Campus Curricula Committee Meeting Agenda
May 10, 2016
12:30-2:00 p.m., 106B Parker Hall

Review of submitted Course Change forms:

File #4056.6 Biological Sciences 4666: Nanobiotechnology
File #4057.4 Biological Sciences 6666: Advanced Nanotechnology in Biomedicine
File #2077.1 Business 2910: Business Law
File #1507.1 Ceramic Engineering 5220: Advanced Mechanical Properties of Ceramics
File #1308.1 Ceramic Engineering 5270: Advanced Thermal Properties of Ceramics
File #25.1 Engineering Management 5330: Advanced Human Factors
File #563.1 Enterprise Resource Planning 5240: Enterprise and Mobile Application Development
File #1009.1 French 1180: Intermediate French
File #1949.4 French 4311: Advanced French Conversation
File #4308 French 4330: Business French
File #1211.1 Geology 3631: Systematic Paleontology
File #214.1 Geology 4711: Paleoclimatology and Paleoecology
File #381.1 Geology 6711: Advanced Paleoclimatology and Paleoecology
File #2491.2 History 4097: Senior Project
File #1596.1 Metallurgical Engineering 5150: Introduction to Particulate Materials
File #1920.1 Physics 2111: General Physics II
File #1919.1 Physics 2135: Engineering Physics II
File #4315 Technical Communication 3580: Business Writing

Review of submitted Degree Change forms:

File #224.1 Math: Applied Math Minor
File #7.11 Math: Applied Mathematics MS
File #17.4 Chemistry: Chemistry Minor
File #44.23 Engineering Management: Engineering Management BS
File #157.12 History: History BA
File#242 History: History BS
File 84.4 Math: Mathematics MST
File #85.8 Math: Mathematics PhD
File #138.6 Business and Information Technology: Management Minor
File #102.13 Arts, Languages, and Philosophy: Multiculture & Diversity Minor
File #115.17 Physics: Physics BS

Review of submitted Experimental Course forms:

File #4297 Economics 5001.001: Experiential Innovation
File #4312 Economics 5001.002: Applied Economic Research
File #4313 Psychology 2001.001: Foundations of Leadership

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: 04/21/16 9:02 am

Changes proposed by: huangy

Requested Effective Change Date	**Fall 2016** ~~08/01/2014~~
Department	Biological Sciences
Discipline	Biological Sciences (BIO SCI)
Course Number	4666
Title	Nanobiotechnology
Abbreviated Course Title	Nanobiotechnology

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. lshelton
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

History

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".

1. Jul 7, 2014 by huangy

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer Comments

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: 04/19/16 12:43 pm

Changes proposed by: huangy

Requested Effective Change Date	**Fall 2016** ~~08/01/2014~~
Department	Biological Sciences
Discipline	Biological Sciences (BIO SCI)
Course Number	6666
Title	Advanced Nanotechnology in Biomedicine
Abbreviated Course Title	Advanced Nanobiotech

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 Majors	No				
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. lshelton
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

History

Majors	1. Jul 7, 2014 by huangy
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 Comments	**imorgan (04/19/16 12:43 pm):** Changed effective date.

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: 02/11/16 5:14 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	**Summer 2016** ~~Fall 2014~~
Department	Business and Information Technology
Discipline	Business (BUS)
Course Number	2910
Title	Business Law
Abbreviated Course Title	Business Law

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. lshelton
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

Justification for change:	Instructor does not use material from the prerequisites.
Semesters previously offered as an experimental course	
Co-Listed Courses:	
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 Effective Change Date	Fall **2016** ~~2014~~
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. lshelton
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 sraper: 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 Effective Change Date	Fall **2016** ~~2014~~
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. lshelton
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 sraper: 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	Engineering Management
Requested Effective Change Date	Fall **2016** ~~2014~~
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

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 **biomechanics.** ~~biomechanics, with a strong focus on application (e.g., environmental design, human error, safety).~~

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. lshelton
11. Peoplesoft

Approval Path

1. 03/29/16 3:53 pm Suzanna Long (longsuz): Approved for RENGMNGT Chair
2. 04/04/16 7:52 am Kaylon Buckner (kleb6b): Approved for CCC Secretary
3. 04/15/16 4:03 pm sraper: 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:	**PSYCH 5710-- Advanced Human Factors**
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: 02/11/16 5:15 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	**Summer 2016** ~~Fall 2014~~
Department	Business and Information Technology
Discipline	Enterprise Resource Planning (ERP)
Course Number	5240
Title	Enterprise ~~Portal~~ and Mobile Application Development
Abbreviated Course Title	**Enterprise & Mobile Apps** ~~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. lshelton
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

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:	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 Course Title	**Intermediate French** ~~Fr Readings & Compositn~~

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. lshelton
11. Peoplesoft

Approval Path

1. 04/06/16 9:04 pm audram: Approved for RPHILOSO Chair
2. 04/07/16 8:07 am Kaylon 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: **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. lshelton
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 dewittp: Approved for Arts & Humanities DSCC Chair

History

1. Jun 22, 2015 by

change:

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

denises (1949.1)

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer Comments

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 Effective Change Date	Fall 2016
Department	Arts, Languages, & Philosophy
Discipline	French (FRENCH)
Course Number	4330
Title	Business French
Abbreviated Course Title	Business French

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. lshelton
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 previously offered as an experimental course	FS 2008, SP 2015
Co-Listed Courses:	
Course Reviewer Comments	**dewittp (04/07/16 7:55 pm):** Corrected grammar **dewittp (04/07/16 7:56 pm):** Corrected to Fall 16

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. **RGEOSENG Chair**
2. **CCC Secretary**
3. **Sciences DSCC Chair**
4. **Pending CCC Agenda post**
5. CCC Meeting Agenda
6. Campus Curricula Committee Chair
7. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. lshelton
11. Peoplesoft

Approval Path

1. 03/24/16 2:28 pm ikuenobe: Approved for RGEOSENG 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	**ikuenobe (03/24/16 2:24 pm):** Rollback: Bio Sci 1110 should be Bio Sci 1113 **imorgan (04/19/16 12:46 pm):** 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	GL&GPH-BS: Geology and Geophysics BS
Requested Effective Change Date	**Fall 2016** ~~08/01/2014~~
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

Geology 1110 or Geology 1120 or Geo Eng 1150. ~~Geology 1120.~~

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. **RGEOSENG Chair**
2. **CCC Secretary**
3. **Sciences DSCC Chair**
4. **Pending CCC Agenda post**
5. CCC Meeting Agenda
6. Campus Curricula Committee Chair
7. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. lshelton
11. Peoplesoft

Approval Path

1. 03/24/16 2:24 pm ikuenobe: Approved for RGEOSENG 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	
Justification for change:	Expanding prerequisite requirement to accommodate students who have taken Physical Geology.
Semesters previously offered as an experimental course	
Co-Listed Courses:	
Course Reviewer Comments	

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: 04/21/16 9:05 am

Changes proposed by: ikuenobe

Requested Effective Change Date	**Fall 2016** ~~08/01/2014~~
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 and **graduate standing.** ~~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	Amended prerequisite to remove Geology 3621 requirement, and include graduate

In Workflow

1. **RGEOSENG Chair**
2. **CCC Secretary**
3. **Sciences DSCC Chair**
4. **Pending CCC Agenda post**
5. CCC Meeting Agenda
6. Campus Curricula Committee Chair
7. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. lshelton
11. Peoplesoft

Approval Path

1. 03/24/16 2:25 pm ikuenobe: Approved for RGEOSENG 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

change:	standing.
Semesters previously offered as an experimental course	
Co-Listed Courses:	

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 Effective Change Date	**Fall** ~~Spring~~ 2016
Department	History and Political Science
Discipline	History (HISTORY)
Course Number	4097
Title	Senior Project
Abbreviated Course Title	Senior Project

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. lshelton
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

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.

dewittp (2491.1)

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer Comments

Key: 2491
Preview Bridge

Course Inventory Change Request

Date Submitted: 03/22/16 2:08 pm

Viewing: **MET ENG 5150 : ~~Advanced~~ Introduction to Particulate Materials**

File: 1596.1

Last edit: 04/18/16 9:13 am

Changes proposed by: eddings

Requested Effective Change Date	Fall **2016** ~~2014~~
Department	Materials Science & Engineering
Discipline	Metallurgical Engineering (MET ENG)
Course Number	5150
Title	~~Advanced~~ Introduction to Particulate Materials
Abbreviated Course Title	~~Adv.~~Intro to Particulate Mat.

Catalog Description

Powder metallurgy and ceramic components, filters, catalysts, nanomaterials, vitamins and more depend strongly on particulate, or powder, characteristics and processing. Aspects of powder fabrication, characterization, safety, handling, component fabrication, secondary processing, and applications will be covered.

Prerequisites

Met Eng 2110.

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: removed the word "Advanced" to reflect option for undergrad students

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. lshelton
11. Peoplesoft

Approval Path

1. 03/30/16 10:02 am mjokeefe: Approved for RMATSENG Chair
2. 04/04/16 7:53 am Kaylon Buckner (kleb6b): Approved for CCC Secretary
3. 04/15/16 4:03 pm sraper: Approved for Engineering DSCC Chair

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer Comments

Key: 1596

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. lshelton
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. lshelton
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 Effective Change Date	**Fall 2016** ~~08/01/2014~~
Department	Physics
Discipline	Physics (PHYSICS)
Course Number	2135
Title	Engineering Physics II
Abbreviated Course Title	Engineering Physics II
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 Majors	**Yes** ~~No~~
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:

Course Reviewer Comments

Key: 1919
Preview Bridge

Course Inventory Change Request

New Course Proposal

Date Submitted: 04/25/16 7:20 am

Viewing: **TCH COM 3580 : Business Writing**

File: 4315

Last edit: 04/25/16 7:20 am

Changes proposed by: kleb6b

Requested Effective Change Date	Fall 2016
Department	English and Technical Communication
Discipline	Technical Communication (TCH COM)
Course Number	3580
Title	Business Writing
Abbreviated Course Title	Business Writing

Catalog Description

This course further develops the experienced writer's style and analytical capabilities to the level of sophistication necessary for upper-division writing assignments and for business and professional settings. Writing assignments may include business correspondence, reports, resumes, proposals, analyses, and feasibility studies.

Prerequisites

English 1120 or equivalent and at least junior standing.

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 new course:

In Workflow

1. **RENGLISH Chair**
2. **CCC Secretary**
3. **Arts & Humanities DSCC Chair**
4. **Pending CCC Agenda post**
5. CCC Meeting Agenda
6. Campus Curricula Committee Chair
7. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. lshelton
11. Peoplesoft

Approval Path

1. 04/25/16 7:20 am Kaylon Buckner (kleb6b): Approved for RENGLISH Chair
2. 04/25/16 7:20 am Kaylon Buckner (kleb6b): Approved for CCC Secretary
3. 04/25/16 7:20 am Kaylon Buckner (kleb6b): Approved for Arts & Humanities DSCC Chair

This course has been taught successfully two semesters as an EC. Although business writing is an important part of several of our courses (e.g., ENGL/TCH COM 1600), we do not have a course devoted to business writing, and there is a need for a course.

Semesters previously offered as an experimental course	SP15, SP16
Co-Listed Courses:	
Course Reviewer Comments	

Key: 4315
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

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

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 8:57 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 Using this Program	Mathematics and Statistics

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 Comments	**kleb6b (04/07/16 8:07 am):** Update effective term **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

Key: 7
Preview Bridge

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: 04/21/16 9:09 am

Changes proposed by: woelkk

Catalog Pages Using this Program	Chemistry
Start Term	**Fall 2016** ~~8/1/2014~~
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 1100 , CHEM 1510 ,~~ CHEM 2210 and either **CHEM 2219** ~~CHEM 2289~~ or **CHEM 2289** ~~CHEM 2219~~ . **Five** ~~Three~~ additional hours of chemistry are to be selected from **CHEM 1510** ~~CHEM 2510~~ , or other Chem 2000, 3000, and 4000-level courses. **A minimum grade of "C" is required for each course counted toward the degree.**

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

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

History

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

Key: 17
Preview Bridge

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	Engineering Management
Start Term	**Fall 2016** ~~08/17/2015~~
Program Code	ENG MG-BS
Department	Engineering Management and Systems Engineering
Title	Engineering Management BS

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 RENGMNGT 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

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

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**
FR ENG 1100	1	MECH ENG 1720	3
CHEM 1310[1]	4	MATH 1215[1]	4
CHEM 1319	1	PHYSICS 1135[1]	4
CHEM 1100	1	ECON 1100 or 1200	3
MATH 1214[1]	4	COMP SCI 1972[1]	2
ENGLISH 1120	3	COMP SCI 1982	1
HISTORY 1200, or 1300, or 1310, or POL SCI 1200	3		
	17		17
Sophomore Year			
First Semester	**Credits**	**Second Semester**	**Credits**
MATH 2222[1]	4	MATH 3304[1]	3
PHYSICS 2135[1]	4	STAT 3115 or 3117[1]	3
CIV ENG 2200[1]	3	ENG MGT 2110[1]	3
ENG MGT 1210[1]	2	ENG MGT 2211[1]	3
ENG MGT 2310[1]	3	MECH ENG 2350	2
		PSYCH 1101	3
	16		17
Junior Year			
First Semester	**Credits**	**Second Semester**	**Credits**
ENG MGT 3310[1]	3	ENG MGT 4710[1]	3
CIV ENG 2210	3	MECH ENG 2527	3
CIV ENG 2211	1	ELEC ENG 2800	3
ENG MGT 3510[1]	3	ENGLISH 3560	3
SP&M S 1185 or 2181	3	ENG MGT 3320[1]	3
Humanities and Social Sciences[2]	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	ENG MGT 4907[1]	3
ENG MGT 4110[1]	3	Upper Level Hum/SS[2]	3
ENG MGT Technical Elective	3	Free Elective[3]	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

ENG MGT 5511	Technical Entrepreneurship	3
ENG MGT 5512	Legal Environment	3
ENG MGT 5410	Industrial System Simulation	3
ENG MGT 5614	Supply Chain Management Systems	3
ENG MGT Technical Electives (in consultation with your advisor)		6

Industrial Engineering

ENG MGT 4310	Materials Handling and Plant Layout	3
ENG MGT 4330	Human Factors	3
ENG MGT 5410	Industrial System Simulation	3
ENG MGT 5414	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 **(in consultation with your advisor)**	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. MATH 1208 and MATH 1221 may be substituted for MATH 1214 and MATH 1215, 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 Comments	**kleb6b (04/04/16 7:51 am):** Update effective term **kleb6b (04/21/16 9:10 am):** update effective term

Key: 44
Preview Bridge

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: 04/18/16 9:11 am

Changes proposed by: dewittp

Catalog Pages Using this Program	History

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

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

History

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

Program Requirements and Description

Bachelor of Arts
History

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

HISTORY 1790	Introduction to History	1
HISTORY 1300	American History To 1877	3
HISTORY 1310	American History Since 1877	3
HISTORY 2790	Historiography	3
2 American History Electives		6
2 European History Electives		6
~~2 History Electives~~		~~6~~
~~HISTORY 4010~~	~~Seminar~~	~~3~~
~~or HISTORY 4097~~	~~Senior Project~~	
3 History Electives		**9**
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 of 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		
ENGLISH 1120	Exposition And Argumentation	3
ENGLISH 1160	Writing And Research	3
SP&M S 1185	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		
ETYM 4306	Introduction To Etymology	3
Social Sciences: 15 hours		
POL SCI 1200	American Government	3
~~POL SCI 2760~~	~~Course POL SCI 2760 Not Found~~	~~3~~
~~or POL SCI 2210~~	~~Course POL SCI 2210 Not Found~~	
~~or POL SCI 3300~~	~~Principles Of Public Policy~~	
~~or POL SCI 3760~~	~~The American Presidency~~	
POL SCI 3763	**Contemporary Political Thought**	**3**
or POL SCI 3211	**American Political Parties**	
ECON 1100	Principles Of Microeconomics	3
or ECON 1200	Principles Of Macroeconomics	
PSYCH 1101	General Psychology	3
HISTORY 2110	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		
MATH 1120	College Algebra (or higher)	3-5
or MATH 1103	Fundamentals Of Algebra	
or MATH 1140	College Algebra	
Clinical Experience: 16 hours		
EDUC 1104	Teacher Field Experience	2
EDUC 1164	Aiding Elementary, Middle And Secondary Schools	2

EDUC 4299	Student Teaching	12
Professional Requirements: 26 hours		
EDUC 1040	Perspectives In Education	2
EDUC 1174	School Organization & Adm For Elementary & Secondary Teachers	2
EDUC 2216	Teaching Reading In Content Area	3
ENGLISH 3170	Teaching And Supervising Reading and Writing	3
EDUC 3280	Teaching Methods And Skills In The Content Areas	6
EDUC 4298	Student Teaching Seminar	1
PSYCH 2300	Educational Psychology	3
PSYCH 3311	Psychological & Educational Development Of The Adolescent	3
PSYCH 4310	Psychology Of The Exceptional Child	3
History Requirements: 37 hours		
HISTORY 1790	Introduction to History	1
HISTORY 1100	Early Western Civilization	3
HISTORY 1200	Modern Western Civilization	3
HISTORY 1300	American History To 1877	3
HISTORY 1310	American History Since 1877	3
HISTORY 2790	Historiography	3
~~HISTORY 4010~~	~~Seminar~~	~~3~~
~~or HISTORY 4097~~	~~Senior Project~~	
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

Key: 157
Preview Bridge

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. kristyg

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

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.

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 Comments	**dewittp (02/01/16 2:59 pm):** Rollback: We do not yet have the CBHE forms approval. **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

Key: 242
Preview Bridge

Missouri Department of Higher Education

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NEW PROGRAM PROPOSAL FORM

Sponsoring Institution(s): Missouri University of Science and Technology

Program Title: History/Political Science

Degree/Certificate: Bachelor of Science Degree in History

Options: N/A

Delivery Site(s): Missouri University of Science and Technology

CIP Classification: 540101

*CIP code can be cross-referenced with programs offered in your region on MDHE's program inventory highered.mo.gov/ProgramInventory/search.jsp

Implementation Date: Fall 2016

Cooperative Partners: N/A

*If this is a collaborative program, form CL must be included with this proposal

AUTHORIZATION:

Cheryl B. Schrader, Chancellor

Name/Title of Institutional Officer | Signature | Date

Shannon Fogg, Chair History/Political Science 573-341-4816

Person to Contact for More Information | Telephone

Missouri Department of Higher Education

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STUDENT ENROLLMENT PROJECTIONS

Year	1	2	3	4	5
Full Time	**1**	**5**	**8**	**10**	**15**
Part Time					
Total	**1**	**5**	**8**	**10**	**15**

Please provide a rationale regarding how student enrollment projections were calculated:

Enrollment will be slow initially until word spreads among students that they can transfer science/engineering courses into this degree or that this degree does not have a foreign language requirement. Advertisement during Major/Minor Day should help attract students within the institution. Advertising during recruitment visits to public high schools should contribute to continuous increase in enrollment.

Provide a **rationale** for proposing this program, including **evidence of market demand and societal need supported by research**:

An important goal of the Bachelor of Science in History is to create additional opportunities for a variety of students – majors and non-majors, part-time and full-time – to more effectively transfer science and engineering course credits from another major or another university for completion of a degree in history or to earn a second undergraduate degree. The History/Political Science department already offers a BA degree in history. Our proposal would offer a BS degree in addition to the BA degree. By eliminating the foreign language requirements and placing more emphasis on science and math classes, students, who are drawn to Missouri S&T through its STEM orientation, will find this BS degree reasonable and attractive. Students with a military background, be it ROTC or active service, will also find more flexibility in course selections through a BS in History.

Students who seek a second major in history will be able to fulfill the math and science requirements, as well as their elective requirements, as part of their primary major requirements. Although enrollment numbers at the University of Missouri St. Louis and the University of Missouri are declining, Missouri S&T is experiencing record enrollments. Even the history department has experienced a 17 percent increase in majors over last year. Based on the demand for the History Minor during the past six years (106 students, of which 99 were engineering or science majors), as well as the fact that nearly 50 percent of our current majors have switched from another STEM field degree program within Missouri S&T, we believe that a demand for this degree exists on campus.

This BS degree in history also aligns with the campus goals of improving retention and breaking down barriers to success by merging STEM courses with humanities and social science courses. For example, elimination of language requirements and offering opportunity to count engineering classes as electives removes barriers from graduation. This degree is in line with the university's strategic plan, including the cultivation of "curiosity, creativity and confidence" in students," the graduation of "highly qualified, talented and entrepreneurial" workers, the development of "innovative research" and "relevant education programs" that help solve the "great challenges of our time." This degree, especially the writing of a senior thesis, will inspire creative thinking and thus contributes to Missouri S&T's culture of excellence in research, scholarship and creative activity. Consequently, offering a Bachelor of Science in History will also enhance Missouri S&T's visibility and national reputation.

We also believe that a societal demand exists for this kind of degree. According to a 2013 study by the *Chronicle of Higher Education*, business leaders and managers have one common complaint about employees who are recent university graduates: they cannot effectively communicate (http://chronicle.com/article/A-College-Degree-Sorts-Job/137625/#id=overview). Students taking history courses learn to develop critical thinking and writing skills, including how to track trends and communicate that information. Therefore, students who hold a BS degree in history become desirable employees in marketing and communication. Those who hold a BS degree in addition to their science or engineering degree will be better communicators and researchers, enabling them to perform their work more effectively. Consequently they become more competitive in the job market, grow more valuable to their employers, and increase their qualifications for promotion into managerial and leadership positions.

Once approved at the state and campus level, we will be able to implement the program immediately because it will not require new courses or additional faculty for first three to four years. We believe that the availability of a BS degree in History in addition to a BA degree will lead to increased enrollment as well as retention, more students pursuing and completing dual degrees, and increasing more recognition for Missouri S&T and its Department of History and Political Science. Although growth may be slow initially, we believe that once students know about the transfer or dual major option, they will take advantage of it. Additionally, faculty members have reported that students, who were in their third

or fourth year of study, had approached them about transferring from engineering to history. These students had typically taken the required History 1300 or History 1310 and at least one other history course because they like an instructor, were interested in a particular subject, or needed to fulfill a humanities or social science requirement. However, when they find out that the BA also requires at least three semesters of a foreign language as well as additional social science and humanities courses, they realize that graduation would be delayed by at least another 3 semesters. By eliminating the foreign language requirement and transferring science, math, and engineering credits "major transfer" students can more easily graduate within 4.5 years and "double majors" within 5 – 5.5 years. Students who come to Missouri S&T intending to major in history or transfer by the end of their first year, can still reasonably expect to graduate within 4 years with the BS degree.

PROGRAM STRUCTURE

A. Total credits required for graduation: 120

B. Residency requirements, if any: Undergraduate students are required to complete the last 60 credit hours in residency at Missouri S&T.

C. General education: Total credits: 48

Courses (specific courses OR distribution area and credits):

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)

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 (Psychology 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)

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)

Social Sciences. Students must take 12 hours in social sciences. Students must take PolSci 1200 and at least one course in two from the three areas: economics, political science, and psychology. At the discretion of the major advisor, students may transfer up to 3 hours of sociology to meet the 12 hours requirement. (12 hours)

D. Major requirements: Total credits: 55

Students must take 37 hours in required history courses, including Hist 1790, Hist 1100, Hist 1200, Hist 1300, Hist 1310, Hist 2790, and Hist 4097. The student must earn a grade of C or better in these required courses. (37)

Students must also 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)

E. Free elective credits: 17

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 advisor. At least 9 hours of these electives should be at the 3000 or above level, although substitutions may be permitted at the discretion of the major advisor. All electives must accumulate to at least a 2.0 grade point average.

F. Requirements for thesis, internship or other capstone experience:

Students must complete a Senior Project (History 4097) and earn a grade of C or better.

G. Any unique features such as interdepartmental cooperation:

No unique features

FINANCIAL PROJECTIONS

	Year 1	Year 2	Year 3	Year 4	Year 5
1. Expenditures					
A. One-time:					
New/renovated space					
Equipment					
Library					
Consultants					
Other					
Total for One-time Expenditures	0	0	0	0	0
B. Recurring:					
Faculty					0
Staff					
Benefits					
Equipment					
Library					
Other					
Total for Recurring Expenditures	0	0	0	0	0
TOTAL (A + B)	0	0	0	0	0
2. Revenues					
*State Aid - CBHE					
*State Aid - DESE					
Tuition/Fees					
Institutional/Resources					
Other					
TOTAL REVENUES	0	0	0	0	0

* Please provide a brief description of the nature of the state aid. Is "new" money requested or is "old" money going to be used? What is the nature of the "old" money?

There will be no one-time expenditures.

Since no new courses will be developed for the Bachelor of Science (BS) degree in History, there will be no initial recurring expenditures.

Financially, the BS degree in History will bring in a net income because there are no expenditures and every enrolled student would pay tuition and fees.

We estimate that by the fifth or six year, when enrollment in the BS degree in History begins to grow steadily, we may need one more full time faculty member to satisfy the increased demand for sources.

Missouri Department of Higher Education

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PROGRAM CHARACTERISTICS AND PERFORMANCE GOALS

Institution Name Missouri University of Science and Technology
Program Name History/Political Science
Date March 21, 2016

(Although all of the following guidelines may not be applicable to the proposed program, please carefully consider the elements in each area and respond as completely as possible in the format below. Quantification of performance goals should be included wherever possible.)

1. Student Preparation

- Any special admissions procedures or student qualifications required for this program which exceed regular university admissions, standards, e.g., ACT score, completion of core curriculum, portfolio, personal interview, etc. Please note if no special preparation will be required.
  Admission to the university requirements: High School Core Curriculum requirements as well as combined GPA, class rank, and ACT score.

- Characteristics of a specific population to be served, if applicable.
  Incoming freshmen who are interested in STEM fields as well as history, or have a primary preference for history and a secondary preference for STEM field. Transfer students and current students outside of major who switch to or add the major.

2. Faculty Characteristics

- Any special requirements (degree status, training, etc.) for assignment of teaching for this degree/certificate.
  No additional requirements beyond the current requirement of a terminal Ph. D. for teaching upper level courses.

- Estimated percentage of credit hours that will be assigned to full time faculty. Please use the term "full time faculty" (and not FTE) in your descriptions here.
  All upper-level courses will be taught by full-time faculty.

- Expectations for professional activities, special student contact, teaching/learning innovation.
  Students can expect small class sizes and thus personal contact with professors through courses and advising. Several professors have adopted innovative teaching and learning approaches through blended format courses. Professors will interact with students through Phi Alpha Theta, the national honor society for historians, and encourage them to present papers at the regional Phi Alpha Theta conference. Professors will interact with

students through experiential learning including Opportunities for Undergraduate Research Experiences (OURE), senior projects, and study abroad (Programs in England and France) or study away courses (Chicago: Architecutre, Technoligy, and Culture).

3. Enrollment Projections

- Student FTE majoring in program by the end of five years.
  15 students majoring in the program by the end of five years.

- Percent of full time and part time enrollment by the end of five years.
  We estimate that about half, or 50 percent, of all full time students enrolled in a history degree program will be working toward a BS in History.

4. Student and Program Outcomes

- Number of graduates per annum at three and five years after implementation.
  We estimate that 5 students who transferred internally will graduate at three years after implementation and that at least 8 students per year will graduate five years after implementation.

- Special skills specific to the program.
  No specific skills required.

- Proportion of students who will achieve licensing, certification, or registration.
  No special licensing, certification, or registration required.

- Performance on national and/or local assessments, e.g., percent of students scoring above the 50th percentile on normed tests; percent of students achieving minimal cut-scores on criterion-referenced tests. Include expected results on assessments of general education and on exit assessments in a particular discipline as well as the name of any nationally recognized assessments used.
  Students attending Missouri S&T on average score 28.3 on the ACT. Graduates who earned a BA in History intending to go on to graduate school consistently score above the norm on LSAT and GRE exams and generally receive multiple offers for law schools and graduate schools.

- Placement rates in related fields, in other fields, unemployed.
  Based on past placement records for BA students, 90 percent of BS students should find employment in their related field or in other fields.

- Transfer rates, continuous study.

Based on the current record of BA students in the history department, nearly 50 percent transferred from a STEM oriented degree program within Missouri S&T to a Bachelor of Arts in History degree. Once in the history program, 100 percent stay in the program and graduate.

5. Program Accreditation

- Institutional plans for accreditation, if applicable, including accrediting agency and timeline. **If there are no plans to seek specialized accreditation, please provide a rationale.**
  The institution is accredited by the Higher Learning Commission.

6. Alumni and Employer Survey

- Expected satisfaction rates for alumni, *including timing and method of surveys.*
  We currently have an exit survey or interview with graduating students as well as a yearly phonathon that allows us to gauge alumni satisfaction rates. Past students have expressed high satisfaction with class sizes, diversity of courses offered, and personal attention by faculty, but low satisfaction with being a humanities major because they felt marginalized on an engineering campus. We expect that satisfaction rate to increase with the creation of a BS in History since it will offer additional diversitication of courses as well as reduce the feeling of marginalization since the BS in History will focus more on STEM courses.

- Expected satisfaction rates for employers, including timing and method of surveys.
  Based on past surveys we expect the satisfaction rates for employers to remain high. For example, the Missouri S&T Career Opportunities & Employer Relations (COER) satisfaction rate for employers who hired Missouri S&T graduates was 89 percent for the 2013/2014 academic year. Missouri First-Year Teacher Survey of principals who hired Missouri S&T graduates who earned certification through the education program, which is part of the history department, demonstrates that 27.3 percent were extremely satisfied, 45.5 percent were highly satisfied, and 27.3 percent were satisfied with the quality of the program.

7. Institutional Characteristics

- Characteristics demonstrating why your institution is particularly well-equipped to support the program.
  We are one of the eight public and eight private institutions collectively known as "technological research universities" that offer a number of STEM degrees but also maintain "thriving humanities and liberal arts programs." Our proposed degree merges STEM courses with humanities and social science courses into one degree. Missouri S&T would therefore become a better choice for students who are not entirely sure whether they want to major in enigeering, science, or homuanities. Several technological peer universities, including CalTech and Georgia Tech, offer a Bachelor of Science degree in history or a closely related discipline such as Museum Studies, Political Science, or

Science, Technology and Society (STS). As the attached table indicates, of the official peer and comparative universities that offer a BA degree in history, Missouri S&T would be one of only five that also offer a BS degree. Of the twelve competitive universities, Missouri S&T will be also one of five institutions that will offer both a BA and BS in history. Strengthening the history program through an additional degree program will make the university more attractive to a variety of students, including those who have an interest in engeering but also love history.

Peer Universities	History Degrees Offered
California Tech	BS History Option, BS History and Philosophy of Science Option
Carnegie Mellon	BA and BS, PhD
Clarkson	BS
Colorado School of Mines	None (Humanities Minor, STS Minor)
Georgia Tech	BS (MS, PhD) in History, Tech and Society
IIT	None (BS Humanities, BS Political Science, PhD Tech and Humanities)
MIT	BS, PhD
Michigan Tech	BA (BS Social Sciences), PhD (Industrial Heritage and Archeology)
NJIT	BA, MS
NM Tech	Bachelor General Studies (History Minor)
RPI	None (BS, PhD STS)
SD Mines	None (BS STS)
Stevens	BA (BS STS)
UAH	BA
WPI	None (Humanities and Arts and Society, Technology & Policy Majors)
Other Comparators	
Case Western Reserve	BA, MA, PhD
Cal Poly	BA, MA
Drexel	BA and BS (MS STS)
FL Tech	None (BA Humanities)
Iowa State	BA and BS, MA, PhD
Montana Tech	None (BS Liberal Studies)
RIT	None (BS Museum Studies, BS Political Science, History and STS Minors)
Competitors	
University of Missouri	BA
University of Missouri-St. Louis	BA, BS Education
University of Missouri-Kansas City	BA
Truman State	BA, BS
Missouri State	BA, BS Education
University of Illinois	BA
University of Southern Illinois-Edwardsville	BA, BS
Iowa State	BA, BS
St. Louis University	BA
Purdue	BA
Kansas State	BA, BS
University of Kansas	BA
University of Arkansas	BA

MISSOURI S&T

MISSOURI UNIVERSITY OF SCIENCE AND TECHNOLOGY

Office of the Provost and Executive Vice Chancellor

210 Parker Hall, 300 West 13th Street
Rolla, MO 65409-0830

Phone: 573-341-4138
Fax: 573-341-6777
Email: marleyr@mst.edu
Web: www.mst.edu

MEMORANDUM TO: Cheryl B. Schrader
Chancellor

FROM: Dr. Robert Marley
Provost and Executive Vice Chancellor

DATE: March 31, 2016

RE: Proposed New BS Degree in History

I have reviewed the proposal for a Bachelor of Science Degree in History and concur with Dean Roberts that the program fits the guidelines of our campus strategic plan. With this memorandum, I am recommending that the department submit the proposal to the Registrar for review by the Campus Curricula Committee and the Discipline Specific Curricula Committee. As a reminder, under the updated new degree proposal process, upon approval by Faculty Senate, I will forward the proposal for your review.

RJM:bjp

cc: Dr. Shannon Fogg
Dr. Stephen Roberts

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 Using this Program	Mathematics and Statistics

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 Comments	**kleb6b (04/07/16 8:08 am):** Update effective term **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

Key: 84
Preview Bridge

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 Using this Program	Mathematics and Statistics

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

Key: 85

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 12:48 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 Using this Program	Business and Management Systems Information Science and Technology

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

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

Program Requirements and Description

Minor in Management

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

BUS 1110	Introduction to Management and Entrepreneurship	3
~~One course from the following list:~~		~~3~~
Four courses from the following list:		**12**
BUS 2910	Business Law	
BUS 3115	Introduction to Teambuilding and Leadership	
BUS 4111	Business Negotiations	
BUS 4150	Customer Focus and Satisfaction	
BUS 5360	Business Operations	
BUS 5470	Human Resource Management	
BUS 5580	Strategic Management	
IS&T 4261	Information Systems Project Management	
~~Three courses from the following list:~~		~~9~~

ENG MGT 3320	Introduction to Project Management

Justification for request	Put all courses besides BUS 1110 into one list.
Supporting Documents	
Course Reviewer Comments	**kleb6b (02/26/16 7:33 am):** Update effective term **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 Using this Program	Multiculturalism & Diversity Psychology

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

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

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.

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:	
ENGLISH 1231	World Literature I: From The Beginnings To The Renaissance
ENGLISH 2242	Literature By Women
ENGLISH 2245	African American Literature
ENGLISH 3228	The American Experience
History and Political Science:	
~~HISTORY 2660~~	~~Course HISTORY 2660 Not Found~~
HISTORY 3280	European Migrations and Nationalism Formation
~~HISTORY 2665~~	~~Course HISTORY 2665 Not Found~~
HISTORY 3660	**Modern East Asia**
HISTORY 3665	**History of Japan**
POL SCI 2500	International Relations
~~POL SCI 3510~~	~~Course POL SCI 3510 Not Found~~
POL SCI 4510	**The Politics of the Third World**
Psychology:	
PSYCH 4993	Psychology of Women
PSYCH 4992	Cross-Cultural Psychology

* Language Courses at the 3rd Semester or above that qualify for the minor:	
FRENCH 1180	Intermediate French
FRENCH 2110	Basic French Conversation
FRENCH 2170	Masterpieces Of French Literature
FRENCH 2180	Basic French Composition
FRENCH 4311	Advanced French Conversation
FRENCH 4320	**French and Francophone Cinema**
FRENCH 4360	French Culture And Civilization
FRENCH 4370	Survey Of French Literature I (Early Period)
FRENCH 4375	Survey Of French Literature II (Modern Period)
GERMAN 1180	Classical And Modern German Readings
GERMAN 2110	Basic German Conversation
GERMAN 2170	Masterpieces Of German Literature
RUSSIAN 1180	Readings In Science And Literature
RUSSIAN 2110	Basic Russian Conversation
RUSSIAN 2170	Masterpieces Of Russian Literature
RUSSIAN 4320	Russian Phonetics and Intonation
RUSSIAN 4330	Business Russian
RUSSIAN 4360	**Russian Civilization**
RUSSIAN 4370	Survey Of Russian Literature I (Early Period)
RUSSIAN 4375	Survey Of Russian Literature II(Modern Period)
SPANISH 1180	Intermediate Spanish
SPANISH 2110	Basic Spanish Conversation
SPANISH 2160	Hispanic Culture
SPANISH 2170	Masterpieces Of Hispanic Literature
SPANISH 2180	Intermediate Spanish Composition
SPANISH 4311	Advanced Spanish Conversation
SPANISH 4377	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 Using this Program	Physics
Start Term	**Fall 2016** ~~08/01/2014~~
Program Code	PHYSIC-BS
Department	Physics
Title	Physics BS

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

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

Freshman Year			
First Semester	**Credits**	**Second Semester**	**Credits**
CHEM 1310	4	CHEM 1320	3

CHEM 1319	1	HISTORY 1200, or 1300, or 1310, or POL SCI 1200	3
CHEM 1100	1	MATH 1221[6]	5
ENGLISH 1120	3	PHYSICS 1111 & PHYSICS 1119[7]	5
MATH 1208[5]	5	~~PHYSICS 1119~~	~~1~~
PHYSICS 1101	1		
	15		16

Sophomore Year

First Semester	Credits	Second Semester	Credits
ENGLISH 1160	3	MATH 3304	3
MATH 2222	4	PHYSICS 2311	3
PHYSICS 2111 & PHYSICS 2119[8]	5	PHYSICS 2129	3
~~PHYSICS 2119~~	~~1~~	PHYSICS 2401	3
COMP SCI 1570 & COMP SCI 1580[4]	4	Elective[1]	3
Elective[1]	3		
	19		15

Junior Year

First Semester	Credits	Second Semester	Credits
PHYSICS 3201	3	PHYSICS 3211	3
PHYSICS 3119	3	PHYSICS 3129	3
PHYSICS 3311	3	Math/Stat Elective[2]	3
Math/Stat Elective[2]	3	Electives[1]	6
Electives[1]	6		
	18		15

Senior Year

First Semester	Credits	Second Semester	Credits
PHYSICS 4211	3	PHYSICS 4311	3
PHYSICS 4301	3	Elective-Humanities (300 level)[1]	3
Physics Elective[3]	3	Physics Elective[3]	3
Electives[1]	6	Electives[1]	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.

1	Electives, in addition to the math/stat electives[2] and Physics electives[3], 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 (PHILOS 4345 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.
2	Six hours of mathematics or statistics beyond MATH 3304 are required. MATH 3108, MATH 5222, MATH 5325, or MATH 5351 are recommended.
3	In addition to the specific physics courses listed (PHYSICS 3311, PHYSICS 3201, PHYSICS 4311, PHYSICS 4211, PHYSICS 3119, PHYSICS 3129, and PHYSICS 4301) two other physics 3000 level or higher courses are required.
4	Alternatively COMP SCI 1971 and COMP SCI 1981; note that this will require one less credit hour than the option listed in the sample schedule.
5	**Alternatively students may substitute Math 1214 for Math 1208. Note that this is one less credit hour than Math 1208.**
6	**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:

EDUC 1040	Perspectives In Education	2
EDUC 1174	School Organization & Adm For Elementary & Secondary Teachers	2
EDUC 2216	Teaching Reading In Content Area	3
EDUC 2251	Historical Foundation Of American Education	3
EDUC 3280	Teaching Methods And Skills In The Content Areas	6
EDUC 4298	Student Teaching Seminar	1
PSYCH 2300	Educational Psychology	3
PSYCH 3311	Psychological & Educational Development Of The Adolescent	3
PSYCH 4310	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:

EDUC 1104	Teacher Field Experience	2
EDUC 1164	Aiding Elementary, Middle And Secondary Schools	2
EDUC 4299	Student Teaching	12

c. Take these additional courses:

SP&M S 1185	Principles Of Speech	3
POL SCI 1200	American Government	3
PSYCH 1101	General Psychology	3
BIO SCI 1113	General Biology	3
PHYSICS 1605	Environmental Physics I	3
~~HISTORY 2530~~	~~Course HISTORY 2530 Not Found~~	~~3~~
HISTORY 3530	**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:~~

~~MATH 1208~~	~~Calculus With Analytic Geometry I~~	~~5~~
~~MATH 1221~~	~~Calculus With Analytic Geometry II~~	~~5~~

~~PHYSICS 1111~~	~~General Physics I~~	~~4~~
~~PHYSICS 1119~~	~~General Physics Laboratory~~	~~1~~
~~PHYSICS 2111~~	~~General Physics II~~	~~4~~
~~PHYSICS 2119~~	~~General Physics Laboratory~~	~~1~~

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 Comments

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

Key: 115
Preview Bridge

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 Effective Change Date	Fall 2016
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. lshelton
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) previously taught	Taught as CS 5001 in FS20014 and FS2015 with different prereqs and course description.
Co-Listed Courses:	ENG MGT 5001 - Special Topics

Course Reviewer Comments	**kleb6b (03/01/16 1:53 pm):** Rollback: Tabled **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: 04/08/16 1:26 pm

Changes proposed by: marcys

Requested Effective Change Date	Fall 2016
Department	Economics
Discipline	Economics (ECON)
Course Number	5001
Topic ID	002
Experimental Title	Applied Economic Research
Experimental Abbreviated Course Title	AppEcon Research
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, under mentor supervision, & by delivering their conclusions in a professional presentation and/or research paper.

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.

Credit Hours	LEC: 2	LAB: 1	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. 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

Justification for new course:	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. For the Fall 2016 semester we will be collaborating with the American Institute of Economic Research.
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 Effective Change Date	Fall 2016
Department	Psychological Science
Discipline	Psychology (PSYCH)
Course Number	2001
Topic ID	001
Experimental Title	Foundations of Leadership
Experimental Abbreviated Course Title	Leadership Foundations
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) previously taught	None
Co-Listed Courses:	ENG MGT 2001 - Special Topics

Course Reviewer Comments

Key: 4313
Preview Bridge