.

Supporting Documents

Course Reviewer **kleb6b (02/26/16 7:33 am):** Update effective term  
Comments **kleb6b (04/18/16 9:14 am):** Update effective term

Key: 138  
[Preview Bridge](#)

## Program Change Request

Date Submitted: 04/07/16 12:20 pm

Viewing: **MUL&DIV-MI : Multiculture & Diversity Minor**

File: 102.13

Last approved: 07/21/15 12:03 pm

Last edit: 04/08/16 8:40 am

Changes proposed by: dewittp

Catalog Pages [Multiculturalism & Diversity](#)  
Using this [Psychology](#)  
Program

Start Term Fall **2016** ~~2015~~  
Program Code MUL&DIV-MI  
Department Arts, Languages, & Philosophy  
Title Multiculture & Diversity Minor

## Program Requirements and Description

### Multiculturalism & Diversity Minor

The **Multiculturalism and Diversity Minor prepares students to function more effectively** ~~minor requires 15 hours~~ in a **global society as well as enhances Missouri S&T graduates' employment options by providing knowledge, skills, and strategies for appreciating and understanding diverse cultural practices.** ~~minimum of 3 of 4 humanities and social sciences (HSS) departments:~~

**The minor requires 15 hours in a minimum of 3 of 4 humanities and social sciences (HSS) departments:** the departments of arts, languages and philosophy; English and technical communication; history and political science; and **psychological science.** ~~psychology.~~ The academic home for this minor will be the arts, languages and philosophy **department.** ~~department in which the student takes the majority of their classes.~~ Courses offered by these departments that can be included in the minor are listed below.

### In Workflow

1. **RPHILOSO 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. kristyg

### Approval Path

1. 04/07/16 9:27 pm  
audram: Approved for RPHILOSO Chair
2. 04/08/16 6:46 am  
Kaylon Buckner (kleb6b): Approved for CCC Secretary
3. 04/08/16 8:40 am  
dewittp: Approved for Arts & Humanities DSCC Chair

### History

1. Apr 28, 2014 by ivliyeva
2. May 7, 2014 by lahne
3. Jun 11, 2014 by lahne
4. Jun 11, 2014 by pantaleoa
5. Jun 11, 2014 by lahne
6. Jun 19, 2015 by denises
7. Jul 21, 2015 by pantaleoa

Arts, Languages & Philosophy:

One language course at the third semester or above in a foreign language (German, Spanish, French, or Russian) \*

**FRENCH 4360** **French Culture And Civilization**

[PHILOS 4340](#) Social Ethics

[RUSSIAN 4360](#) Russian Civilization

[SP&M S 3235](#) Intercultural Communication

English and Technical Communication:	
<a href="#">ENGLISH 1231</a>	World Literature I: From The Beginnings To The Renaissance
<a href="#">ENGLISH 2242</a>	Literature By Women
<a href="#">ENGLISH 2245</a>	African American Literature
<a href="#">ENGLISH 3228</a>	The American Experience
History and Political Science:	
<del>HISTORY 2660</del>	<del>Course HISTORY 2660 Not Found</del>
<a href="#">HISTORY 3280</a>	European Migrations and Nationalism Formation
<del>HISTORY 2665</del>	<del>Course HISTORY 2665 Not Found</del>
<a href="#">HISTORY 3660</a>	<b>Modern East Asia</b>
<a href="#">HISTORY 3665</a>	<b>History of Japan</b>
<a href="#">POL SCI 2500</a>	International Relations
<del>POL SCI 3510</del>	<del>Course POL SCI 3510 Not Found</del>
<a href="#">POL SCI 4510</a>	<b>The Politics of the Third World</b>
Psychology:	
<a href="#">PSYCH 4993</a>	Psychology of Women
<a href="#">PSYCH 4992</a>	Cross-Cultural Psychology

\* Language Courses at the 3rd Semester or above that qualify for the minor:

<a href="#">FRENCH 1180</a>	Intermediate French
<a href="#">FRENCH 2110</a>	Basic French Conversation
<a href="#">FRENCH 2170</a>	Masterpieces Of French Literature
<a href="#">FRENCH 2180</a>	Basic French Composition
<a href="#">FRENCH 4311</a>	Advanced French Conversation
<a href="#">FRENCH 4320</a>	<b>French and Francophone Cinema</b>
<a href="#">FRENCH 4360</a>	French Culture And Civilization
<a href="#">FRENCH 4370</a>	Survey Of French Literature I (Early Period)
<a href="#">FRENCH 4375</a>	Survey Of French Literature II (Modern Period)
<a href="#">GERMAN 1180</a>	Classical And Modern German Readings
<a href="#">GERMAN 2110</a>	Basic German Conversation
<a href="#">GERMAN 2170</a>	Masterpieces Of German Literature
<a href="#">RUSSIAN 1180</a>	Readings In Science And Literature
<a href="#">RUSSIAN 2110</a>	Basic Russian Conversation
<a href="#">RUSSIAN 2170</a>	Masterpieces Of Russian Literature
<a href="#">RUSSIAN 4320</a>	Russian Phonetics and Intonation
<a href="#">RUSSIAN 4330</a>	Business Russian
<a href="#">RUSSIAN 4360</a>	<b>Russian Civilization</b>
<a href="#">RUSSIAN 4370</a>	Survey Of Russian Literature I (Early Period)
<a href="#">RUSSIAN 4375</a>	Survey Of Russian Literature II (Modern Period)
<a href="#">SPANISH 1180</a>	Intermediate Spanish
<a href="#">SPANISH 2110</a>	Basic Spanish Conversation
<a href="#">SPANISH 2160</a>	Hispanic Culture
<a href="#">SPANISH 2170</a>	Masterpieces Of Hispanic Literature
<a href="#">SPANISH 2180</a>	Intermediate Spanish Composition
<a href="#">SPANISH 4311</a>	Advanced Spanish Conversation
<a href="#">SPANISH 4377</a>	Spanish-American Novel And Short Story

[SPANISH 4302](#)

Phonetics and Phonology of Spanish

Justification for  
request

Added a description of the minor.

Supporting  
Documents

Course Reviewer  
Comments

**audram (04/07/16 12:09 pm):** Rollback: I'm rolling this back for you to be able to make the change for Russian 4360  
**kleb6b (04/08/16 6:46 am):** Update effective term  
**dewittp (04/08/16 8:40 am):** Approved.

Key: 102  
[Preview Bridge](#)

## Program Change Request

Date Submitted: 03/18/16 4:05 pm

Viewing: **PHYSIC-BS : Physics BS**

File: 115.17

Last approved: 07/21/15 1:41 pm

Last edit: 04/21/16 10:00 am

Changes proposed by: waddill

Catalog Pages [Physics](#)  
Using this  
Program

Start Term **Fall 2016-08/01/2014**

Program Code PHYSIC-BS

Department Physics

Title Physics BS

## Program Requirements and Description

### Bachelor of Science Physics

A minimum of 128 credit hours is required for a bachelor of science degree in physics and an average of at least two grade points per credit hour must be obtained. These requirements for the B.S. degree are in addition to credit received for algebra, trigonometry, and basic ROTC.

The physics curriculum requires twelve semester hours in humanities, exclusive of foreign language, and must include [ENGLISH 1160](#) or [ENGLISH 3560](#). A minimum of nine semester hours is required in social sciences, including either [HISTORY 1300](#), [HISTORY 1310](#), [HISTORY 1200](#), or [POL SCI 1200](#). Specific requirements for the bachelor degree are outlined in the sample program listed below

### 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. kristyg

### Approval Path

1. 03/18/16 4:21 pm  
waddill: Approved for RPHYSICS Chair
2. 03/21/16 6:59 am  
Kaylon Buckner (kleb6b): Approved for CCC Secretary
3. 04/20/16 10:28 am  
imorgan: Approved for Sciences DSCC Chair
4. 04/21/16 9:01 am  
Kaylon Buckner (kleb6b): Approved for Pending CCC Agenda post
5. 04/21/16 9:50 am  
Kaylon Buckner (kleb6b): Rollback to Sciences DSCC Chair for CCC Meeting Agenda
6. 04/21/16 10:01 am  
imorgan: Approved for Sciences DSCC Chair

### History

1. May 6, 2014 by waddill
2. Jul 21, 2015 by pantaleoa

Freshman Year			
First Semester	Credits	Second Semester	Credits
<a href="#">CHEM 1310</a>	4	<a href="#">CHEM 1320</a>	3

<a href="#">CHEM 1319</a>	1	<a href="#">HISTORY 1200</a> , or <a href="#">1300</a> , or <a href="#">1310</a> , or <a href="#">POL SCI 1200</a>	3
<a href="#">CHEM 1100</a>	1	<a href="#">MATH 1221</a> <sup>6</sup>	5
<a href="#">ENGLISH 1120</a>	3	<a href="#">PHYSICS 1111</a> & <a href="#">PHYSICS 1119</a> <sup>7</sup>	5
<a href="#">MATH 1208</a> <sup>5</sup>	5	<a href="#">PHYSICS 1119</a>	4
<a href="#">PHYSICS 1101</a>	1		
	15		16
<b>Sophomore Year</b>			
<b>First Semester</b>	<b>Credits</b>	<b>Second Semester</b>	<b>Credits</b>
<a href="#">ENGLISH 1160</a>	3	<a href="#">MATH 3304</a>	3
<a href="#">MATH 2222</a>	4	<a href="#">PHYSICS 2311</a>	3
<a href="#">PHYSICS 2111</a> & <a href="#">PHYSICS 2119</a> <sup>8</sup>	5	<a href="#">PHYSICS 2129</a>	3
<a href="#">PHYSICS 2119</a>	4	<a href="#">PHYSICS 2401</a>	3
<a href="#">COMP SCI 1570</a> & <a href="#">COMP SCI 1580</a> <sup>4</sup>	4	Elective <sup>1</sup>	3
Elective <sup>1</sup>	3		
	19		15
<b>Junior Year</b>			
<b>First Semester</b>	<b>Credits</b>	<b>Second Semester</b>	<b>Credits</b>
<a href="#">PHYSICS 3201</a>	3	<a href="#">PHYSICS 3211</a>	3
<a href="#">PHYSICS 3119</a>	3	<a href="#">PHYSICS 3129</a>	3
<a href="#">PHYSICS 3311</a>	3	Math/Stat Elective <sup>2</sup>	3
Math/Stat Elective <sup>2</sup>	3	Electives <sup>1</sup>	6
Electives <sup>1</sup>	6		
	18		15
<b>Senior Year</b>			
<b>First Semester</b>	<b>Credits</b>	<b>Second Semester</b>	<b>Credits</b>
<a href="#">PHYSICS 4211</a>	3	<a href="#">PHYSICS 4311</a>	3
<a href="#">PHYSICS 4301</a>	3	Elective-Humanities (300 level) <sup>1</sup>	3
Physics Elective <sup>3</sup>	3	Physics Elective <sup>3</sup>	3
Electives <sup>1</sup>	6	Electives <sup>1</sup>	6
	15		15
Total Credits: 128			

**Note:** The minimum credit hours required for a bachelor of science in physics is 128 hours. No more than two of the required physics and mathematics courses with a grade of "D" may be used to meet graduation requirements. Upon petition to and approval by the physics faculty, three semester hours of advanced ROTC (military science or aerospace credit studies) credit can be counted as elective credit to meet requirements for graduation.

<sup>1</sup>	Electives, in addition to the math/stat electives <sup>2</sup> and Physics electives <sup>3</sup> , shall include six hours of social studies and nine hours of humanities, at least three of which must be literature and at least three of which must be at the 3000 level or above not including Special Problems courses ( <a href="#">PHILOS 4345</a> recommended). 19 hours of free electives may be used to develop an emphasis area. 18 hours of elective credit shall be in courses at the 3000 level or above.
<sup>2</sup>	Six hours of mathematics or statistics beyond <a href="#">MATH 3304</a> are required. <a href="#">MATH 3108</a> , <a href="#">MATH 5222</a> , <a href="#">MATH 5325</a> , or <a href="#">MATH 5351</a> are recommended.
<sup>3</sup>	In addition to the specific physics courses listed ( <a href="#">PHYSICS 3311</a> , <a href="#">PHYSICS 3201</a> , <a href="#">PHYSICS 4311</a> , <a href="#">PHYSICS 4211</a> , <a href="#">PHYSICS 3119</a> , <a href="#">PHYSICS 3129</a> , and <a href="#">PHYSICS 4301</a> ) two other physics 3000 level or higher courses are required.
<sup>4</sup>	Alternatively <a href="#">COMP SCI 1971</a> and <a href="#">COMP SCI 1981</a> ; note that this will require one less credit hour than the option listed in the sample schedule.
<sup>5</sup>	Alternatively students may substitute Math 1214 for Math 1208. Note that this is one less credit hour than Math 1208.
<sup>6</sup>	Alternatively students may substitute Math 1215 for Math 1221. Note that this is one less credit hour than Math 1221.



7	Alternatively students may substitute Physics 1135 for the combination of Physics 1111 and 1119. Note that this is one less credit hour than Physics 1111/1119.
8	Alternatively students may substitute Physics 2135 for the combination of Physics 2111 and 2119. Note that this is one less credit hour than Physics 2111/2119.

Students may develop an emphasis area in secondary education by satisfying the requirements for a bachelor of science in physics and by completing the following additional requirements:

a. Take the education professional requirements courses:

<a href="#">EDUC 1040</a>	Perspectives In Education	2
<a href="#">EDUC 1174</a>	School Organization & Adm For Elementary & Secondary Teachers	2
<a href="#">EDUC 2216</a>	Teaching Reading In Content Area	3
<a href="#">EDUC 2251</a>	Historical Foundation Of American Education	3
<a href="#">EDUC 3280</a>	Teaching Methods And Skills In The Content Areas	6
<a href="#">EDUC 4298</a>	Student Teaching Seminar	1
<a href="#">PSYCH 2300</a>	Educational Psychology	3
<a href="#">PSYCH 3311</a>	Psychological & Educational Development Of The Adolescent	3
<a href="#">PSYCH 4310</a>	Psychology Of The Exceptional Child	3
Fifteen of these credit hours may be used to substitute for six hours of mathematics electives, six hours of physics electives, and three hours of computer science courses.		

b. Take the education clinical experience courses:

<a href="#">EDUC 1104</a>	Teacher Field Experience	2
<a href="#">EDUC 1164</a>	Aiding Elementary, Middle And Secondary Schools	2
<a href="#">EDUC 4299</a>	Student Teaching	12

c. Take these additional courses:

<a href="#">SP&amp;M S 1185</a>	Principles Of Speech	3
<a href="#">POL SCI 1200</a>	American Government	3
<a href="#">PSYCH 1101</a>	General Psychology	3
<a href="#">BIO SCI 1113</a>	General Biology	3
<a href="#">PHYSICS 1605</a>	Environmental Physics I	3
<a href="#">HISTORY 2530</a>	Course HISTORY 2530 Not Found	3
<a href="#">HISTORY 3530</a>	History of Science	3
A 3 hour Art/Music/Theater elective		3

d. Complete the requirements for teacher certification listed in this catalog.

~~e. PHYSICS 1135 and PHYSICS 2135 may be substituted for: MATH 1214 and MATH 1215 may be substituted for:—~~

<del>MATH 1208</del>	<del>Calculus With Analytic Geometry-I</del>	<del>5</del>
<del>MATH 1221</del>	<del>Calculus With Analytic Geometry-II</del>	<del>5</del>
<del>PHYSICS 1114</del>	<del>General Physics-I</del>	<del>4</del>
<del>PHYSICS 1119</del>	<del>General Physics Laboratory</del>	<del>4</del>
<del>PHYSICS 2114</del>	<del>General Physics-II</del>	<del>4</del>
<del>PHYSICS 2119</del>	<del>General Physics Laboratory</del>	<del>4</del>

Justification for request

First change is to allow option of Math 1214 for Math 1208. This is because math 1208 is no longer offered.

Second change is to allow option of Math 1215 for Math 1221. This is because transfer credit for Calculus II is always Math 1215 instead of math 1221. This will save many substitution/waiver forms.

Third change is to allow option of Physics 1135 for Physics 1111/1119. We are no longer routinely offering Physics 1111 so it is now necessary for students to take 1135 instead.

Fourth change is to allow option of Physics 2135 for Physics 211/2119. We are no longer routinely offering Physics 2111 so it is now necessary for students to take 2135 instead.

Fifth change is to eliminate Comp Sci 1970 and 1980 since neither are offered any longer.

#### Supporting Documents

Course Reviewer	<b>imorgan (04/19/16 12:49 pm):</b> Minor correction.
Comments	<b>imorgan (04/20/16 10:27 am):</b> Changed HISTORY 2530 (Course Not Found) to HISTORY 3530 (new course number). <b>kleb6b (04/21/16 9:14 am):</b> Update effective term <b>kleb6b (04/21/16 9:50 am):</b> Rollback: Rollback per Dr. Morgan <b>imorgan (04/21/16 9:59 am):</b> Minor clean-up in consultation with Dr. Waddill. <b>imorgan (04/21/16 10:00 am):</b> Minor clean-up.

## Course Inventory Change Request

### New Experimental Course Proposal

Date Submitted: 01/15/16 12:01 pm

Viewing: **ECON 5001.001 : Experiential Innovation**

File: 4297

Last edit: 04/25/16 10:28 am

Changes proposed by: marcys

Requested Fall 2016

Effective Change

Date

Department Economics

Discipline Economics (ECON)

Course Number 5001

Topic ID 001

Experimental Title  
Experiential Innovation

Experimental Abbreviated  
Course Title  
Experiential Innov

Instructors Bonnie Bachman

Experimental  
Catalog  
Description

Students work in multidisciplinary engineering/science/social science teams mentored by experienced entre/intrapreneurs to generate innovative ideas and transform them into models for economically viable tech companies. Experiential learning is emphasized in live customer discovery, domain exploration, prototyping and validation.

Prerequisites

Senior or graduate standing.

Field Trip  
Statement

Credit Hours	LEC: 3	LAB: 0	IND: 0	RSD: 0	Total: 3
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#### 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. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. Ishelton
11. Peoplesoft

#### Approval Path

1. 01/15/16 12:12 pm  
gelles: Approved for RECONOMI Chair
2. 01/15/16 12:17 pm  
Kaylon Buckner (kleb6b):  
Approved for CCC Secretary
3. 02/02/16 8:46 am  
barryf: Approved for Social Sciences DSCC Chair
4. 02/12/16 10:41 am

Justification for  
new course:

This course is a required course for student entrepreneurial leads entering the newly awarded NSF I-Corps™ Site program (Dr. Bachman is PI for this new innovation and entrepreneurship center on campus). The I-Corps Site program will be rolled out to the UM System as well, where this course will be a shared course between campuses. This course is also the fifth required course in a proposed sequence of courses for the Technical Innovation and Entrepreneurship campus minor (special program) which is supported by 18 full-time tenured or tenure-track professors across 24 degree programs. It is modeled on the entrepreneurship and innovation curriculum first developed by Stanford University and subsequently became known as the NSF I-Corps curriculum and is now taught all over the world. This course was developed with assistance (two grants-2014 and 2015) from Epicenter, the National Science Center for Engineering Pathways to Innovation, funded by NSF and directed by Stanford University. Novel in its content and experiential learning approach, it is team taught and has a wide variety of external mentors such as entrepreneurs, intrapreneurs, venture capitalists, incubator directors and small business development directors that coach students throughout the semester. It leverages our students' traditional, technical strengths with a learning process where students have the freedom to develop knowledge and skills from direct experiences outside the typical academic framework while working in interdisciplinary teams.

The development of this course, Experiential Entrepreneurship, is also part of the International Affairs Study Abroad faculty grant and program for South Africa and Oman.

The campus Strategic Plan calls for more entrepreneurial content in the curriculum and this course helps meet those goals. Further, this course is in alignment with the Accreditation Board for Engineering and Technology (ABET), which requires students to demonstrate specific abilities in both technical and non-technical skills (e.g., address real-world problems, perceive opportunities, lead others, work in multidisciplinary teams, communicate effectively, react and adapt with flexibility in uncertain times and deal well with risk and failure).

Comments from students who have taken the CompSci 5001 course (precursor to the proposed Econ 5001/co-listed EngMgt 5001) include:

"Can you build a program like this class (CompSci 5001) and I-Corps where we get to work on our projects and experience the whole process of understanding customer context, needs and opportunities, and how to be creative, design the right thing, and how to build it so it solves real problems?"

"We aren't Silicon Valley where this is everyday stuff, but we're eager to learn. Can you give us the opportunity to do great things while learning a lot and developing

Kaylon Buckner  
(kleb6b):

Approved for  
Pending CCC  
Agenda post

5. 03/01/16 1:53 pm

Kaylon Buckner  
(kleb6b): Rollback  
to Pending CCC  
Agenda post for  
CCC Meeting  
Agenda

6. 03/21/16 8:09 am

Kaylon Buckner  
(kleb6b):  
Approved for  
Pending CCC  
Agenda post

7. 04/05/16 1:47 pm

Kaylon Buckner  
(kleb6b):  
Approved for CCC  
Meeting Agenda

8. 04/25/16 7:13 am

Kaylon Buckner  
(kleb6b): Rollback  
to CCC Meeting  
Agenda for  
Campus Curricula  
Committee Chair

the skills we need to have an impact in today's world?"

"Can we have more than one class that helps us learn how to take our ideas out of the labs and find out if they can make it to the marketplace?"

Although CS 5001 has been taught successfully 2 times (Fall 2014 and Fall 2015), Computer Science will not be making this a numbered course, nor offer it and therefore, to keep this course alive, two other departments (Economics and Engineering Management) will be team teaching it going forward.

Semester(s) Taught as CS 5001 in FS20014 and FS2015 with different prereqs and course previously taught description.

Co-Listed ENG MGT 5001 - Special Topics  
Courses:

Course Reviewer **kleb6b (03/01/16 1:53 pm):** Rollback: Tabled  
Comments **kleb6b (04/25/16 7:13 am):** Rollback: Tabled  
**kleb6b (04/25/16 10:28 am):** Updated title per request of Dr. Bachman

Key: 4297  
[Preview Bridge](#)

# Course Inventory Change Request

## New Experimental Course Proposal

Date Submitted: 04/08/16 10:23 am

Viewing: **ECON 5001.002 : Applied Economic Research**

File: 4312

Last edit: 05/12/16 7:10 am

Changes proposed by: marcys

Requested Fall 2016

Effective Change

Date

Department Economics

Discipline Economics (ECON)

Course Number 5001

Topic ID 002

Experimental Applied Economic Research  
Title

Experimental App Econ Research

Abbreviated  
Course Title

Instructors Ichim, Ana

Experimental

Catalog

Description

Student teams work on a practical economics research project, mentored by the instructor & professional economists from economic research institutes or industry.

Experiential learning will be achieved by working with real economic data & by delivering their conclusions in a professional presentation and/or research paper.

Field trip with expenses.

Prerequisites

Stat 3111 or Stat 3113 or Stat 3115 or Stat 3117 or Stat 5643 and Econ 2100 or Econ 2200.

Field Trip

Statement

One single day trip to the Federal Reserve Bank of St. Louis. Students are responsible for the associated costs, such as travel expenses. Arrangements will be made to avoid conflicts.

### 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. **Registrar**

### Approval Path

1. 04/08/16 1:21 pm

gelles: Approved  
for RECONOMI  
Chair

2. 04/08/16 1:26 pm

Kaylon Buckner

(kleb6b):

Approved for CCC

Secretary

3. 04/13/16 9:00 am

barryf: Approved

for Social

Sciences DSCC

Chair

4. 04/18/16 9:05 am

Kaylon Buckner

(kleb6b):

Approved for

Pending CCC

Agenda post

Credit Hours	LEC: 2	LAB: 1	IND: 0	RSD: 0	Total: 3
Justification for new course:	<p>This course offers students the opportunity to immerse themselves in the economic research process from “conception to completion,” which will enhance their understanding of economic concepts, theories, and real world applications. Class projects may lead to new research ideas and OURE applications or internships. Students will have the opportunity to interact and work with economics professionals outside academia.</p> <p>For the Fall 2016 semester we will be collaborating with the American Institute of Economic Research.</p>				
Semester(s) previously taught					
Co-Listed Courses:					
Course Reviewer Comments					

Key: 4312  
[Preview Bridge](#)

# Course Inventory Change Request

## New Experimental Course Proposal

Date Submitted: 04/13/16 1:32 pm

Viewing: **PSYCH 2001.001 : Foundations of Leadership**

File: 4313

Last edit: 04/13/16 1:40 pm

Changes proposed by: murray

Requested Fall 2016

Effective Change

Date

Department Psychological Science

Discipline Psychology (PSYCH)

Course Number 2001

Topic ID 001

Experimental Foundations of Leadership  
Title

Experimental Leadership Foundations

Abbreviated  
Course Title

Instructors Susan Murray & Jerri Arnold-Cook

Experimental

Catalog

Description

This class will enable students to develop and refine personal leadership skills.

Students will increase their knowledge of exemplary leadership practices through classroom and hands-on activities. Leadership skills covered will include communication, leading teams, being a team member, and goal settings.

Prerequisites

Field Trip

Statement

Credit Hours	LEC: 2	LAB: 1	IND: 0	RSD: 0	Total: 3
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Justification for new course: Leadership theory is currently taught in existing Psychological Science and Engineering Management classes. Leadership experiences and training is offered by Student Affairs. This class seeks to combine theories and principles of leadership

### In Workflow

1. RPSYCHOL Chair

2. CCC Secretary

3. Social Sciences

DSCC Chair

4. Pending CCC

Agenda post

5. CCC Meeting

Agenda

6. Campus Curricula

Committee Chair

7. Registrar

### Approval Path

1. 04/13/16 1:34 pm

murray: Approved  
for RPSYCHOL  
Chair

2. 04/13/16 1:41 pm

Kaylon Buckner

(kleb6b):

Approved for CCC

Secretary

3. 04/14/16 10:03

am

barryf: Approved

for Social

Sciences DSCC

Chair



with hands-on experience. The lab portion of the class with consist of group activities, events offered by Student Affairs, and individual applications of leadership principles.

Semester(s)        None  
previously taught

Co-Listed        ENG MGT 2001 - Special Topics  
Courses:

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Course Reviewer  
Comments

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Key: 4313  
[Preview Bridge](#)

# Course Inventory Change Request

Date Submitted: 03/17/16 10:37 am

Viewing: **BIO SCI 4666 : Nanobiotechnology**

File: 4056.6

Last approved: 07/07/14 3:48 am

Last edit: 05/10/16 1:36 pm

Changes proposed by: huangy

Requested **Spring 2017-08/01/2014**

Effective Change  
Date

Department Biological Sciences

Discipline Biological Sciences (BIO SCI)

Course Number 4666

Title Nanobiotechnology

Abbreviated Nanobiotechnology  
Course Title

Catalog

Description

Nanotechnology has emerged to change human economy and society in many aspects. Applications of nanotechnology in life science is termed nanobiotechnology.

This course describes recent development of nanobiotechnology in **basic fundamental** biological research as well as biomedical **applications. studies.**

Prerequisites

**Bio Sci** ~~BIO-SCI-2213~~ or **Bio Sci** ~~BIO-SCI-2223~~.

Field Trip

Statement

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

Required for  
Majors No

Elective for  
Majors No

Justification for  
change:

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. Ishelton

11. Peoplesoft

Approval Path

1. 03/17/16 10:41  
am

huangy:

Approved for  
RBIOLSCI Chair

2. 03/21/16 7:00 am  
Kaylon Buckner

(kleb6b):

Approved for CCC  
Secretary

3. 04/19/16 12:45  
pm

imorgan:

Approved for  
Sciences DSCC  
Chair

4. 04/21/16 9:02 am  
Kaylon Buckner

The credit hours is increased from 2 to 3, as more materials will be covered.

A minor adjustment in Catalog Description: change from "...fundamental biological research as well as biomedical research." to "basic biological research as well as biomedical applications".

Semesters  
previously  
offered as an  
experimental  
course

Co-Listed  
Courses:

Course Reviewer  
Comments

(kleb6b):  
Approved for  
Pending CCC  
Agenda post

#### History

1. Jul 7, 2014 by  
huangy

Key: 4056  
[Preview Bridge](#)

## Course Inventory Change Request

Date Submitted: 03/17/16 10:39 am

Viewing: **BIO SCI 6666 : Advanced Nanotechnology in Biomedicine**

File: 4057.4

Last approved: 07/07/14 3:48 am

Last edit: 05/10/16 1:37 pm

Changes proposed by: huangy

Requested **Spring 2017** ~~08/01/2014~~

Effective Change

Date

Department Biological Sciences

Discipline Biological Sciences (BIO SCI)

Course Number 6666

Title Advanced Nanotechnology in Biomedicine

Abbreviated Advanced Nanobiotech

Course Title

Catalog

Description

Applications of nanotechnology in life science is termed nanobiotechnology. This course describes recent development of nanotechnology in basic biological research as well as biomedical applications. In addition to attending regular lectures, graduate students will be assigned to an independent research project and present the information in the class.

Prerequisites

**Bio Sci 2213** ~~Two biomedical science related courses at college level~~ and **Bio Sci 2223** and graduate standing.

Field Trip

Statement

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

Required for No

Majors

Elective for Yes

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. Ishelton

11. Peoplesoft

Approval Path

1. 03/17/16 10:41 am

huangy:

Approved for

RBIOLSCI Chair

2. 03/21/16 7:01 am

Kaylon Buckner

(kleb6b):

Approved for CCC

Secretary

3. 04/19/16 12:44

pm

imorgan:

Approved for

Sciences DSCC

Chair

4. 04/21/16 9:03 am

Kaylon Buckner

## Majors

### Justification for change:

The total credit hour is increased from 2 to 3, as more materials will be covered.

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer **imorgan (04/19/16 12:43 pm):** Changed effective date.

Comments

(kleb6b):  
Approved for  
Pending CCC  
Agenda post

### History

1. Jul 7, 2014 by  
huangy

Key: 4057  
[Preview Bridge](#)

# Course Inventory Change Request

Date Submitted: 02/11/16 5:15 pm

Viewing: **BUS 2910 : Business Law**

File: 2077.1

Last edit: 05/10/16 1:37 pm

Changes proposed by: barryf

Programs  
referencing this  
course

[BUS&MS-BS: Business and Mgmt Systems BS](#)  
[MGMT-MI: Management Minor](#)  
[PRE LAW-MI: Pre Law Minor](#)  
[PRE MBA-MI: Pre MBA Minor](#)

Requested  
Effective Change  
Date

**Fall 2016** ~~08/01/2014~~

Department Business and Information Technology

Discipline Business (BUS)

Course Number 2910

Title Business Law

Abbreviated Business Law

Course Title

Catalog

Description

This course is an introduction to the nature and meaning of law and the legal environment of business. Topics include the legal process, sources of law, and institutions.

Prerequisites

~~Bus-1110 and Econ-1100.~~

Field Trip

Statement

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

Required for  
Majors No

Elective for  
Majors No

## 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. Ishelton

11. Peoplesoft

## Approval Path

1. 02/26/16 12:58  
am

siauk: Approved  
for RBUSADMN  
Chair

2. 02/26/16 7:34 am

Kaylon Buckner  
(kleb6b):  
Approved for CCC  
Secretary

3. 03/24/16 8:48 am

barryf: Approved  
for Social  
Sciences DSCC  
Chair

4. 04/18/16 9:02 am

Kaylon Buckner

Justification for  
change:

Instructor does not use material from the prerequisites.

Semesters  
previously  
offered as an  
experimental  
course

Co-Listed  
Courses:

(kleb6b):  
Approved for  
Pending CCC  
Agenda post

Course Reviewer  
Comments

Key: 2077  
[Preview Bridge](#)

# Course Inventory Change Request

Date Submitted: 03/22/16 2:14 pm

Viewing: **CER ENG 5220 : Advanced Mechanical Properties of Ceramics**

File: 1507.1

Last edit: 04/18/16 9:02 am

Changes proposed by: eddings

Requested	Fall <b>2016</b> <del>2014</del>
Effective Change Date	
Department	Materials Science & Engineering
Discipline	Ceramic Engineering (CER ENG)
Course Number	5220
Title	Advanced Mechanical Properties of Ceramics
Abbreviated Course Title	Adv Mech Prop Of Ceramics

## Catalog

### Description

**An advanced course** ~~Particular emphasis is placed on how ceramic materials are altered to treat meet the theory and testing practice related to design based on the mechanical properties needs of ceramics. a specific application.~~ The course also includes a laboratory consisting ~~application and design of experiments~~ ceramics for the **characterization of the mechanical properties of ceramics.** ~~electrical industry is discussed. Particular emphasis is placed on how ceramic materials are altered to meet the needs of a specific application. The laboratory acquaints the student with measurements which are used for electrical property evaluation.~~

### Prerequisites

**Graduate standing.** ~~Cer Eng 4210.~~

### Field Trip

### Statement

Credit Hours	LEC: 3	LAB: 1	IND: 0	RSD: 0	Total: 4
Required for Majors	No				

## 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. 03/30/16 10:01 am  
mjokeefe:  
Approved for  
RMATSENG Chair
2. 04/04/16 7:51 am  
Kaylon Buckner (kleb6b):  
Approved for CCC Secretary
3. 04/15/16 4:03 pm  
srafer: Approved for Engineering DSCC Chair



Elective for  
Majors

Yes ~~No~~

Justification for  
change:

Course description should be the same as Cer Eng 4220 (except advanced version)  
and the catalog shows the same description for this course as Cer Eng 5217.

Semesters  
previously  
offered as an  
experimental  
course

Co-Listed  
Courses:

Course Reviewer  
Comments

Key: 1507

[Preview Bridge](#)

# Course Inventory Change Request

A deleted record cannot be edited

## Course Deactivation Proposal

Date Submitted: 03/22/16 2:04 pm

Viewing: **CER ENG 5270 : Advanced Thermal Properties of Ceramics**

File: 1308.1

Last edit: 04/18/16 9:03 am

Changes proposed by: eddings

Requested	Fall <b>2016</b> <del>2014</del>
Effective Change Date	
Department	Materials Science & Engineering
Discipline	Ceramic Engineering (CER ENG)
Course Number	5270
Title	Advanced Thermal Properties of Ceramics
Abbreviated Course Title	Adv Thermal Prop of Cer

### Catalog

#### Description

This course will introduce senior undergraduate students to a broad array of topics in biomaterials, including ceramic, metallic, and polymeric biomaterials for in vivo use, basic concepts related to cells and tissues, host reactions to biomaterials, biomaterials-tissue compatibility, and degradation of biomaterials.

#### Prerequisites

Senior undergraduate standing.

#### Field Trip

#### Statement

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

### 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. 03/30/16 10:02 am  
mjokeefe:  
Approved for  
RMATSENG Chair
2. 04/04/16 7:51 am  
Kaylon Buckner  
(kleb6b):  
Approved for CCC  
Secretary
3. 04/15/16 4:03 pm  
sraaper: Approved  
for Engineering  
DSCC Chair

Justification for  
change:

course no longer taught

Semesters  
previously  
offered as an  
experimental  
course

Co-Listed  
Courses:

BIO SCI 5210 - Biomaterials I  
MET ENG 5210 - Biomaterials I  
CHEM ENG 5200 - Biomaterials I

Course Reviewer  
Comments

Key: 1308  
[Preview Bridge](#)

# Course Inventory Change Request

Date Submitted: 03/29/16 2:46 pm

Viewing: **ENG MGT 5330 : Advanced Human Factors**

File: 25.1

Last edit: 04/18/16 9:06 am

Changes proposed by: cornss

Catalog Pages referencing this course	<u>Engineering Management</u>				
Requested Effective Change Date	Fall <b>2016</b> <del>2014</del>				
Department	Engineering Management and Systems Engineering				
Discipline	Engineering Management (ENG MGT)				
Course Number	5330				
Title	Advanced Human Factors				
Abbreviated Course Title	Advanced Human Factors				
Catalog Description	<p>An in-depth review of the foundations of human factors, focusing on the interaction of people with various forms of technology in a variety of environments. Topics include research and evaluation methods, displays (e.g., visual, auditory), attention and information processing, decision making, motor skills, anthropometry, and <b>biomechanics</b>. <del>biomechanics, with a strong focus on application (e.g., environmental design, human error, safety).</del></p>				
Prerequisites					
Field Trip Statement					
Credit Hours	LEC: 3	LAB: 0	IND: 0	RSD: 0	Total: 3
Required for Majors	No				

## In Workflow

1. **RENGMNGT 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. 03/29/16 3:53 pm  
Suzanna Long (longsuz):  
Approved for RENG MNGT Chair
2. 04/04/16 7:52 am  
Kaylon Buckner (kleb6b):  
Approved for CCC Secretary
3. 04/15/16 4:03 pm  
sraaper: Approved for Engineering DSCC Chair

Elective for Majors	No
Justification for change:	Course is mirrored in the Psychology Department
Semesters previously offered as an experimental course	
Co-Listed Courses:	<b>PSYCH 5710-- Advanced Human Factors</b>
Course Reviewer Comments	

Key: 25

[Preview Bridge](#)

# Course Inventory Change Request

Date Submitted: 02/11/16 5:15 pm

Viewing: **ERP 5240 : Enterprise ~~Portal~~ and Mobile Application Development**

File: 563.1

Last edit: 05/10/16 1:38 pm

Changes proposed by: barryf

Catalog Pages  
referencing this  
course

[Information Science and Technology](#)

Programs  
referencing this  
course

[MOBLB&T-MI: Mobile Bus & Tech Minor](#)

Requested  
Effective Change  
Date

**Fall 2016** ~~08/01/2014~~

Department

Business and Information Technology

Discipline

Enterprise Resource Planning (ERP)

Course Number

5240

Title

Enterprise ~~Portal~~ and Mobile Application Development

Abbreviated

**Enterprise & Mobile Apps**

Course Title

~~Portal and Mobile App Dev~~

Catalog  
Description

This course provides conceptual foundation and hands on experience in web based applications development deployed through an Enterprise ~~Portal~~ and Mobile platform. SAP ~~Netweaver~~ Enterprise **development Portal** and tools **will be used to build these apps**, including **SAP Design Studio, HANA Cloud Platform, and SAP Mobile Platform**. ~~Visual Composer, Web Dynpro, and Sybase Unwired Platform will be used for apps.~~

Prerequisites

Programming knowledge and either ERP 2110 or preceded or accompanied by ERP 5110.

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. Ishelton

11. Peoplesoft

Approval Path

1. 02/26/16 12:59  
am

siauk: Approved  
for RBUSADMN  
Chair

2. 02/26/16 7:34 am  
Kaylon Buckner  
(kleb6b):

Approved for CCC  
Secretary

3. 03/24/16 8:48 am  
barryf: Approved  
for Social

Sciences DSCC  
Chair

4. 04/18/16 9:08 am  
Kaylon Buckner

Field Trip  
Statement

(kleb6b):  
Approved for  
Pending CCC  
Agenda post

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

Required for  
Majors      No

Elective for  
Majors      No

Justification for  
change:      Updating course to de-emphasize portal aspect

Semesters  
previously  
offered as an  
experimental  
course

Co-Listed  
Courses:

Course Reviewer  
Comments

Key: 563  
[Preview Bridge](#)

# Course Inventory Change Request

Date Submitted: 04/05/16 2:09 pm

Viewing: **FRENCH 1180 : Intermediate French**~~**-French Readings And Composition**~~

File: 1009.1

Last edit: 04/18/16 9:08 am

Changes proposed by: denises

Programs  
referencing this  
course

MUL&DIV-MI: Multiculture & Diversity Minor

Other Courses  
referencing this  
course

In The Prerequisites:  
FRENCH 2170 : Masterpieces Of French Literature

Requested  
Effective Change  
Date

Fall **2016** ~~2014~~

Department

Arts, Languages, & Philosophy

Discipline

French (FRENCH)

Course Number

1180

Title

**Intermediate French**~~**-French Readings And Composition**~~

Abbreviated

**Intermediate French**~~**-Fr**~~

Course Title

**Readings & Compositi**~~**n**~~

Catalog  
Description

**Focuses on intermediate reading, writing, speaking, & listening skills in French.**  
~~**Readings in French narrative literature and composition.**~~

Prerequisites

French 1102.

Field Trip  
Statement

Credit Hours

LEC: 4      LAB: 0      IND: 0      RSD: 0      Total: 4

## In Workflow

1. **RPHILOSO 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. Ishelton
11. Peoplesoft

## Approval Path

1. 04/06/16 9:04 pm audram:  
Approved for RPHILOSO Chair
2. 04/07/16 8:07 am Kylon Buckner (kleb6b):  
Approved for CCC Secretary
3. 04/07/16 9:55 am dewittp:  
Approved for Arts & Humanities DSCC Chair



Required for  
Majors

No

Elective for  
Majors

No

Justification for  
change:

Course title and description changes more accurately reflect course content.  
Description & title were outdated.

Semesters  
previously  
offered as an  
experimental  
course

Co-Listed  
Courses:

Course Reviewer  
Comments

Key: 1009  
[Preview Bridge](#)

# Course Inventory Change Request

Date Submitted: 04/05/16 2:11 pm

Viewing: **FRENCH 4311 : Advanced French Conversation**

File: 1949.4

Last approved: 06/22/15 3:46 am

Last edit: 04/18/16 9:09 am

Changes proposed by: denises

Programs  
referencing this  
course

MUL&DIV-MI: Multiculture & Diversity Minor

Requested  
Effective Change  
Date

Fall **2016** ~~2015~~

Department

Arts, Languages, & Philosophy

Discipline

French (FRENCH)

Course Number

4311

Title

Advanced French Conversation

Abbreviated  
Course Title

Adv French Conversation

Catalog  
Description

Advanced conversation and oral practice.

Prerequisites

French 2170.

Field Trip  
Statement

Credit Hours	LEC: <b>3-2</b>	LAB: 0	IND: 0	RSD: 0	Total: <b>3-2</b>
Required for Majors	No				
Elective for Majors	No				

Justification for

## In Workflow

1. RPHILOSO 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. Ishelton
11. Peoplesoft

## Approval Path

1. 04/06/16 9:05 pm  
audram:  
Approved for  
RPHILOSO Chair
2. 04/07/16 8:08 am  
Kaylon Buckner  
(kleb6b):  
Approved for CCC  
Secretary
3. 04/07/16 9:56 am  
dewitt:  
Approved for Arts  
& Humanities  
DSCC Chair

## History

1. Jun 22, 2015 by

change:

denises (1949.1)

Course meeting times & amount of homework is worth 3 credits, not 2.

Semesters

previously

offered as an

experimental

course

Co-Listed

Courses:

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Course Reviewer

Comments

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Key: 1949

[Preview Bridge](#)

# Course Inventory Change Request

## New Course Proposal

Date Submitted: 04/05/16 1:56 pm

Viewing: **FRENCH 4330 : Business French**

File: 4308

Last edit: 04/07/16 7:56 pm

Changes proposed by: denises

Requested Fall 2016

Effective Change  
Date

Department Arts, Languages, & Philosophy

Discipline French (FRENCH)

Course Number 4330

Title Business French

Abbreviated Business French  
Course Title

Catalog

Description

This course addresses practical reading, speaking, listening, and writing strategies for conducting business in French-speaking countries. Students will also improve their knowledge of the contemporary Francophone world. Readings, lectures, and discussions are in French.

Prerequisites

French 2170.

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  
new course: Course has been offered twice and should be included in the catalog.

In Workflow

1. RPHILOSO 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. Ishelton
11. Peoplesoft

Approval Path

1. 04/06/16 9:05 pm  
audram:  
Approved for  
RPHILOSO Chair
2. 04/07/16 8:08 am  
Kaylon Buckner  
(kleb6b):  
Approved for CCC  
Secretary
3. 04/07/16 7:56 pm  
dewitt:  
Approved for Arts  
& Humanities  
DSCC Chair

Semesters FS 2008, SP 2015  
previously  
offered as an  
experimental  
course

Co-Listed  
Courses:

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Course Reviewer **dewittp (04/07/16 7:55 pm):** Corrected grammar  
Comments **dewittp (04/07/16 7:56 pm):** Corrected to Fall 16

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Key: 4308  
[Preview Bridge](#)

# Course Inventory Change Request

Date Submitted: 03/24/16 2:27 pm

Viewing: **GEOLOGY 3631 : Systematic Paleontology**

File: 1211.1

Last edit: 04/21/16 9:03 am

Changes proposed by: ikuenobe

Programs  
referencing this  
course

GL&GPH-BS: Geology and Geophysics BS

Other Courses  
referencing this  
course

In The Prerequisites:  
GEOLOGY 5741 : Micropaleontology  
GEOLOGY 6611 : Advanced Palynology

Requested  
Effective Change  
Date

**Fall 2016** ~~08/01/2014~~

Department

Geosciences and Geological and Petroleum  
Engineering

Discipline

Geology (GEOLOGY)

Course Number

3631

Title

Systematic Paleontology

Abbreviated  
Course Title

Systematic Paleontology

Catalog  
Description

Introduction to **paleontological principles, biostratigraphy, paleoenvironments, and**  
the study of fossil **invertebrates, microfossils, plants and palynology.** ~~invertebrates.~~  
Emphasis of the course is on fossil morphology, classification, and environmental  
relationships.

Prerequisites

**Geology 1110 or Geology 1120 or Bio Sci 1113.** ~~Geology 1120.~~

Field Trip  
Statement

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

## In Workflow

1. **RGEOENG 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. 03/24/16 2:28 pm  
ikuenobe:  
Approved for  
RGEOENG Chair
2. 03/24/16 3:05 pm  
Kaylon Buckner  
(kleb6b):  
Approved for CCC  
Secretary
3. 04/19/16 12:46  
pm  
imorgan:  
Approved for  
Sciences DSCC  
Chair

Required for Majors	No
Elective for Majors	No
Justification for change:	Description better reflects course content. Prerequisite change accommodates students with physical geology or introductory biology backgrounds.
Semesters previously offered as an experimental course	
Co-Listed Courses:	
Course Reviewer Comments	<b>ikuenobe (03/24/16 2:24 pm):</b> Rollback: Bio Sci 1110 should be Bio Sci 1113 <b>imorgan (04/19/16 12:46 pm):</b> Minor correction.

Key: 1211  
[Preview Bridge](#)

## Course Inventory Change Request

Date Submitted: 03/24/16 1:55 pm

Viewing: **GEOLOGY 4711 : Paleoclimatology and Paleoecology**

File: 214.1

Last edit: 04/21/16 9:04 am

Changes proposed by: ikuenobe

Programs referencing this course	<u>GL&amp;GPH-BS: Geology and Geophysics BS</u>				
Requested Effective Change Date	<b>Fall 2016</b> <del>08/01/2014</del>				
Department	Geosciences and Geological and Petroleum Engineering				
Discipline	Geology (GEOLOGY)				
Course Number	4711				
Title	Paleoclimatology and Paleoecology				
Abbreviated Course Title	Paleoclimatology				
Catalog Description	This course will introduce students to the elements of climate, evidence of climate changes, proxy measurements and paleoclimate models. There is a review of Holocene climates and Archean to Pleistocene paleoclimates.				
Prerequisites	<b>Geology 1110 or Geology 1120 or Geo Eng 1150.</b> <del>Geology 1120.</del>				
Field Trip Statement					
Credit Hours	LEC: 3	LAB: 0	IND: 0	RSD: 0	Total: 3
Required for Majors	No				
Elective for	No				

### In Workflow

1. **RGEOENG 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. 03/24/16 2:24 pm  
ikuenobe:  
Approved for  
RGEOENG Chair
2. 03/24/16 3:05 pm  
Kaylon Buckner  
(kleb6b):  
Approved for CCC  
Secretary
3. 04/19/16 12:47 pm  
imorgan:  
Approved for  
Sciences DSCC  
Chair



## Majors

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Justification for  
change:

Expanding prerequisite requirement to accommodate students who have taken  
Physical Geology.

Semesters  
previously  
offered as an  
experimental  
course

Co-Listed  
Courses:

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Course Reviewer  
Comments

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Key: 214

[Preview Bridge](#)

## Course Inventory Change Request

Date Submitted: 03/24/16 2:01 pm

Viewing: **GEOLOGY 6711 : Advanced Paleoclimatology and Paleoecology**

File: 381.1

Last edit: 05/12/16 7:09 am

Changes proposed by: ikuenobe

Requested **Fall 2016** ~~08/01/2014~~

Effective Change

Date

Department Geosciences and Geological and Petroleum Engineering

Discipline Geology (GEOLOGY)

Course Number 6711

Title Advanced Paleoclimatology and Paleoecology

Abbreviated Adv Paleoclimatology

Course Title

Catalog

Description

Advanced study of paleoclimatic and paleoecologic processes since the Archean, and the interpretation of Holocene climate changes, including human impacts. Extensive presentations and discussions of current ideas and techniques in paleoclimatic studies.

Prerequisites

**Geology 3620.** ~~Geology 3620 and 3631.~~

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

In Workflow

1. **RGEOENG 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. 03/24/16 2:25 pm  
ikuenobe:

Approved for  
RGEOENG Chair

2. 03/24/16 3:05 pm  
Kaylon Buckner

(kleb6b):  
Approved for CCC  
Secretary

3. 04/19/16 12:47  
pm

imorgan:  
Approved for  
Sciences DSCC  
Chair

4. 04/21/16 9:06 am  
Kaylon Buckner  
(kleb6b):

change:

Amended prerequisite to remove Geology 3621 requirement.

Semesters

previously

offered as an

experimental

course

Co-Listed

Courses:

Approved for

Pending CCC

Agenda post

Course Reviewer

Comments

Key: 381

[Preview Bridge](#)

# Course Inventory Change Request

Date Submitted: 03/25/16 12:29 pm

Viewing: **HISTORY 4097 : Senior Project**

File: 2491.2

Last approved: 10/19/15 3:34 am

Last edit: 04/18/16 9:12 am

Changes proposed by: dewittp

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

Effective Change

Date

Department History and Political Science

Discipline History (HISTORY)

Course Number 4097

Title Senior Project

Abbreviated Senior Project

Course Title

Catalog

Description

History majors **interested in graduate school or professional school, such as law school, should will** complete an extended research **project, or thesis, project** under the supervision of a department faculty member.

Prerequisites

History 2790 and senior **standing. history majors only.**

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:

After extensive discussion about how to make the senior thesis/project more

## In Workflow

1. RHISTORY 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. Ishelton
11. Peoplesoft

## Approval Path

1. 03/26/16 4:45 pm sfogg: Approved for RHISTORY Chair
2. 04/04/16 7:52 am Kaylon Buckner (kleb6b): Approved for CCC Secretary
3. 04/04/16 9:19 am dewittp: Approved for Arts & Humanities DSCC Chair

## History

1. Oct 19, 2015 by

dewittp (2491.1)

effective and the importance of meeting the experiential learning requirement, the history department decided to eliminate the senior thesis/project as a requirement for a degree in history, but keep it as an optional, one-semester course for students interested in graduate school or needing an acceptable experiential learning experience. History students seeking teacher certification or taking an internship meet the experiential learning requirement and do not require this additional experience. Removing the senior thesis/project requirement will allow them to take an additional content course.

Semesters  
previously  
offered as an  
experimental  
course

Co-Listed  
Courses:

Course Reviewer  
Comments

Key: 2491  
[Preview Bridge](#)

# Course Inventory Change Request

Date Submitted: 03/17/16 12:26 pm

Viewing: **PHYSICS 2111 : General Physics II**

File: 1920.1

Last edit: 04/21/16 9:06 am

Changes proposed by: waddill

Programs  
referencing this  
course

[AP MATH-BS: Applied Mathematics BS](#)  
[BIO SC-BA: Biological Sciences BA](#)  
[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](#)

Other Courses  
referencing this  
course

In The Catalog Description:  
[PHYSICS 2119 : General Physics Laboratory](#)  
 In The Prerequisites:  
[CHEM 3420 : Introduction To Quantum Chemistry](#)  
[CHEM 5420 : Elemental Quantum Chemistry](#)  
[CHEM 5710 : Environmental Monitoring](#)  
[PHYSICS 2119 : General Physics Laboratory](#)  
[PHYSICS 5413 : Chaos, Fractals, and Nonlinear Dynamics](#)

Requested  
Effective Change  
Date

**Fall 2016** ~~08/01/2014~~

Department

Physics

Discipline

Physics (PHYSICS)

Course Number

2111

Title

General Physics II

Abbreviated  
Course Title

General Physics II

Catalog

Description

An introduction to the fundamental ideas of physics including electricity, magnetism,

## 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. 03/17/16 12:27 pm  
waddill: Approved for RPHYSICS Chair
2. 03/21/16 7:01 am  
Kaylon Buckner (kleb6b):  
Approved for CCC Secretary
3. 04/19/16 12:48 pm  
imorgan:  
Approved for Sciences DSCC Chair

and light.

Prerequisites      Preceded by Physics 1111 ~~and preceded~~ or **Physics 1135 and preceded** ~~accompanied~~  
~~by Math 1221~~ or **accompanied by Math 1221 or** Math 1215.

Field Trip  
Statement

Credit Hours      LEC: 4      LAB: 0      IND: 0      RSD: 0      Total: 4

Required for  
Majors      No

Elective for  
Majors      No

Justification for  
change:      In the past Physics has offered two calculus-based introductory Physics sequences -  
Physics 1111/2111 and Physics 1135/2135. The proposed change allows the first  
semester of either sequence to serve as the prerequisite for 2111.

Semesters  
previously  
offered as an  
experimental  
course

Co-Listed  
Courses:

Course Reviewer  
Comments

# Course Inventory Change Request

Date Submitted: 03/17/16 12:22 pm

Viewing: **PHYSICS 2135 : Engineering Physics II**

File: 1919.1

Last edit: 04/21/16 9:07 am

Changes proposed by: waddill

Programs  
referencing this  
course

[AE ENG-BS: Aerospace Engineering BS](#)  
[AP MATH-BS: Applied Mathematics BS](#)  
[ARC ENG-BS: Architectural Engineering BS](#)  
[BIO SC-BS: Biological Sciences BS](#)  
[CH ENG-BS: Chemical Engineering BS](#)  
[CHEM-BS: Chemistry BS](#)  
[CMP SC-BS: Computer Science BS](#)  
[CP ENG-BS: Computer Engineering BS](#)  
[CR ENG-BS: Ceramic Engineering BS](#)  
[CV ENG-BS: Civil Engineering BS](#)  
[EL ENG-BS: Electrical Engineering BS](#)  
[ENG MG-BS: Engineering Management BS](#)  
[EV ENG-BS: Environmental Engineering BS](#)  
[GE ENG-BS: Geological Engineering BS](#)  
[GL&GPH-BS: Geology and Geophysics BS](#)  
[MC ENG-BS: Mechanical Engineering BS](#)  
[MI ENG-BS: Mining Engineering BS](#)  
[MT ENG-BS: Metallurgical Engineering BS](#)  
[NU ENG-BS: Nuclear Engineering BS](#)  
[PE ENG-BS: Petroleum Engineering BS](#)  
[PHYSIC-BS: Physics BS](#)

Other Courses  
referencing this  
course

In The Prerequisites:  
[ARCH ENG 3803 : Building Electrical Systems](#)  
[CER ENG 6220 : Optical Properties Of Materials](#)  
[CHEM 3420 : Introduction To Quantum Chemistry](#)  
[CHEM 5420 : Elemental Quantum Chemistry](#)  
[CHEM ENG 5340 : Principles Of Environmental Monitoring](#)  
[CIV ENG 3842 : Fundamentals of Building Systems](#)  
[ELEC ENG 2200 : Introduction to Electronic Devices](#)  
[ELEC ENG 2201 : Electronic Devices Laboratory](#)  
[ELEC ENG 2800 : Electrical Circuits](#)  
[ELEC ENG 3500 : Electromechanics](#)  
[ELEC ENG 3600 : Electromagnetics](#)

## 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. 03/17/16 12:27 pm  
waddill: Approved for RPHYSICS Chair
2. 03/21/16 7:01 am  
Kaylon Buckner (kleb6b): Approved for CCC Secretary
3. 04/19/16 12:48 pm  
imorgan: Approved for Sciences DSCC Chair



[ELEC ENG 5200 : Classical Optics](#)  
[ELEC ENG 5510 : Electric-Drive Vehicles](#)  
[ELEC ENG 5670 : Nondestructive Testing](#)  
[GEO ENG 5556 : Renewable Energy Systems](#)  
[GEOPHYS 2211 : Geophysical Imaging](#)  
[MECH ENG 3411 : Modeling and Analysis of Dynamic Systems](#)  
[MECH ENG 4840 : Mechanical Instrumentation](#)  
[MET ENG 5510 : Nondestructive Testing](#)  
[MET ENG 5627 : Electrical Systems and Controls for Materials](#)  
[MIN ENG 4823 : Rock Mechanics](#)  
[NUC ENG 3103 : Interactions Of Radiation With Matter](#)  
[PET ENG 3330 : Well Logging](#)  
[PHYSICS 2305 : Introduction To Modern Physics](#)  
[PHYSICS 2311 : Modern Physics I](#)  
[PHYSICS 2401 : Introduction To Theoretical Physics](#)  
[PHYSICS 4503 : Classical Optics](#)  
[PHYSICS 5413 : Chaos, Fractals, and Nonlinear Dynamics](#)

Requested **Fall 2016**~~08/01/2014~~  
 Effective Change  
 Date

Department Physics  
 Discipline Physics (PHYSICS)  
 Course Number 2135  
 Title Engineering Physics II  
 Abbreviated Engineering Physics II  
 Course Title

Catalog Description An introduction to electricity, magnetism, and light, with emphasis on topics needed by engineering students.

Prerequisites Physics **1135** ~~1135, Math 1221~~ or **Physics 1111, Math 1221** or Math 1215.

Field Trip  
 Statement

Credit Hours LEC: 1.5 LAB: 1 IND: 0 RSD: 1.5 Total: 4

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

Elective for  
 Majors No

Justification for change: Physics had two introductory Physics course sequences for calculus-based physics. They were Physics 1111 and Physics 2111 or Physics 1135 and Physics 2135. We

recently stopped offering the 1111/2111 sequence due to enrollment issues. The proposed change would allow students who began the 1111/2111 sequence to finish with 2135.

Semesters  
previously  
offered as an  
experimental  
course

Co-Listed  
Courses:

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Course Reviewer  
Comments

Key: 1919  
[Preview Bridge](#)

## Program Change Request

A deleted record cannot be edited

### Program Deactivation Proposal

Date Submitted: 04/06/16 3:22 pm

Viewing: **AP MATH-MI : Applied Math Minor**

File: 224.1

Last edit: 04/21/16 9:08 am

Changes proposed by: imorgan

Start Term	<b>Fall 2016</b>
Program Code	AP MATH-MI
Department	Mathematics & Statistics
Title	Applied Math Minor

### In Workflow

1. **RMATHEMA 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

### Program Requirements and Description

Justification for request

There is not actually an Applied Math minor--I believe it was created when I erroneously approved a minor form labeled Applied Mathematics instead of Mathematics.

Supporting Documents

Course Reviewer Comments  
**kleb6b (04/21/16 9:08 am):** update effective term

### Approval Path

1. 04/06/16 4:49 pm  
sclark: Approved for RMATHEMA Chair
2. 04/07/16 8:07 am  
Kaylon Buckner (kleb6b): Approved for CCC Secretary
3. 04/19/16 12:42 pm  
imorgan: Approved for Sciences DSCC Chair
4. 04/21/16 8:57 am  
Kaylon Buckner (kleb6b): Approved for Pending CCC Agenda post

Key: 224  
[Preview Bridge](#)

## Program Change Request

Date Submitted: 04/06/16 3:20 pm

Viewing: **AP MATH-MS : Applied Mathematics MS**

File: 7.11

Last approved: 07/23/15 3:14 pm

Last edit: 04/21/16 9:09 am

Changes proposed by: imorgan

Catalog Pages [Mathematics and Statistics](#)  
Using this  
Program

Start Term **Fall 2016-08/17/2015**  
Program Code AP MATH-MS  
Department Mathematics & Statistics  
Title Applied Mathematics MS

## Program Requirements and Description

The program for the M.S. degree without a thesis must include at least 33 hours of graduate credit, nine hours of which must be lecture courses at the 6000-level. For the M.S. degree with thesis, the program must include at least 30 hours of graduate credit, at least six hours of which must be lecture courses at the 6000-level and six or more hours of which must be Graduate Research, [MATH 6099 or STAT 6099](#). ~~MATH 5099 or STAT 5099~~. Candidates in a ~~non-thesis program must pass a final comprehensive examination while candidates in a~~ thesis program must pass an oral thesis defense. All M.S. candidates are encouraged to include in their program courses in engineering and science which are closely related to their research in mathematics or statistics. For those intending to terminate study at the M.S. level, specializations supporting specific career goals are possible.

### Justification for request

We have replaced 5099 with 6099 based on the preferences of the Graduate Studies office. The department also voted to remove the master's comprehensive exam requirement for non-thesis students.

### Supporting Documents

Course Reviewer **kleb6b (04/07/16 8:07 am)**: Update effective term  
Comments **kleb6b (04/21/16 9:09 am)**: update effective term

### In Workflow

1. **RMATHEMA 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. 04/06/16 4:49 pm  
sclark: Approved for RMATHEMA Chair
2. 04/07/16 8:07 am  
Kaylon Buckner (kleb6b): Approved for CCC Secretary
3. 04/19/16 12:42 pm  
imorgan: Approved for Sciences DSCC Chair
4. 04/21/16 8:58 am  
Kaylon Buckner (kleb6b): Approved for Pending CCC Agenda post

### History

1. Sep 12, 2013 by pantaleoa
2. Mar 6, 2014 by imorgan
3. Jul 23, 2014 by imorgan
4. Jul 23, 2015 by pantaleoa

## Program Change Request

Date Submitted: 03/23/16 8:48 am

Viewing: **CHEM-MI : Chemistry Minor**

File: 17.4

Last approved: 04/28/14 10:22 am

Last edit: 05/10/16 1:58 pm

Changes proposed by: woelkk

Catalog Pages Using this Program	<a href="#">Chemistry</a>
Start Term	<b>Fall 2016</b> <del>8/1/2014</del>
Program Code	CHEM-MI
Department	Chemistry
Title	Chemistry Minor

## Program Requirements and Description

### Minor in Chemistry

A minor in chemistry requires a minimum of 19 hours of chemistry course work selected in conjunction with a chemistry faculty advisor. The required courses are [CHEM 1100](#) , ~~are CHEM 1310~~ , ~~CHEM 1319~~ , ~~CHEM 1320~~ , ~~CHEM 1400~~ , ~~CHEM 1510~~ , ~~CHEM 2210~~ and either [CHEM 2219](#) ~~CHEM 2289~~ or [CHEM 2289](#) ~~CHEM 2249~~ . ~~Five Three~~ additional hours of chemistry are to be selected from [CHEM 1510](#) or ~~CHEM 2510~~ , or other Chem 2000, 3000, and 4000-level courses. **A minimum grade of "C" is required for each course counted toward the minor.**

Justification for request

(1) For years, the department has allowed students to substitute the formerly required CHEM 1510 course with other chemistry courses. This change makes CHEM 1510 optional (which is in line with the common departmental practice). (2) Requiring a "C" in all courses is in line with requirements for chem majors.. (3) CHEM 2510 does not need to be listed separately as an elective for it falls under the 2000-level courses.

Supporting Documents

Course Reviewer Comments

**woelkk (03/23/16 8:52 am):** Made minor edits to list courses in order of increasing course number.

**kleb6b (04/21/16 9:09 am):** update effective term

**imorgan (05/10/16 1:58 pm):** Changed the last word from "degree" to "minor".

### In Workflow

1. [RCHEMIST 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. 03/23/16 8:53 am  
woelk (woelkk):  
Approved for  
RCHEMIST Chair
2. 03/23/16 9:00 am  
Kaylon Buckner (kleb6b): Approved  
for CCC Secretary
3. 04/19/16 12:45 pm  
imorgan: Approved  
for Sciences DSCC Chair
4. 04/21/16 8:59 am  
Kaylon Buckner (kleb6b): Approved  
for Pending CCC Agenda post
5. 05/10/16 1:41 pm  
Kaylon Buckner (kleb6b): Approved  
for CCC Meeting Agenda
6. 05/10/16 1:59 pm  
imorgan: Approved  
for Campus Curricula Committee Chair

### History

1. Apr 28, 2014 by  
Thomas Schuman (tschuman)



## Program Change Request

Date Submitted: 04/01/16 12:50 pm

Viewing: **ENG MG-BS : Engineering Management BS**

File: 44.23

Last approved: 07/20/15 1:49 pm

Last edit: 04/21/16 9:10 am

Changes proposed by: sraper

Catalog Pages Using this Program	<a href="#">Engineering Management</a>
Start Term	<b>Fall 2016</b> <del>08/17/2015</del>
Program Code	ENG MG-BS
Department	Engineering Management and Systems Engineering
Title	Engineering Management BS

## Program Requirements and Description

### Bachelor of Science Engineering Management

Entering freshmen intending to study engineering management are admitted to the Freshman Engineering Program. They may, however, state an engineering management preference, which will be used as a consideration for available freshman departmental scholarships. The focus of the Freshman Engineering program is on enhanced advising and career counseling, with the goal of providing to the student the information necessary to make an informed decision regarding the choice of a major.

The bachelor of science degree in engineering management requires a minimum of 128 credit hours. These requirements are in addition to credit received for algebra, trigonometry, and basic ROTC courses. An average of at least two grade points per credit hour must be attained. At least two grade points per credit hour must also be attained in all courses taken in engineering management.

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

1. All students are required to take one American history course, one economics course, and [ENGLISH 1120](#). The history course is to be selected from [HISTORY 1200](#), [HISTORY 1300](#), [HISTORY 1310](#), or [POL SCI 1200](#). The economics course may be either [ECON 1100](#) or [ECON 1200](#). All students must choose one additional humanities or social science course from "The Approved List of Humanities and Social Sciences Courses for Engineering Degrees" maintained by the Office of Undergraduate Studies.
2. Depth requirement. Three credit hours must be taken in humanities or social sciences at the 2000-level or above and must be selected from the approved list. This course must have as a prerequisite one of the humanities or social sciences courses already taken. Foreign language courses numbered 1180 will be considered to satisfy this requirement. Students may receive humanities credit for foreign language courses in their native tongue only if the course is at the 4000-level or above. All courses taken to satisfy the depth requirement must be taken after graduating from high school.
3. The remaining two courses are to be chosen from the list of approved humanities/social sciences courses and may include one communications course in addition to [ENGLISH 1120](#).
4. Any specific departmental requirements in the general studies area must be satisfied.
5. Special topics, special problems and honors seminars are allowed only by petition to and approval by the student's department chair.

The engineering management program at Missouri S&T is characterized by its focus on the scientific basics of engineering and its innovative application; indeed, the underlying theme of this educational program is the application of the scientific basics to engineering practice through attention to problems and needs of the public. The

### In Workflow

1. [RENGMNGT 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. [kristyg](#)

### Approval Path

1. 04/01/16 6:53 pm  
Suzanna Long  
(longsuz): Approved for RENG MNGT Chair
2. 04/04/16 7:51 am  
Kaylon Buckner (kleb6b): Approved for CCC Secretary
3. 04/15/16 4:03 pm  
sraper: Approved for Engineering DSCC Chair
4. 04/18/16 9:06 am  
Kaylon Buckner (kleb6b): Approved for Pending CCC Agenda post

### History

1. Sep 24, 2013 by lahne
2. Apr 28, 2014 by sraper
3. Jun 12, 2014 by pantaleoa
4. Nov 18, 2014 by Kaylon Buckner (kleb6b)
5. Jan 30, 2015 by sraper
6. Jul 20, 2015 by pantaleoa

necessary interrelations among the various topics, the engineering disciplines, and the other professions as they naturally come together in the solution of real world problems are emphasized as research, analysis, synthesis, and design are presented and discussed through classroom and laboratory instruction.

### Free Electives Footnote:

Free electives. Each student is required to take three hours of free electives in consultation with his/her academic advisor. Credits which do not count towards this requirement are deficiency courses (such as algebra and trigonometry), and extra credits in required courses. Any courses outside of engineering and science must be at least three credit hours.

Freshman Year			
First Semester	Credits	Second Semester	Credits
<a href="#">FR ENG 1100</a>	1	<a href="#">MECH ENG 1720</a>	3
<a href="#">CHEM 1310</a> <sup>1</sup>	4	<a href="#">MATH 1215</a> <sup>1</sup>	4
<a href="#">CHEM 1319</a>	1	<a href="#">PHYSICS 1135</a> <sup>1</sup>	4
<a href="#">CHEM 1100</a>	1	<a href="#">ECON 1100 or 1200</a>	3
<a href="#">MATH 1214</a> <sup>1</sup>	4	<a href="#">COMP SCI 1972</a> <sup>1</sup>	2
<a href="#">ENGLISH 1120</a>	3	<a href="#">COMP SCI 1982</a>	1
<a href="#">HISTORY 1200</a> , or <a href="#">1300</a> , or <a href="#">1310</a> , or <a href="#">POL SCI 1200</a>	3		
	17		17
Sophomore Year			
First Semester	Credits	Second Semester	Credits
<a href="#">MATH 2222</a> <sup>1</sup>	4	<a href="#">MATH 3304</a> <sup>1</sup>	3
<a href="#">PHYSICS 2135</a> <sup>1</sup>	4	<a href="#">STAT 3115 or 3117</a> <sup>1</sup>	3
<a href="#">CIV ENG 2200</a> <sup>1</sup>	3	<a href="#">ENG MGT 2110</a> <sup>1</sup>	3
<a href="#">ENG MGT 1210</a> <sup>1</sup>	2	<a href="#">ENG MGT 2211</a> <sup>1</sup>	3
<a href="#">ENG MGT 2310</a> <sup>1</sup>	3	<a href="#">MECH ENG 2350</a>	2
		<a href="#">PSYCH 1101</a>	3
	16		17
Junior Year			
First Semester	Credits	Second Semester	Credits
<a href="#">ENG MGT 3310</a> <sup>1</sup>	3	<a href="#">ENG MGT 4710</a> <sup>1</sup>	3
<a href="#">CIV ENG 2210</a>	3	<a href="#">MECH ENG 2527</a>	3
<a href="#">CIV ENG 2211</a>	1	<a href="#">ELEC ENG 2800</a>	3
<a href="#">ENG MGT 3510</a> <sup>1</sup>	3	<a href="#">ENGLISH 3560</a>	3
<a href="#">SP&amp;M S 1185 or 2181</a>	3	<a href="#">ENG MGT 3320</a> <sup>1</sup>	3
Humanities and Social Sciences <sup>2</sup>	3		
	16		15
Senior Year			
First Semester	Credits	Second Semester	Credits
Emphasis Area Required Course	3	ENG MGT Technical Elective	3
Emphasis Area Required Course	3	ENG MGT Technical Elective	3
Emphasis Area Required Course	3	<a href="#">ENG MGT 4907</a> <sup>1</sup>	3
<a href="#">ENG MGT 4110</a> <sup>1</sup>	3	Upper Level Hum/SS <sup>2</sup>	3
ENG MGT Technical Elective	3	Free Elective <sup>3</sup>	3
	15		15
Total Credits: 128			

### Example Emphasis Area Programs for Engineering Management Students



One unique aspect of the engineering management degree is the student's ability to select an established emphasis area or create a specialized emphasis. Two examples of established emphasis areas are shown below.

## Management of Technology

<a href="#">ENG MGT 5511</a>	Technical Entrepreneurship	3
<a href="#">ENG MGT 5512</a>	Legal Environment	3
<a href="#">ENG MGT 5410</a>	Industrial System Simulation	3
<a href="#">ENG MGT 5614</a>	Supply Chain Management Systems	3
ENG MGT Technical Electives (in consultation with your advisor)		6

## Industrial Engineering

<a href="#">ENG MGT 4310</a>	Materials Handling and Plant Layout	3
<a href="#">ENG MGT 4330</a>	Human Factors	3
<a href="#">ENG MGT 5410</a>	Industrial System Simulation	3
<a href="#">ENG MGT 5414</a>	Introduction To Operations Research	3
ENG MGT Technical Electives (in consultation with your advisor)		6

## General

Engineering Area Courses (Engineering Discipline)	15
ENG MGT-Technical Elective ( <b>in consultation with your advisor</b> )	3

**Note:** All electives must be chosen in consultation with the student's advisor. Students must satisfy the common engineering freshman year course requirements in addition to the sophomore, junior, and senior year requirements listed above with a minimum of 128 hours.

1	Must have a grade of "C" or better in these courses for graduation. <a href="#">MATH 1208</a> and <a href="#">MATH 1221</a> may be substituted for <a href="#">MATH 1214</a> and <a href="#">MATH 1215</a> , respectively.
2	Humanities and social science electives must be approved by the student's advisor. Students must comply with the general education requirements with respect to selection and depth of study. These requirements are specified in the current catalog.
3	Each student is required to take three hours of free electives in consultation with his/her academic advisor. Credits which do not count towards this requirement are deficiency courses (such as algebra and trigonometry), and extra credits in required courses. Any courses outside of engineering and science must be at least three credit hours.
4	Students are required to select an emphasis area and maintain a minimum 2.0 GPA for these courses.
5	All engineering management students must take the fundamentals of engineering (FE) exam prior to graduation. A passing grade on this examination is not required to earn a B.S. degree. This requirement is part of the Missouri S&T assessment process as described in assessment requirements found elsewhere in this catalog.

Justification for request      Emgt faculty voted to require the FE exam rather than the AEM exam. This change is more consistent with other engineering programs in the CEC.

Supporting Documents

Course Reviewer      **kleb6b (04/04/16 7:51 am):** Update effective term  
Comments      **kleb6b (04/21/16 9:10 am):** update effective term

## Program Change Request

Date Submitted: 04/05/16 10:39 am

Viewing: **HIST-BA : History BA**

File: 157.12

Last approved: 07/21/15 9:51 am

Last edit: 05/10/16 1:41 pm

Changes proposed by: dewittp

Catalog Pages [History](#)  
Using this  
Program

Start Term **Fall 2016-08/17/2015**  
Program Code HIST-BA  
Department History and Political Science  
Title History BA

## Program Requirements and Description

### Bachelor of Arts History

(In addition to general requirements for bachelor of arts degree.)

### In Workflow

1. RHISTORY 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. kristyg

### Approval Path

1. 04/06/16 8:47 am  
sfogg: Approved for RHISTORY Chair
2. 04/07/16 8:08 am  
Kaylon Buckner (kleb6b): Approved for CCC Secretary
3. 04/07/16 10:24 am  
dewittp: Approved for Arts & Humanities DSCC Chair
4. 04/18/16 9:11 am  
Kaylon Buckner (kleb6b): Approved for Pending CCC Agenda post

### History

1. Aug 6, 2014 by lahne
2. Jul 21, 2015 by pantaleoa

<a href="#">HISTORY 1790</a>	Introduction to History	1
<a href="#">HISTORY 1300</a>	American History To 1877	3
<a href="#">HISTORY 1310</a>	American History Since 1877	3
<a href="#">HISTORY 2790</a>	Historiography	3
2 American History Electives		6
2 European History Electives		6
<del>2 History Electives</del>		<del>6</del>
<del>HISTORY 4010</del>	<del>Seminar</del>	<del>3</del>
<del>or HISTORY 4097</del>	<del>Senior Project</del>	
<b>3 History Electives</b>		<b>9</b>

Total Credits	31
---------------	----

Note: History majors are also required to complete [HISTORY 1100](#) and [HISTORY 1200](#) as part of the general education requirements for the B.A. In addition, 9 hours of the 31 major hours must be taken at the 3000 or 4000 level.

Note: **History majors interested in graduate or professional school should take HISTORY 4097 as independent research under the guidance of a faculty member in a short period (one semester).**

Note: **History majors must complete an experiential learning requirement. They can meet this requirement by taking HISTORY 4085 or HISTORY 4097 or study abroad, among other options, in consultation with their advisor.**

Note: Entering students will normally take [ENGLISH 1120](#) either semester of the first year.

## Secondary Education Emphasis Area

You may earn a B.A. degree in history from Missouri S&T and certification to teach in the schools of Missouri. This program may be completed in four academic years and student teaching is arranged with public schools within 30 miles of the Rolla campus.

Students interested in the certification program should consult with the advisor for history/education majors in the department of history and political science for requirements particular to those interested in this degree. Students should process a change of major form to designate history with an emphasis area of secondary education.

History students must complete 124 credit hours, including the requirements of the teacher education program listed in this catalog. A minimum grade of "C" is required by the department in all history and political science courses counted towards this degree. Students must take the following courses:

Communication Skills: 9 hours		
<a href="#">ENGLISH 1120</a>	Exposition And Argumentation	3
<a href="#">ENGLISH 1160</a>	Writing And Research	3
<a href="#">SP&amp;M S 1185</a>	Principles Of Speech	3
Humanities: 12 hours with at least one course from the first three areas		
Art or Music or Theater Appreciation		
Philosophy		
Literature		
Foreign Language		
<a href="#">ETYM 4306</a>	Introduction To Etymology	3
Social Sciences: 15 hours		
<a href="#">POL SCI 1200</a>	American Government	3
<a href="#">POL SCI 2760</a>	Course POL SCI 2760 Not Found	3
or <a href="#">POL SCI 2210</a>	Course POL SCI 2210 Not Found	
or <a href="#">POL SCI 3300</a>	Principles Of Public Policy	
or <a href="#">POL SCI 3760</a>	The American Presidency	
<a href="#">POL SCI 3763</a>	Contemporary Political Thought	3
or <a href="#">POL SCI 3211</a>	American Political Parties	
<a href="#">ECON 1100</a>	Principles Of Microeconomics	3
or <a href="#">ECON 1200</a>	Principles Of Macroeconomics	
<a href="#">PSYCH 1101</a>	General Psychology	3
<a href="#">HISTORY 2110</a>	World Regional Geography	3
Natural Sciences: 7 hours = 2 courses and 1 lab		
One course in Physics or Chemistry or Geology and one course in Biology		
One laboratory in any of the above science courses		
Mathematics: 3 hours		
<a href="#">MATH 1120</a>	College Algebra (or higher)	3-5
or <a href="#">MATH 1103</a>	Fundamentals Of Algebra	

or <a href="#">MATH 1140</a>	College Algebra	
Clinical Experience: 16 hours		
<a href="#">EDUC 1104</a>	Teacher Field Experience	2
<a href="#">EDUC 1164</a>	Aiding Elementary, Middle And Secondary Schools	2
<a href="#">EDUC 4299</a>	Student Teaching	12
Professional Requirements: 26 hours		
<a href="#">EDUC 1040</a>	Perspectives In Education	2
<a href="#">EDUC 1174</a>	School Organization & Adm For Elementary & Secondary Teachers	2
<a href="#">EDUC 2216</a>	Teaching Reading In Content Area	3
<a href="#">ENGLISH 3170</a>	Teaching And Supervising Reading and Writing	3
<a href="#">EDUC 3280</a>	Teaching Methods And Skills In The Content Areas	6
<a href="#">EDUC 4298</a>	Student Teaching Seminar	1
<a href="#">PSYCH 2300</a>	Educational Psychology	3
<a href="#">PSYCH 3311</a>	Psychological & Educational Development Of The Adolescent	3
<a href="#">PSYCH 4310</a>	Psychology Of The Exceptional Child	3
History Requirements: 37 hours		
<a href="#">HISTORY 1790</a>	Introduction to History	1
<a href="#">HISTORY 1100</a>	Early Western Civilization	3
<a href="#">HISTORY 1200</a>	Modern Western Civilization	3
<a href="#">HISTORY 1300</a>	American History To 1877	3
<a href="#">HISTORY 1310</a>	American History Since 1877	3
<a href="#">HISTORY 2790</a>	Historiography	3
<del>HISTORY 4010</del>	<del>Seminar</del>	<del>3</del>
or <del>HISTORY 4097</del>	<del>Senior Project</del>	
American History Electives		6
European History Electives		6
History Electives		9

Justification for request

The History department has decided to no longer make HISTORY 4097 a requirement, instead offering it as an option for students wishing to go to graduate school. History majors or history majors with secondary education emphasis will now have to take an additional content course in the form of a history elective. We also added a note regarding experiential learning.

Supporting Documents

Course Reviewer Comments

**dewittp (04/07/16 10:13 am):** Updated POL SCI 2760 and POL SCI 2210 to recently updated and approved course numbers  
**dewittp (04/07/16 10:23 am):** Updated not found courses to new approved numbers  
**kleb6b (04/18/16 9:11 am):** Update effective term  
**kleb6b (05/10/16 1:41 pm):** Edits per CCC meeting

## Program Change Request

### New Program Proposal

Date Submitted: 01/27/16 4:08 pm

Viewing: **HISTORY-BS : Bachelor of Science in History**

File: 242

Last edit: 04/18/16 9:12 am

Changes proposed by: dewittp

Start Term	Fall 2016
Program Code	HISTORY-BS
Department	History and Political Science
Title	Bachelor of Science in History

### In Workflow

1. RHISTORY 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. kristygy

### Program Requirements and Description

Students must take a minimum of 120 hours for a Bachelor of Science degree in history, and obtain a grade point average of 2.0. These requirements for the B.S. are in addition to credit received for basic ROTC.

The B.S. in history requires the following:

1. ENGLISH 1120 (entering students will normally take ENGLISH 1120 within their first year of study) and one other writing intensive course outside their major, which may include ENGLISH 1160, ENGLISH 1170, or ENGLISH 3560. (6 hours)
2. Math and Sciences. The general requirements for a B.S. call for at least 18 hours in biological, physical (chemistry, geology, physics), and mathematical (mathematics, statistics, computer science, and information science and technology) sciences. The B.S. in history requires at least one course from each of the biological and physical sciences, one lab, and at least one math course at the level of college algebra or higher. In addition to these requirements, students may count STAT 1115, up to 3 hours from psychology classes (PSYCH 2200 preferred), and up to 3 hours from history of science and technology classes (HISTORY 2510, HISTORY 3510, or HISTORY 2530), but may not use them to satisfy another requirement. (18 hours)
3. Humanities. Students must take 12 hours in humanities other than history with at least one course from literature, philosophy, and fine arts (Art, Music, or Theater Appreciation). Students may take courses in language and humanities other than history to meet the 12 hours requirement. (12 hours)
4. Social Sciences. Students must take 12 hours in social sciences. Students must take POL SCI 1200 and at least one course in two from the three areas: economics, political science, and psychology. At the discretion of the major adviser, students may transfer up to 3 hours of Sociology to meet the 12 hours requirement. (12 hours)
5. History. Students must take 37 hours in required history courses, including HISTORY 1790, HISTORY 1100, HISTORY 1200, HISTORY 1300, HISTORY 1310, HISTORY 2790, and HISTORY 4097. The student must earn a grade of C or better in these required courses. (37)
6. History Electives. Students must take at least 18 hours in history electives, including at least 6 hours in American history and at least 6 hours in European history. Nine of these 18 hours of history electives must be at or above the 3000 level. (18 hours)
7. Electives Credit. Each student will elect sufficient additional courses to complete a minimum of 120 credit hours, which may include up to 12 hours in engineering courses at the discretion of the major adviser. At least 9 hours of these electives must be at the 3000 or above level, although substitutions may be permitted at the discretion of the major adviser. All electives must accumulate to at least a 2.0 grade point average.

### Approval Path

1. 01/28/16 8:08 am  
sfogg: Approved for  
RHISTORY Chair
2. 02/01/16 1:02 pm  
Kaylon Buckner  
(kleb6b): Approved  
for CCC Secretary
3. 02/01/16 2:59 pm  
dewittp: Rollback to  
CCC Secretary for  
Arts & Humanities  
DSCC Chair
4. 04/04/16 9:39 am  
Kaylon Buckner  
(kleb6b): Approved  
for CCC Secretary
5. 04/04/16 9:46 am  
dewittp: Approved  
for Arts &  
Humanities DSCC  
Chair
6. 04/07/16 8:33 am  
Kaylon Buckner  
(kleb6b): Rollback  
to Arts &  
Humanities DSCC  
Chair for Pending  
CCC Agenda post
7. 04/07/16 10:28 am  
dewittp: Approved  
for Arts &  
Humanities DSCC  
Chair
8. 04/18/16 9:13 am  
Kaylon Buckner  
(kleb6b): Approved  
for Pending CCC  
Agenda post

Justification for To offer history majors a BS in addition to a BA as this could provide additional

request                      employment opportunities especially in private industry and to offer science or engineering majors opportunity for a dual major. Dean Roberts approved via email and Provost Marley's approval is attached, as well as a copy of the CBHE forms.

Supporting  
Documents

Course Reviewer      **dewittp (02/01/16 2:59 pm):** Rollback: We do not yet have the CBHE forms approval.  
Comments              **dewittp (04/04/16 9:46 am):** CBHE forms and proposal have been approved by Provost.  
                             **kleb6b (04/07/16 8:33 am):** Rollback: Attach supporting documents  
                             **dewittp (04/07/16 10:27 am):** Attached proposal forms as well as Provost Marley's approval forms.  
                             **kleb6b (04/18/16 9:12 am):** Update effective term

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Key: 242  
[Preview Bridge](#)

## Program Change Request

Date Submitted: 04/06/16 3:16 pm

Viewing: **MATH-MST : Mathematics MST**

File: 84.4

Last approved: 07/23/15 3:16 pm

Last edit: 04/21/16 9:12 am

Changes proposed by: imorgan

Catalog Pages [Mathematics and Statistics](#)  
Using this  
Program

Start Term **Fall 2016-08/17/2015**  
Program Code MATH-MST  
Department Mathematics & Statistics  
Title Mathematics MST

## Program Requirements and Description

The master of science for teachers program is primarily designed for secondary school teachers in the physical sciences and mathematics. The program of study must include at least 32 hours of courses numbered above 2000 in science and mathematics, three hours of which must be at the 6000-level. No more than six hours may be at the 2000-level; any such courses must be from departments other than mathematics and statistics and are subject to the approval of the student's master's committee.

~~Candidates must pass a final comprehensive examination.~~

Justification for  
request

Department voted to remove the master's comprehensive exam requirement.

Supporting  
Documents

Course Reviewer **kleb6b (04/07/16 8:08 am):** Update effective term  
Comments **kleb6b (04/21/16 9:12 am):** update effective term

### In Workflow

1. **RMATHEMA 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. 04/06/16 4:50 pm  
sclark: Approved for  
RMATHEMA Chair
2. 04/07/16 8:08 am  
Kaylon Buckner  
(kleb6b): Approved  
for CCC Secretary
3. 04/19/16 12:47 pm  
imorgan: Approved  
for Sciences DSCC  
Chair
4. 04/21/16 9:00 am  
Kaylon Buckner  
(kleb6b): Approved  
for Pending CCC  
Agenda post

### History

1. Feb 20, 2014 by  
imorgan
2. Jul 23, 2015 by  
pantaleoa

## Program Change Request

Date Submitted: 04/06/16 3:15 pm

Viewing: **MATH-PHD : Mathematics PhD**

File: 85.8

Last approved: 07/23/15 3:22 pm

Last edit: 04/21/16 9:13 am

Changes proposed by: imorgan

Catalog Pages [Mathematics and Statistics](#)  
Using this  
Program

Start Term **Fall 2016-08/17/2015**  
Program Code MATH-PHD  
Department Mathematics & Statistics  
Title Mathematics PhD

## Program Requirements and Description

A program for the Ph.D. degree includes about 30 hours of breadth in graduate level mathematics and statistics, about 30 hours of courses in or outside of the department representing a field of specialization, and a minimum of 30 hours devoted to the dissertation. In particular, the Ph.D. requires a total of at least 30 hours of Math/Stat ~~5099 or 6099 of which at least 24 hours must be Math/Stat 6099.~~ **Math/Stat 6099 hours used to complete an M.S.** ~~Students must have passed at least three of the five individual exams in the Ph.D. qualifying exam to be eligible for 6099 credit. A student may be registered for 6099 credit during the semester of his or her qualifying exam, but he or she will need to switch from 6099 to 5099 if at least three individual exams are not passed. Math/Stat 5099 hours used to complete an M.S. thesis cannot be counted toward the~~ **toward the** doctoral research requirements.

The specific program for a candidate is designed jointly by the candidate and the candidate's advisory committee. A qualifying examination, usually taken soon after completion of the M.S. degree or equivalent course work, is required. For those obtaining a doctoral degree with emphasis in Mathematics a reading knowledge of one modern foreign language, typically either French, German, or Russian, is required. Those whose doctoral emphasis is computational and applied mathematics, statistics, knowledge in a programming language such as C, C++, or FORTRAN and programming expertise demonstrated through an approved project is required. At times approved by the advisory committee, candidates must pass both written and oral comprehensive examinations. These examinations may cover courses outside the department. The dissertation is expected to represent original research and to meet the standard ordinarily required for publication in one of the journals devoted to reporting research in the selected field.

Justification for request To comply with the preference of the Graduate Council to have all graduate research be 6099.

Supporting  
Documents

Course Reviewer **kleb6b (04/21/16 9:13 am):** update effective term  
Comments

### In Workflow

1. **RMATHEMA 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. kristygy

### Approval Path

1. 04/06/16 4:50 pm  
sclark: Approved for RMATHEMA Chair
2. 04/07/16 8:08 am  
Kaylon Buckner (kleb6b): Approved for CCC Secretary
3. 04/19/16 12:48 pm  
imorgan: Approved for Sciences DSCC Chair
4. 04/21/16 9:00 am  
Kaylon Buckner (kleb6b): Approved for Pending CCC Agenda post

### History

1. Sep 12, 2013 by pantaleoa
2. Jul 23, 2014 by imorgan
3. Jul 23, 2015 by pantaleoa





## Program Change Request

Date Submitted: 02/25/16 1:25 pm

Viewing: **MGMT-MI : Management Minor**

File: 138.6

Last approved: 07/14/15 3:40 pm

Last edit: 04/18/16 9:14 am

Changes proposed by: barryf

Catalog Pages [Business and Management Systems](#)  
Using this [Information Science and Technology](#)  
Program

Start Term Fall **2016** 2015  
Program Code MGMT-MI  
Department Business and Information Technology  
Title Management Minor

## Program Requirements and Description

### Minor in Management

The minor in management requires the following 15 hours of coursework:

<a href="#">BUS 1110</a>	Introduction to Management and Entrepreneurship	3
One course from the following list:		3
Four courses from the following list:		12
<a href="#">BUS 2910</a>	Business Law	
<a href="#">BUS 3115</a>	Introduction to Teambuilding and Leadership	
<a href="#">BUS 4111</a>	Business Negotiations	
<a href="#">BUS 4150</a>	Customer Focus and Satisfaction	
<a href="#">BUS 5360</a>	Business Operations	
<a href="#">BUS 5470</a>	Human Resource Management	
<a href="#">BUS 5580</a>	Strategic Management	
<a href="#">IS&amp;T 4261</a>	Information Systems Project Management	
Three courses from the following list:		9

### 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. [kristyg](#)

### Approval Path

1. 02/26/16 1:02 am  
siauk: Approved for  
RBUSADMN Chair
2. 02/26/16 7:34 am  
Kaylon Buckner  
(kleb6b): Approved  
for CCC Secretary
3. 03/24/16 8:48 am  
barryf: Approved for  
Social Sciences  
DSCC Chair

### History

1. Aug 5, 2014 by  
[pantaleoa](#)
2. Jun 17, 2015 by  
[pantaleoa](#)
3. Jun 17, 2015 by  
[pantaleoa](#)
4. Jul 14, 2015 by  
[pantaleoa](#)

Justification for request Put all courses besides BUS 1110 into one list.

Supporting Documents

Course Reviewer **kleb6b (02/26/16 7:33 am):** Update effective term  
Comments **kleb6b (04/18/16 9:14 am):** Update effective term

Key: 138  
[Preview Bridge](#)

## Program Change Request

Date Submitted: 04/07/16 12:20 pm

Viewing: **MUL&DIV-MI : Multiculture & Diversity Minor**

File: 102.13

Last approved: 07/21/15 12:03 pm

Last edit: 04/08/16 8:40 am

Changes proposed by: dewittp

Catalog Pages [Multiculturalism & Diversity](#)  
Using this [Psychology](#)  
Program

Start Term Fall **2016** ~~2015~~  
Program Code MUL&DIV-MI  
Department Arts, Languages, & Philosophy  
Title Multiculture & Diversity Minor

## Program Requirements and Description

### Multiculturalism & Diversity Minor

The **Multiculturalism and Diversity Minor** prepares students to function more effectively ~~minor requires 15 hours~~ in a **global society as well as enhances Missouri S&T graduates' employment options by providing knowledge, skills, and strategies for appreciating and understanding diverse cultural practices.** ~~minimum of 3 of 4 humanities and social sciences (HSS) departments:~~

**The minor requires 15 hours in a minimum of 3 of 4 humanities and social sciences (HSS) departments:** the departments of arts, languages and philosophy; English and technical communication; history and political science; and **psychological science.** ~~psychology.~~ The academic home for this minor will be the arts, languages and philosophy **department.** ~~department in which the student takes the majority of their classes.~~ Courses offered by these departments that can be included in the minor are listed below.

### In Workflow

1. **RPHILOSO 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. kristyg

### Approval Path

1. 04/07/16 9:27 pm  
audram: Approved for RPHILOSO Chair
2. 04/08/16 6:46 am  
Kaylon Buckner (kleb6b): Approved for CCC Secretary
3. 04/08/16 8:40 am  
dewittp: Approved for Arts & Humanities DSCC Chair

### History

1. Apr 28, 2014 by ivliyeva
2. May 7, 2014 by lahne
3. Jun 11, 2014 by lahne
4. Jun 11, 2014 by pantaleoa
5. Jun 11, 2014 by lahne
6. Jun 19, 2015 by denises
7. Jul 21, 2015 by pantaleoa

Arts, Languages & Philosophy:

One language course at the third semester or above in a foreign language (German, Spanish, French, or Russian) \*

**FRENCH 4360** **French Culture And Civilization**

[PHILOS 4340](#) Social Ethics

[RUSSIAN 4360](#) Russian Civilization

[SP&M S 3235](#) Intercultural Communication

English and Technical Communication:	
<a href="#">ENGLISH 1231</a>	World Literature I: From The Beginnings To The Renaissance
<a href="#">ENGLISH 2242</a>	Literature By Women
<a href="#">ENGLISH 2245</a>	African American Literature
<a href="#">ENGLISH 3228</a>	The American Experience
History and Political Science:	
<del>HISTORY 2660</del>	<del>Course HISTORY 2660 Not Found</del>
<a href="#">HISTORY 3280</a>	European Migrations and Nationalism Formation
<del>HISTORY 2665</del>	<del>Course HISTORY 2665 Not Found</del>
<a href="#">HISTORY 3660</a>	<b>Modern East Asia</b>
<a href="#">HISTORY 3665</a>	<b>History of Japan</b>
<a href="#">POL SCI 2500</a>	International Relations
<del>POL SCI 3510</del>	<del>Course POL SCI 3510 Not Found</del>
<a href="#">POL SCI 4510</a>	<b>The Politics of the Third World</b>
Psychology:	
<a href="#">PSYCH 4993</a>	Psychology of Women
<a href="#">PSYCH 4992</a>	Cross-Cultural Psychology

\* Language Courses at the 3rd Semester or above that qualify for the minor:

<a href="#">FRENCH 1180</a>	Intermediate French
<a href="#">FRENCH 2110</a>	Basic French Conversation
<a href="#">FRENCH 2170</a>	Masterpieces Of French Literature
<a href="#">FRENCH 2180</a>	Basic French Composition
<a href="#">FRENCH 4311</a>	Advanced French Conversation
<a href="#">FRENCH 4320</a>	<b>French and Francophone Cinema</b>
<a href="#">FRENCH 4360</a>	French Culture And Civilization
<a href="#">FRENCH 4370</a>	Survey Of French Literature I (Early Period)
<a href="#">FRENCH 4375</a>	Survey Of French Literature II (Modern Period)
<a href="#">GERMAN 1180</a>	Classical And Modern German Readings
<a href="#">GERMAN 2110</a>	Basic German Conversation
<a href="#">GERMAN 2170</a>	Masterpieces Of German Literature
<a href="#">RUSSIAN 1180</a>	Readings In Science And Literature
<a href="#">RUSSIAN 2110</a>	Basic Russian Conversation
<a href="#">RUSSIAN 2170</a>	Masterpieces Of Russian Literature
<a href="#">RUSSIAN 4320</a>	Russian Phonetics and Intonation
<a href="#">RUSSIAN 4330</a>	Business Russian
<a href="#">RUSSIAN 4360</a>	<b>Russian Civilization</b>
<a href="#">RUSSIAN 4370</a>	Survey Of Russian Literature I (Early Period)
<a href="#">RUSSIAN 4375</a>	Survey Of Russian Literature II (Modern Period)
<a href="#">SPANISH 1180</a>	Intermediate Spanish
<a href="#">SPANISH 2110</a>	Basic Spanish Conversation
<a href="#">SPANISH 2160</a>	Hispanic Culture
<a href="#">SPANISH 2170</a>	Masterpieces Of Hispanic Literature
<a href="#">SPANISH 2180</a>	Intermediate Spanish Composition
<a href="#">SPANISH 4311</a>	Advanced Spanish Conversation
<a href="#">SPANISH 4377</a>	Spanish-American Novel And Short Story

[SPANISH 4302](#)

Phonetics and Phonology of Spanish

Justification for  
request

Added a description of the minor.

Supporting  
Documents

Course Reviewer  
Comments

**audram (04/07/16 12:09 pm):** Rollback: I'm rolling this back for you to be able to make the change for Russian 4360  
**kleb6b (04/08/16 6:46 am):** Update effective term  
**dewittp (04/08/16 8:40 am):** Approved.

Key: 102  
[Preview Bridge](#)

## Program Change Request

Date Submitted: 03/18/16 4:05 pm

Viewing: **PHYSIC-BS : Physics BS**

File: 115.17

Last approved: 07/21/15 1:41 pm

Last edit: 04/21/16 10:00 am

Changes proposed by: waddill

Catalog Pages [Physics](#)  
Using this  
Program

Start Term **Fall 2016-08/01/2014**

Program Code PHYSIC-BS

Department Physics

Title Physics BS

## Program Requirements and Description

### Bachelor of Science Physics

A minimum of 128 credit hours is required for a bachelor of science degree in physics and an average of at least two grade points per credit hour must be obtained. These requirements for the B.S. degree are in addition to credit received for algebra, trigonometry, and basic ROTC.

The physics curriculum requires twelve semester hours in humanities, exclusive of foreign language, and must include [ENGLISH 1160](#) or [ENGLISH 3560](#). A minimum of nine semester hours is required in social sciences, including either [HISTORY 1300](#), [HISTORY 1310](#), [HISTORY 1200](#), or [POL SCI 1200](#). Specific requirements for the bachelor degree are outlined in the sample program listed below

### 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. kristyg

### Approval Path

1. 03/18/16 4:21 pm  
waddill: Approved for RPHYSICS Chair
2. 03/21/16 6:59 am  
Kaylon Buckner (kleb6b): Approved for CCC Secretary
3. 04/20/16 10:28 am  
imorgan: Approved for Sciences DSCC Chair
4. 04/21/16 9:01 am  
Kaylon Buckner (kleb6b): Approved for Pending CCC Agenda post
5. 04/21/16 9:50 am  
Kaylon Buckner (kleb6b): Rollback to Sciences DSCC Chair for CCC Meeting Agenda
6. 04/21/16 10:01 am  
imorgan: Approved for Sciences DSCC Chair

### History

1. May 6, 2014 by waddill
2. Jul 21, 2015 by pantaleoa

Freshman Year			
First Semester	Credits	Second Semester	Credits
<a href="#">CHEM 1310</a>	4	<a href="#">CHEM 1320</a>	3

<a href="#">CHEM 1319</a>	1	<a href="#">HISTORY 1200</a> , or <a href="#">1300</a> , or <a href="#">1310</a> , or <a href="#">POL SCI 1200</a>	3
<a href="#">CHEM 1100</a>	1	<a href="#">MATH 1221</a> <sup>6</sup>	5
<a href="#">ENGLISH 1120</a>	3	<a href="#">PHYSICS 1111</a> & <a href="#">PHYSICS 1119</a> <sup>7</sup>	5
<a href="#">MATH 1208</a> <sup>5</sup>	5	<a href="#">PHYSICS 1119</a>	4
<a href="#">PHYSICS 1101</a>	1		
	15		16
<b>Sophomore Year</b>			
<b>First Semester</b>	<b>Credits</b>	<b>Second Semester</b>	<b>Credits</b>
<a href="#">ENGLISH 1160</a>	3	<a href="#">MATH 3304</a>	3
<a href="#">MATH 2222</a>	4	<a href="#">PHYSICS 2311</a>	3
<a href="#">PHYSICS 2111</a> & <a href="#">PHYSICS 2119</a> <sup>8</sup>	5	<a href="#">PHYSICS 2129</a>	3
<a href="#">PHYSICS 2119</a>	4	<a href="#">PHYSICS 2401</a>	3
<a href="#">COMP SCI 1570</a> & <a href="#">COMP SCI 1580</a> <sup>4</sup>	4	Elective <sup>1</sup>	3
Elective <sup>1</sup>	3		
	19		15
<b>Junior Year</b>			
<b>First Semester</b>	<b>Credits</b>	<b>Second Semester</b>	<b>Credits</b>
<a href="#">PHYSICS 3201</a>	3	<a href="#">PHYSICS 3211</a>	3
<a href="#">PHYSICS 3119</a>	3	<a href="#">PHYSICS 3129</a>	3
<a href="#">PHYSICS 3311</a>	3	Math/Stat Elective <sup>2</sup>	3
Math/Stat Elective <sup>2</sup>	3	Electives <sup>1</sup>	6
Electives <sup>1</sup>	6		
	18		15
<b>Senior Year</b>			
<b>First Semester</b>	<b>Credits</b>	<b>Second Semester</b>	<b>Credits</b>
<a href="#">PHYSICS 4211</a>	3	<a href="#">PHYSICS 4311</a>	3
<a href="#">PHYSICS 4301</a>	3	Elective-Humanities (300 level) <sup>1</sup>	3
Physics Elective <sup>3</sup>	3	Physics Elective <sup>3</sup>	3
Electives <sup>1</sup>	6	Electives <sup>1</sup>	6
	15		15
Total Credits: 128			

**Note:** The minimum credit hours required for a bachelor of science in physics is 128 hours. No more than two of the required physics and mathematics courses with a grade of "D" may be used to meet graduation requirements. Upon petition to and approval by the physics faculty, three semester hours of advanced ROTC (military science or aerospace credit studies) credit can be counted as elective credit to meet requirements for graduation.

<sup>1</sup>	Electives, in addition to the math/stat electives <sup>2</sup> and Physics electives <sup>3</sup> , shall include six hours of social studies and nine hours of humanities, at least three of which must be literature and at least three of which must be at the 3000 level or above not including Special Problems courses ( <a href="#">PHILOS 4345</a> recommended). 19 hours of free electives may be used to develop an emphasis area. 18 hours of elective credit shall be in courses at the 3000 level or above.
<sup>2</sup>	Six hours of mathematics or statistics beyond <a href="#">MATH 3304</a> are required. <a href="#">MATH 3108</a> , <a href="#">MATH 5222</a> , <a href="#">MATH 5325</a> , or <a href="#">MATH 5351</a> are recommended.
<sup>3</sup>	In addition to the specific physics courses listed ( <a href="#">PHYSICS 3311</a> , <a href="#">PHYSICS 3201</a> , <a href="#">PHYSICS 4311</a> , <a href="#">PHYSICS 4211</a> , <a href="#">PHYSICS 3119</a> , <a href="#">PHYSICS 3129</a> , and <a href="#">PHYSICS 4301</a> ) two other physics 3000 level or higher courses are required.
<sup>4</sup>	Alternatively <a href="#">COMP SCI 1971</a> and <a href="#">COMP SCI 1981</a> ; note that this will require one less credit hour than the option listed in the sample schedule.
<sup>5</sup>	Alternatively students may substitute Math 1214 for Math 1208. Note that this is one less credit hour than Math 1208.
<sup>6</sup>	Alternatively students may substitute Math 1215 for Math 1221. Note that this is one less credit hour than Math 1221.



7	Alternatively students may substitute Physics 1135 for the combination of Physics 1111 and 1119. Note that this is one less credit hour than Physics 1111/1119.
8	Alternatively students may substitute Physics 2135 for the combination of Physics 2111 and 2119. Note that this is one less credit hour than Physics 2111/2119.

Students may develop an emphasis area in secondary education by satisfying the requirements for a bachelor of science in physics and by completing the following additional requirements:

a. Take the education professional requirements courses:

<a href="#">EDUC 1040</a>	Perspectives In Education	2
<a href="#">EDUC 1174</a>	School Organization & Adm For Elementary & Secondary Teachers	2
<a href="#">EDUC 2216</a>	Teaching Reading In Content Area	3
<a href="#">EDUC 2251</a>	Historical Foundation Of American Education	3
<a href="#">EDUC 3280</a>	Teaching Methods And Skills In The Content Areas	6
<a href="#">EDUC 4298</a>	Student Teaching Seminar	1
<a href="#">PSYCH 2300</a>	Educational Psychology	3
<a href="#">PSYCH 3311</a>	Psychological & Educational Development Of The Adolescent	3
<a href="#">PSYCH 4310</a>	Psychology Of The Exceptional Child	3
Fifteen of these credit hours may be used to substitute for six hours of mathematics electives, six hours of physics electives, and three hours of computer science courses.		

b. Take the education clinical experience courses:

<a href="#">EDUC 1104</a>	Teacher Field Experience	2
<a href="#">EDUC 1164</a>	Aiding Elementary, Middle And Secondary Schools	2
<a href="#">EDUC 4299</a>	Student Teaching	12

c. Take these additional courses:

<a href="#">SP&amp;M S 1185</a>	Principles Of Speech	3
<a href="#">POL SCI 1200</a>	American Government	3
<a href="#">PSYCH 1101</a>	General Psychology	3
<a href="#">BIO SCI 1113</a>	General Biology	3
<a href="#">PHYSICS 1605</a>	Environmental Physics I	3
<a href="#">HISTORY 2530</a>	Course HISTORY 2530 Not Found	3
<a href="#">HISTORY 3530</a>	History of Science	3
A 3 hour Art/Music/Theater elective		3

d. Complete the requirements for teacher certification listed in this catalog.

~~e. PHYSICS 1135 and PHYSICS 2135 may be substituted for: MATH 1214 and MATH 1215 may be substituted for:—~~

<del>MATH 1208</del>	<del>Calculus With Analytic Geometry-I</del>	<del>5</del>
<del>MATH 1221</del>	<del>Calculus With Analytic Geometry-II</del>	<del>5</del>
<del>PHYSICS 1114</del>	<del>General Physics-I</del>	<del>4</del>
<del>PHYSICS 1119</del>	<del>General Physics Laboratory</del>	<del>4</del>
<del>PHYSICS 2114</del>	<del>General Physics-II</del>	<del>4</del>
<del>PHYSICS 2119</del>	<del>General Physics Laboratory</del>	<del>4</del>

Justification for request

First change is to allow option of Math 1214 for Math 1208. This is because math 1208 is no longer offered.

Second change is to allow option of Math 1215 for Math 1221. This is because transfer credit for Calculus II is always Math 1215 instead of math 1221. This will save many substitution/waiver forms.

Third change is to allow option of Physics 1135 for Physics 1111/1119. We are no longer routinely offering Physics 1111 so it is now necessary for students to take 1135 instead.

Fourth change is to allow option of Physics 2135 for Physics 211/2119. We are no longer routinely offering Physics 2111 so it is now necessary for students to take 2135 instead.

Fifth change is to eliminate Comp Sci 1970 and 1980 since neither are offered any longer.

#### Supporting Documents

Course Reviewer	<b>imorgan (04/19/16 12:49 pm):</b> Minor correction.
Comments	<b>imorgan (04/20/16 10:27 am):</b> Changed HISTORY 2530 (Course Not Found) to HISTORY 3530 (new course number). <b>kleb6b (04/21/16 9:14 am):</b> Update effective term <b>kleb6b (04/21/16 9:50 am):</b> Rollback: Rollback per Dr. Morgan <b>imorgan (04/21/16 9:59 am):</b> Minor clean-up in consultation with Dr. Waddill. <b>imorgan (04/21/16 10:00 am):</b> Minor clean-up.

## Course Inventory Change Request

### New Experimental Course Proposal

Date Submitted: 01/15/16 12:01 pm

Viewing: **ECON 5001.001 : Experiential Innovation**

File: 4297

Last edit: 04/25/16 10:28 am

Changes proposed by: marcys

Requested Fall 2016

Effective Change

Date

Department Economics

Discipline Economics (ECON)

Course Number 5001

Topic ID 001

Experimental Title  
Experiential Innovation

Experimental Abbreviated  
Course Title  
Experiential Innov

Instructors Bonnie Bachman

Experimental  
Catalog  
Description

Students work in multidisciplinary engineering/science/social science teams mentored by experienced entre/intrapreneurs to generate innovative ideas and transform them into models for economically viable tech companies. Experiential learning is emphasized in live customer discovery, domain exploration, prototyping and validation.

Prerequisites

Senior or graduate standing.

Field Trip  
Statement

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

#### 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. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. Ishelton
11. Peoplesoft

#### Approval Path

1. 01/15/16 12:12 pm  
gelles: Approved for RECONOMI Chair
2. 01/15/16 12:17 pm  
Kaylon Buckner (kleb6b):  
Approved for CCC Secretary
3. 02/02/16 8:46 am  
barryf: Approved for Social Sciences DSCC Chair
4. 02/12/16 10:41 am

Justification for  
new course:

This course is a required course for student entrepreneurial leads entering the newly awarded NSF I-Corps™ Site program (Dr. Bachman is PI for this new innovation and entrepreneurship center on campus). The I-Corps Site program will be rolled out to the UM System as well, where this course will be a shared course between campuses. This course is also the fifth required course in a proposed sequence of courses for the Technical Innovation and Entrepreneurship campus minor (special program) which is supported by 18 full-time tenured or tenure-track professors across 24 degree programs. It is modeled on the entrepreneurship and innovation curriculum first developed by Stanford University and subsequently became known as the NSF I-Corps curriculum and is now taught all over the world. This course was developed with assistance (two grants-2014 and 2015) from Epicenter, the National Science Center for Engineering Pathways to Innovation, funded by NSF and directed by Stanford University. Novel in its content and experiential learning approach, it is team taught and has a wide variety of external mentors such as entrepreneurs, intrapreneurs, venture capitalists, incubator directors and small business development directors that coach students throughout the semester. It leverages our students' traditional, technical strengths with a learning process where students have the freedom to develop knowledge and skills from direct experiences outside the typical academic framework while working in interdisciplinary teams.

The development of this course, Experiential Entrepreneurship, is also part of the International Affairs Study Abroad faculty grant and program for South Africa and Oman.

The campus Strategic Plan calls for more entrepreneurial content in the curriculum and this course helps meet those goals. Further, this course is in alignment with the Accreditation Board for Engineering and Technology (ABET), which requires students to demonstrate specific abilities in both technical and non-technical skills (e.g., address real-world problems, perceive opportunities, lead others, work in multidisciplinary teams, communicate effectively, react and adapt with flexibility in uncertain times and deal well with risk and failure).

Comments from students who have taken the CompSci 5001 course (precursor to the proposed Econ 5001/co-listed EngMgt 5001) include:

"Can you build a program like this class (CompSci 5001) and I-Corps where we get to work on our projects and experience the whole process of understanding customer context, needs and opportunities, and how to be creative, design the right thing, and how to build it so it solves real problems?"

"We aren't Silicon Valley where this is everyday stuff, but we're eager to learn. Can you give us the opportunity to do great things while learning a lot and developing

Kaylon Buckner  
(kleb6b):

Approved for  
Pending CCC  
Agenda post

5. 03/01/16 1:53 pm

Kaylon Buckner  
(kleb6b): Rollback  
to Pending CCC  
Agenda post for  
CCC Meeting  
Agenda

6. 03/21/16 8:09 am

Kaylon Buckner  
(kleb6b):  
Approved for  
Pending CCC  
Agenda post

7. 04/05/16 1:47 pm

Kaylon Buckner  
(kleb6b):  
Approved for CCC  
Meeting Agenda

8. 04/25/16 7:13 am

Kaylon Buckner  
(kleb6b): Rollback  
to CCC Meeting  
Agenda for  
Campus Curricula  
Committee Chair

the skills we need to have an impact in today's world?"

"Can we have more than one class that helps us learn how to take our ideas out of the labs and find out if they can make it to the marketplace?"

Although CS 5001 has been taught successfully 2 times (Fall 2014 and Fall 2015), Computer Science will not be making this a numbered course, nor offer it and therefore, to keep this course alive, two other departments (Economics and Engineering Management) will be team teaching it going forward.

Semester(s) Taught as CS 5001 in FS20014 and FS2015 with different prereqs and course previously taught description.

Co-Listed ENG MGT 5001 - Special Topics  
Courses:

Course Reviewer **kleb6b (03/01/16 1:53 pm):** Rollback: Tabled  
Comments **kleb6b (04/25/16 7:13 am):** Rollback: Tabled  
**kleb6b (04/25/16 10:28 am):** Updated title per request of Dr. Bachman

Key: 4297  
[Preview Bridge](#)

# Course Inventory Change Request

## New Experimental Course Proposal

Date Submitted: 04/08/16 10:23 am

Viewing: **ECON 5001.002 : Applied Economic Research**

File: 4312

Last edit: 05/12/16 7:10 am

Changes proposed by: marcys

Requested Fall 2016

Effective Change

Date

Department Economics

Discipline Economics (ECON)

Course Number 5001

Topic ID 002

Experimental Applied Economic Research  
Title

Experimental App Econ Research

Abbreviated  
Course Title

Instructors Ichim, Ana

Experimental

Catalog

Description

Student teams work on a practical economics research project, mentored by the instructor & professional economists from economic research institutes or industry.

Experiential learning will be achieved by working with real economic data & by delivering their conclusions in a professional presentation and/or research paper.

Field trip with expenses.

Prerequisites

Stat 3111 or Stat 3113 or Stat 3115 or Stat 3117 or Stat 5643 and Econ 2100 or Econ 2200.

Field Trip

Statement

One single day trip to the Federal Reserve Bank of St. Louis. Students are responsible for the associated costs, such as travel expenses. Arrangements will be made to avoid conflicts.

### 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. **Registrar**

### Approval Path

1. 04/08/16 1:21 pm

gelles: Approved  
for RECONOMI  
Chair

2. 04/08/16 1:26 pm

Kaylon Buckner  
(kleb6b):

Approved for CCC  
Secretary

3. 04/13/16 9:00 am

barryf: Approved  
for Social  
Sciences DSCC  
Chair

4. 04/18/16 9:05 am

Kaylon Buckner  
(kleb6b):

Approved for  
Pending CCC  
Agenda post

Credit Hours	LEC: 2	LAB: 1	IND: 0	RSD: 0	Total: 3
Justification for new course:	<p>This course offers students the opportunity to immerse themselves in the economic research process from “conception to completion,” which will enhance their understanding of economic concepts, theories, and real world applications. Class projects may lead to new research ideas and OURE applications or internships. Students will have the opportunity to interact and work with economics professionals outside academia.</p> <p>For the Fall 2016 semester we will be collaborating with the American Institute of Economic Research.</p>				
Semester(s) previously taught					
Co-Listed Courses:					
Course Reviewer Comments					

Key: 4312  
[Preview Bridge](#)

# Course Inventory Change Request

## New Experimental Course Proposal

Date Submitted: 04/13/16 1:32 pm

Viewing: **PSYCH 2001.001 : Foundations of Leadership**

File: 4313

Last edit: 04/13/16 1:40 pm

Changes proposed by: murray

Requested Fall 2016

Effective Change

Date

Department Psychological Science

Discipline Psychology (PSYCH)

Course Number 2001

Topic ID 001

Experimental Foundations of Leadership  
Title

Experimental Leadership Foundations

Abbreviated  
Course Title

Instructors Susan Murray & Jerri Arnold-Cook

Experimental

Catalog

Description

This class will enable students to develop and refine personal leadership skills.

Students will increase their knowledge of exemplary leadership practices through classroom and hands-on activities. Leadership skills covered will include communication, leading teams, being a team member, and goal settings.

Prerequisites

Field Trip

Statement

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

Justification for new course: Leadership theory is currently taught in existing Psychological Science and Engineering Management classes. Leadership experiences and training is offered by Student Affairs. This class seeks to combine theories and principles of leadership

### In Workflow

1. **RPSYCHOL Chair**

2. **CCC Secretary**

3. **Social Sciences**

**DSCC Chair**

4. **Pending CCC**

**Agenda post**

5. CCC Meeting

Agenda

6. Campus Curricula

Committee Chair

7. Registrar

### Approval Path

1. 04/13/16 1:34 pm

murray: Approved  
for RPSYCHOL  
Chair

2. 04/13/16 1:41 pm

Kaylon Buckner  
(kleb6b):  
Approved for CCC  
Secretary

3. 04/14/16 10:03

am  
barryf: Approved  
for Social  
Sciences DSCC  
Chair



with hands-on experience. The lab portion of the class with consist of group activities, events offered by Student Affairs, and individual applications of leadership principles.

Semester(s)          None  
previously taught

Co-Listed            ENG MGT 2001 - Special Topics  
Courses:

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Course Reviewer  
Comments

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Key: 4313  
[Preview Bridge](#)