



Minutes of the Campus Curricula Committee Meeting

December 4, 2013

10 am, Room 106B Parker Hall

Attendees: Lahne Black, Barry Flachsbart, Irina Ivliyeva, Deanne Jackson, Keith Nisbett, Steve Raper, Tom Schuman, Daniel Tauritz, and Paul Worsey.

Due to construction in Parker Hall, the location for the January 14, 2014 CCC meeting has been changed to Fulton Hall, Room 117.

The Committee revisited previously approved CC forms #8385, #8445, #8446 and #8447, which changed Metallurgical Engineering/Ceramic Engineering 261 and Metallurgical Engineering/Ceramic Engineering 262. The forms were edited because course descriptions, credit hours and prerequisites for co-listed courses must match and did not before.

The following curriculum forms were discussed and approved:

Degree Change Forms:

File #7.2	File #178.1
File #28.1	File #179.1
File #29.1	File #181.1
File #30.1	File #183.1
File #84.1	File #184.1
File #116.1	File #187.1
File #132.1	File #188.1
File #141.1	File #204.1
File #143.4	File #209.1
File #144.1	File #217.1
File #145.1	File #218.1
File #148.1	File #219.1
File #167.1	File #220.1
File #173.1	File #223.1
File #177.1	

The following item was removed from the agenda as no action was required.

File #185.1 Materials Science and Engineering – Ceramic Engineering PhD



The item below remains tabled, pending clarification from the submitting department.

File #48.1 English and Technical Communication – English BA

The items below remain tabled due to the freeze required by the ongoing Course Renumbering Initiative:

CC #8475	Mining Engineering 407 - Theory of High Explosives
CC #8476	Economics 350 - Ethical Problems in a Global Environment
CC #8477	Explosives Engineering 305 - Explosives Handling and Safety
CC #8478	Materials Science and Engineering 325 - Materials Selection in Mechanical Design
CC #8479	Environmental Engineering 265 - Water and Wastewater Engineering
CC #8480	Philosophy 201 - Symbolic Logic in Argumentation

The meeting adjourned at 11:27 am.

A handwritten signature in blue ink that reads "Daniel Tauritz".

Daniel Tauritz, Chair
Missouri S&T Campus Curricula Committee

Effective Year: 2014 Effective Term: Summer ☐ Fall ☒ Spring ☐**Course Change Form (CC)**

This form is for creating or modifying permanent courses.

Course Changes (Check all changes.)New Course ☐Course Deletion ☐Credit Hours ☒Prerequisites ☒Course Title ☐Catalog Description ☒Course Number ☐Co-listing ☐**Course Information** (Sections 1-9 must be completed. Leave "Proposed" items blank if no change is being made.)1. Department: **Materials Science & Engineering**2. Discipline and Course Number: Present: **CER ENG 261** Proposed:3. Course Title: Present: **Materials Senior Design I**

Proposed:

Abbreviated Course Title (24 Spaces or Less. Only needed for New Courses or Title Changes.):

4. Catalog Description (360 character spaces or less.)

Present: **Students working in groups will be assigned a capstone design project related to a specific materials technology. This course will focus on project plan and all aspects of product and process design.**Proposed: **Overview of the methods, approaches, and techniques required to execute materials related capstone senior design projects. Formation of teams, assignment of projects, review of department curriculum concepts and topics, and comprehensive project management skills needed to complete projects will be used as means to learn the design process.**5. If course requires field trip check box: ☐6. Credit Hours: Present: Lecture **0** Lab **1** Total **1**Proposed: Lecture **3** Lab **0** Total **3**

7. Prerequisites:

Present: **Senior standing**Proposed: **MET ENG 216 and MET ENG 218, or CER ENG 231 with a "C" or better**8. Required for Majors: ☒ Elective for Majors: ☐9. Justification: **Increased hours needed to expand course content & expectations; prerequisite grade of "C" new dept standard**

10. Semesters previously offered as an experimental course (101, 201, 301, 401):

11. List all co-listed courses, initialed by Dept. Chair, if signature does not appear below.

1) **MET ENG 261**

3)

5)

2)

4)

6)

Recommended by Department: _____ Date: _____
(Chair signature)Recommended by DSCC _____ Date: _____
(Chair signature)Approved by Curricula Committee: *Daniel Jank* Date: 12/16/2013
(Chair signature)Approved by Faculty Senate: _____ Date: _____
(Chair signature)

Effective Year: **2014** Effective Term: Summer ☐ Fall ☒ Spring ☐**Course Change Form (CC)**

This form is for creating or modifying permanent courses.

Course Changes (Check all changes.)

New Course ☐ Course Deletion ☐ Credit Hours ☒ Prerequisites ☒
 Course Title ☐ Catalog Description ☐ Course Number ☐ Co-listing ☐

Course Information (Sections 1-9 must be completed. Leave "Proposed" items blank if no change is being made.)1. Department: **Materials Science & Engineering**2. Discipline and Course Number: Present: **CER ENG 262** Proposed:3. Course Title: Present: **Materials Senior Design II**

Proposed:

Abbreviated Course Title (24 Spaces or Less. Only needed for New Courses or Title Changes.):

4. Catalog Description (360 character spaces or less.)

Present: **A continuation of the Materials Senior Design I. Students working in groups will complete a capstone design project including process and product simulation and/or fabrication, safety aspects, environmental impact and capital and operating economics.**

Proposed:

5. If course requires field trip check box: ☐6. Credit Hours: Present: Lecture **0** Lab **2** Total **2**Proposed: Lecture **0** Lab **3** Total **3**

7. Prerequisites:

Present: **CER ENG 261 or MET ENG 261**Proposed: **"C" or better in either CER ENG 261 or MET ENG 261**8. Required for Majors: ☒ Elective for Majors: ☐9. Justification: **Increased prerequisite grade - new department standard to improve student success; increased credit hours needed to expand course content & expectations**

10. Semesters previously offered as an experimental course (101, 201, 301, 401):

11. List all co-listed courses, initialed by Dept. Chair, if signature does not appear below.

1) **MET ENG 262**

3)

5)

2)

4)

6)

Recommended by Department _____ Date: _____
(Chair signature)Recommended by DSCC _____ Date: _____
(Chair signature)Approved by Curricula Committee: *Daniel Smith* Date: 12/16/2013
(Chair signature)Approved by Faculty Senate: _____ Date: _____
(Chair signature)

Program Change Request

Date Submitted: 09/25/13 4:16 pm

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

File: 7.2

Last approved: 09/12/13 2:39 pm

Last edit: 09/25/13 10:14 pm

Changes proposed by: imorgan

In Workflow

1. RMATHEMA Chair
2. CCC Secretary
3. Sciences DSCC Chair
4. CCC Meeting Agenda
5. Campus Curricula Committee Chair
6. FS Meeting Agenda
7. Faculty Senate Chair
8. Registrar
9. Peoplesoft

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

Start Term Fall **2014** ~~2013~~
Program Code AP MATH-MS
Department Mathematics & Statistics
Title Applied Mathematics MS

Approval Path

1. 09/25/13 10:19 pm
sclark: Approved for RMATHEMA Chair
2. 09/27/13 2:14 pm
lahne: Approved for CCC Secretary
3. 10/28/13 7:14 pm
tauritzd: Approved for Sciences DSCC Chair
4. 12/05/13 12:22 pm
lahne: Approved for CCC Meeting Agenda
5. 12/08/13 7:24 am
tauritzd: Approved for Campus Curricula Committee Chair

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**. ~~400-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** ~~400-level~~ and six or more hours of which must be Graduate Research, [MATH 490](#) or [STAT 490](#). 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 The intention is to maintain the current requirements under the new numbering system.

Supporting Documents

Course Reviewer Comments

History

1. Sep 12, 2013 by pantaleoa

Key: 7

Program Change Request

Date Submitted: 09/26/13 1:54 pm

Viewing: **CMP SC-BS : Computer Science BS**

File: 28.1

Last edit: 11/01/13 11:01 am

Changes proposed by: tauritzd

Catalog Pages	Computer Science	In Workflow <ol style="list-style-type: none"> 1. RCOMPSCI Chair 2. CCC Secretary 3. Sciences DSCC Chair 4. CCC Meeting Agenda 5. Campus Curricula Committee Chair 6. FS Meeting Agenda 7. Faculty Senate Chair 8. Registrar 9. Peoplesoft
Using this Program		
Start Term	Fall 2014	
Program Code	CMP SC-BS	
Department	Computer Science	Approval Path <ol style="list-style-type: none"> 1. 09/26/13 2:16 pm sdas: Approved for RCOMPSCI Chair 2. 09/30/13 8:22 am lahne: Approved for CCC Secretary 3. 10/28/13 7:14 pm tauritzd: Approved for Sciences DSCC Chair 4. 12/05/13 12:23 pm lahne: Approved for CCC Meeting Agenda 5. 12/08/13 7:27 am tauritzd: Approved for Campus Curricula Committee Chair
Title	Computer Science BS	

Program Requirements and Description

Bachelor of Science Computer Science

A minimum of 128 credit hours is required for a Bachelor of Science degree in Computer Science 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 Computer Science curriculum requires twelve semester hours in humanities, exclusive of foreign language, and must include [ENGLISH 60](#) or [ENGLISH 160](#). A minimum of nine semester hours is required in social sciences, including either [HISTORY 175](#), [HISTORY 176](#), ~~[HISTORY 476](#)~~, [HISTORY 112](#), or [POL SCI 90](#). -Specific requirements for the bachelor degree are outlined in the sample program listed below.

All computer science majors must earn a "C" or better grade in all COMP SCI courses used to fulfill a B.S. in Computer Science degree requirements as well as in [COMP ENG 111](#), [COMP ENG 213](#), and the required ethics elective.

Sample Course of Study

Freshman Year			
First Semester	Credits	Second Semester	Credits
COMP SCI 1 ¹⁴	1	COMP SCI 153	3
COMP SCI 53	3	COMP SCI 128	3
COMP SCI 54	1	MATH 21 ¹⁵	5
ENGLISH 20	3	Laboratory science course(s) ¹	5
MATH 8 ¹⁵	5		
Humanities Elective ⁵	3		
	16		16
Sophomore Year			
First Semester	Credits	Second Semester	Credits
COMP SCI 253	3	COMP SCI 238	3
Social Science Elective ²	3	COMP ENG 111 ¹²	3
Literature Elective ⁵	3	MATH 208 ⁷	3
Physics Elective ³	4	Physics Elective ³	4
SP&M S 85 ⁴	3	STAT 215 ⁶	3
	16		16
Junior Year			
First Semester	Credits	Second Semester	Credits
History Elective ²	3	COMP SCI 256	3
COMP SCI 284	3	Social Science Elective ²	3
COMP ENG 213 ¹²	3	COMP SCI 228	3
COMP SCI 220	3	ENGLISH 60 ¹³	3

Free Elective ⁸	3	COMP SCI 206	3
	15		15
Senior Year			
First Semester	Credits	Second Semester	Credits
Cmp Sc Electives ⁹	9	Cmp Sc Electives ⁹	6
Eng/Science Electives ¹⁰	6	Eng/Science Elective ¹⁰	3
COMP SCI 397	3	Ethics Elective ¹¹	3
		Free Elective ⁸	4
	18		16
Total Credits: 128			

¹ Any science lecture-laboratory course or course pair totaling at least four hours credit. The laboratory is mandatory in all cases. These course(s) may be selected from: [CHEM 1](#) and [CHEM 2](#); [CHEM 5](#); [BIO SCI 110](#) and [BIO SCI 112](#); [PHYSICS 9](#) and [PHYSICS 10](#); [GEOLOGY 51](#) and [GEOLOGY 53](#); [GEOLOGY 52](#) and [GEOLOGY 54](#); [BIO SCI 113](#) and [BIO SCI 114](#); [BIO SCI 115](#) and [BIO SCI 116](#).

² Any nine credit hours of social science courses approved on the list maintained on the Computer Science web page. One course must satisfy the Missouri and U.S. Constitution requirement.

³ Either [PHYSICS 23](#) and [PHYSICS 24](#) or both [PHYSICS 21](#)-[PHYSICS 22](#) and [PHYSICS 25](#)-[PHYSICS 26](#).

⁴ [SP&M S 85](#) or [SP&M S 283](#).

⁵ One literature and one humanities course approved on the list maintained on the Computer Science web page.

⁶ [STAT 213](#), [STAT 215](#), [STAT 217](#) or [STAT 343](#).

⁷ [MATH 203](#) or [MATH 208](#).

⁸ Courses chosen from any field so that 128 hours are completed. These and only these courses may be taken pass/fail and only one course may be taken pass/fail each semester. Some courses such as algebra, trigonometry, [MATH 14](#), [MATH 15](#), [MATH 21](#), [PHYSICS 21](#), [PHYSICS 22](#), [PHYSICS 23](#), [PHYSICS 24](#), [PHYSICS 25](#), [PHYSICS 26](#), [PHYSICS 31](#), [PHYSICS 35](#) and the first two years of ROTC do not count toward the free electives.

⁹ Fifteen hours of elective Comp Sci courses excluding [COMP SCI 202](#), [COMP SCI 317](#), and Comp Sci x9xx courses. At least nine hours must be 5000-level or higher. At least nine hours must be lecture courses.

¹⁰ Any nine hours chosen from departments that offer a degree associated with either the Discipline Specific Curricula Committee for Sciences or the Discipline Specific Curricula Committee for Engineering, excluding computer science. These may not be [MATH 8](#), [MATH 14](#), [MATH 15](#), [MATH 21](#), [PHYSICS 21](#), [PHYSICS 22](#), [PHYSICS 23](#), [PHYSICS 24](#), [PHYSICS 25](#), [PHYSICS 26](#), [PHYSICS 31](#), or [PHYSICS 35](#).

¹¹ [PHILOS 225](#) or [PHILOS 235](#) or [PHILOS 340](#) or [PHILOS 368](#).

¹² Laboratory not required.

¹³ Or [ENGLISH 160](#) Technical Writing.

¹⁴ Or [BIO SCI 102](#) [CHEM 11](#), [PHYSICS 1](#), [MATH 1](#), or [FR ENG 10](#).

¹⁵ [MATH 14](#) may be taken instead of [MATH 8](#); [MATH 15](#) may be taken instead of [MATH 21](#)

Justification for request Updates the BS in CS degree program to be consistent with the new numbering system, removes/replaces all inactive courses, and updates the specific degree requirements.

Supporting Documents

Course Reviewer Comments

Program Change Request

Date Submitted: 09/26/13 1:56 pm

Viewing: **CMP SC-MI : Computer Science Minor**

File: 29.1

Last edit: 09/26/13 1:56 pm

Changes proposed by: tauritzd

Catalog Pages	Computer Science	In Workflow 1. RCOMPSCI Chair 2. CCC Secretary 3. Sciences DSCC Chair 4. CCC Meeting Agenda 5. Campus Curricula Committee Chair 6. FS Meeting Agenda 7. Faculty Senate Chair 8. Registrar 9. Peoplesoft
Using this Program		
Start Term	Fall 2014	
Program Code	CMP SC-MI	
Department	Computer Science	Approval Path 1. 09/26/13 2:17 pm sdas: Approved for RCOMPSCI Chair 2. 09/27/13 2:41 pm lahne: Approved for CCC Secretary 3. 10/28/13 7:14 pm tauritzd: Approved for Sciences DSCC Chair 4. 12/05/13 12:23 pm lahne: Approved for CCC Meeting Agenda 5. 12/08/13 7:28 am tauritzd: Approved for Campus Curricula Committee Chair
Title	Computer Science Minor	

Program Requirements and Description

Computer Science Minor Curriculum

A student with a minor in computer science must meet the following requirements:

1. A "C" or better grade in at least 18 credit hours of Comp Sci courses, excluding x9xx courses.
2. A "C" or better grade in at least 9 credit hours of Comp Sci courses at the 2000 or higher level.
3. A "C" or better grade in two of the following courses: [COMP SCI 206](#), [COMP SCI 220](#), [COMP SCI 228](#), [COMP SCI 238](#), [COMP SCI 253](#), [COMP SCI 256](#) and [COMP SCI 284](#).
4. ~~COMP SCI 153 and 12 elective hours in computer science beyond COMP SCI 53, COMP SCI 54, COMP SCI 73 & COMP SCI 77 or COMP SCI 74 & COMP SCI 78.~~ A member of the computer science faculty will serve as the student's minor advisor. The student and his/her minor advisor will plan a course of study to meet the specific interests and needs of the student.

~~Students pursuing a minor in computer science must earn a "C" or better, in COMP SCI 53, COMP SCI 54, COMP SCI 153, COMP SCI 128, and COMP SCI 253 if any of these courses are taken for the minor.~~

Justification for request	Updates the minor to be consistent with the new course numbering as well as with the increased grade requirements for CS course prereqs and CS degree programs.
Supporting Documents	
Course Reviewer Comments	

Key: 29

Program Change Request

Date Submitted: 09/30/13 2:32 pm

Viewing: **A&E BIO-MS : Applied and Environ Biology MS**

File: 30.1

Last edit: 11/01/13 2:35 pm

Changes proposed by: shannonk

Catalog Pages	Biological Sciences	<div>5. Campus Curricula Committee Chair</div> <div>6. FS Meeting Agenda</div> <div>7. Faculty Senate Chair</div> <div>8. Registrar</div> <div>9. Peoplesoft</div>
Using this Program		
Start Term	Fall 2014	
Program Code	A&E BIO-MS	
Department	Biological Sciences	<div>Approval Path</div> <div>1. 09/30/13 7:22 pm aronstam: Approved for RBIOLSCI Chair</div> <div>2. 10/08/13 10:53 am lahne: Approved for CCC Secretary</div> <div>3. 10/28/13 7:13 pm tauritzd: Approved for Sciences DSCC Chair</div> <div>4. 12/05/13 12:23 pm lahne: Approved for CCC Meeting Agenda</div> <div>5. 12/08/13 7:29 am tauritzd: Approved for Campus Curricula Committee Chair</div>
Title	Applied and Environ Biology MS	
Program Requirements and Description		
Degree Requirements M.S. - with thesis		

BIO SCI 402	Problems In Applied And Environmental Biology
BIO SCI 410	Graduate Seminar
BIO SCI 475	Techniques In Applied And Environmental Biology
BIO SCI 490	Graduate Research

Degree Requirements M.S. - without thesis

BIO SCI 402	Problems In Applied And Environmental Biology
BIO SCI 410	Graduate Seminar

Elective courses are chosen with guidance from the advisor and advisory committee. Out-of-department courses comprise at least 6 hours of credit. A minimum of 30 credit hours is required for a MS degree. Up to 6 credit hours may be taken at the **3000-level** ~~290-level~~ in courses offered by other departments. Candidates for the MS degree with thesis conduct original research that is defended in a final oral examination. Non-thesis MS degree candidates take a comprehensive written final examination.

Justification for request Change 200 to 3000 level to reflect course renumbering efforts

Supporting Documents

Course Reviewer Comments

Key: 30

Program Change Request

Date Submitted: 09/25/13 4:26 pm

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

File: 84.1

Last edit: 11/01/13 11:25 am

Changes proposed by: imorgan

Catalog Pages	<u>Mathematics and Statistics</u>	<div>5. Campus Curricula Committee Chair</div> <div>6. FS Meeting Agenda</div> <div>7. Faculty Senate Chair</div> <div>8. Registrar</div> <div>9. Peoplesoft</div>
Using this Program		
Start Term	Fall 2014	
Program Code	MATH-MST	
Department	Mathematics & Statistics	
Title	Mathematics MST	
<div>Program Requirements and Description</div> <div>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 299 in Science and Mathematics, three hours of which must be at the 6000-level. 400-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.</div> <div>Candidates must pass a final comprehensive examination.</div>		<div>Approval Path</div> <div>1. 09/25/13 10:20 pm sclark: Approved for RMATHEMA Chair</div> <div>2. 09/27/13 2:47 pm lahne: Approved for CCC Secretary</div> <div>3. 10/28/13 7:14 pm tauritzd: Approved for Sciences DSCC Chair</div> <div>4. 12/05/13 12:24 pm lahne: Approved for CCC Meeting Agenda</div> <div>5. 12/08/13 7:30 am tauritzd: Approved for Campus Curricula Committee Chair</div>
Justification for request	<div>The intention is to maintain current requirements under the new numbering system.</div> <div>There are valuable courses at the 2000-level we would like the students to be able to count for their degree.</div>	
Supporting Documents		
Course Reviewer Comments		

Key: 84

Program Change Request

Date Submitted: 09/18/13 3:51 pm

Viewing: **PHYSIC-MI : Physics Minor**

File: 116.1

Last edit: 11/01/13 11:42 am

Changes proposed by: waddill

Catalog Pages	Physics	In Workflow <ol style="list-style-type: none"> 1. RPHYSICS Chair 2. CCC Secretary 3. Sciences DSCC Chair 4. CCC Meeting Agenda 5. Campus Curricula Committee Chair 6. FS Meeting Agenda 7. Faculty Senate Chair 8. Registrar 9. Peoplesoft
Using this Program		
Start Term	Fall 2014	
Program Code	PHYSIC-MI	Approval Path <ol style="list-style-type: none"> 1. 09/18/13 3:53 pm waddill: Approved for RPHYSICS Chair 2. 09/25/13 10:00 am lahne: Approved for CCC Secretary 3. 10/28/13 7:13 pm tauritzd: Approved for Sciences DSCC Chair 4. 12/05/13 12:24 pm lahne: Approved for CCC Meeting Agenda 5. 12/08/13 7:33 am tauritzd: Approved for Campus Curricula Committee Chair
Department	Physics	
Title	Physics Minor	
Program Requirements and Description		
Physics Minor Curriculum		
<p>The minor in Physics is a flexible program whose goal is to increase the breadth and competency of science and engineering students in modern or classical Physics. Science students pursuing the Physics minor will be interested in a deeper understanding of fundamental physical processes. Engineering students who intend to work in research or advanced development may use a Physics minor to acquire a thorough knowledge of atomic, condensed matter, and environmental physics.</p> <p>The physics minor consists of PHYSICS 10Z or PHYSICS 20Z and 12 additional hours of physics courses at the 2000-level the 200-level or above. The program will be designed to conform to the individual's interests and needs.</p>		
Justification for request	To update according to new course renumbering scheme.	
Supporting Documents		
Course Reviewer Comments		

Key: 116

Program Change Request

Date Submitted: 09/16/13 2:09 pm

Viewing: **TCH COM-BS : Technical Communication BS**

File: 132.1

Last edit: 11/01/13 3:24 pm

Changes proposed by: kswenson

In Workflow

1. [RENGLISH Chair](#)
2. [CCC Secretary](#)
3. [Arts & Humanities DSCC Chair](#)
4. [CCC Meeting Agenda](#)
5. [Campus Curricula Committee Chair](#)
6. [FS Meeting Agenda](#)
7. [Faculty Senate Chair](#)
8. [Registrar](#)
9. [Peoplesoft](#)

Approval Path

1. 09/16/13 2:16 pm
kswenson: Approved for
RENGLISH Chair
2. 10/10/13 3:43 pm
lahne: Approved for
CCC Secretary
3. 10/14/13 6:11 pm
ivliyeva: Approved for Arts & Humanities DSCC Chair
4. 12/05/13 12:24 pm
lahne: Approved for
CCC Meeting Agenda
5. 12/08/13 7:35 am
tauritzd: Approved for Campus Curricula Committee Chair

Catalog Pages [Technical Communication](#)Using this
ProgramStart Term **Fall 2014**

Program Code TCH COM-BS

Department English and Technical Communication

Title Technical Communication BS

Program Requirements and Description

Bachelor of Science Technical Communication

The Technical Communication degree requires 33 credit hours of core courses: [ENGLISH 281](#), [TCH COM 240](#), [TCH COM 260](#), [TCH COM 302](#), [TCH COM 340](#), [TCH COM 385](#), and five additional courses from the following list: [ENGLISH 160](#), [ENGLISH 305](#), [TCH COM 301](#), [TCH COM 310](#), [TCH COM 331](#), [TCH COM 333](#), [TCH COM 361](#), [TCH COM 380](#). It also requires 42 hours of general education courses, 36 hours of interdisciplinary courses (see Note below), and 15 hours of free electives, for a total of 126 hours. Specific requirements for the bachelor's degree are outlined in the sample program listed below.

Freshman Year			
First Semester	Credits	Second Semester	Credits
ENGLISH 20	3	TCH COM 65	3
MATH 4	3	BIO SCI 110 or 231 or 235 or 251	3
PSYCH 50	3	HISTORY 175 or 176 or 111 or 112	3
Interdisciplinary Course ¹	3	Interdisciplinary Course ¹	3
Humanities, Art, Music, Theater	3	ECON 121	3
	15		15
Sophomore Year			
First Semester	Credits	Second Semester	Credits
SP&M S 85	3	Humanities, Art, Music, Theater	3
English Literature	3	POL SCI 90	3
TCH COM 240	3	TCH COM 260	3
ENGLISH 281	3	TCH COM Elective	3
Interdisciplinary Course ¹	3	Chemistry, Geology, Physics	3
		Interdisciplinary Course ¹	3
	15		18
Junior Year			
First Semester	Credits	Second Semester	Credits
Math/Statistics	3	TCH COM 302	3
TCH COM 340	3	TCH COM Elective	3
Interdisciplinary Course ¹	3	TCH COM Elective	3
Interdisciplinary Course ¹	3	Interdisciplinary Course ¹	3
Interdisciplinary Course ¹	3	Interdisciplinary Course ¹	3
		Free Elective	3

	15		18
Senior Year			
First Semester	Credits	Second Semester	Credits
TCH COM Elective	3	TCH COM 385	3
Interdisciplinary Course ¹	3	TCH COM Elective	3
Interdisciplinary Course ¹	3	Interdisciplinary Course ¹	3
Free Elective	3	Free Elective	3
Free Elective	3	Free Elective	3
	15		15
Total Credits: 126			

¹ In consultation with his or her advisor, the student will select 36 hours of Interdisciplinary Courses from only two of the areas listed below, with no fewer than 15 credit hours per area: biological sciences, business, chemistry, computer science, economics, education, engineering management, English, finance, one foreign language, geology, history, information science and technology, management and information systems, mathematics, philosophy, physics, political science, psychology, speech and media studies, statistics, any area of engineering. At least 12 of the 36 hours must come from courses numbered 2000-level or above. The student's course selections must be approved by the Department of English and Technical Communication's technical communication committee.

Justification for
request

Supporting
Documents

Course Reviewer
Comments

Key: 132

Program Change Request

Date Submitted: 09/27/13 2:52 pm

Viewing: **AE ENG-BS : Aerospace Engineering BS**

File: 141.1

Last edit: 12/05/13 12:39 pm

Changes proposed by: nisbett

Catalog Pages	Aerospace Engineering	In Workflow <ol style="list-style-type: none"> 1. RMECHENG Chair 2. CCC Secretary 3. Engineering DSCC Chair 4. CCC Meeting Agenda 5. Campus Curricula Committee Chair 6. FS Meeting Agenda 7. Faculty Senate Chair 8. Registrar 9. Peoplesoft
Using this Program		
Start Term	Fall 2014	
Program Code	AE ENG-BS	
Department	Mechanical & Aerospace Engineering	Approval Path <ol style="list-style-type: none"> 1. 09/27/13 3:43 pm drallmei: Approved for RMECHENG Chair 2. 09/27/13 3:44 pm lahne: Approved for CCC Secretary 3. 10/10/13 2:47 pm srafer: Approved for Engineering DSCC Chair 4. 12/05/13 12:40 pm lahne: Approved for CCC Meeting Agenda 5. 12/08/13 7:57 am tauritzd: Approved for Campus Curricula Committee Chair
Title	Aerospace Engineering BS	

Program Requirements and Description

Bachelor of Science Aerospace Engineering

Entering freshmen desiring to study Aerospace Engineering will be admitted to the Freshman Engineering Program. They will, however, be permitted, if they wish, to state an Aerospace Engineering 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.

A Cumulative GPA of 2.5, and math science GPA of 2.25 are the minimum requirements for admission to the Aerospace Engineering program.

Students must comply with the requirements specified in the current online catalog published by the Registrar. For the Bachelor of Science degree in Aerospace Engineering a minimum of 128 credit hours is required. 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 Aerospace Engineering. Each student's program of study must contain a minimum of 21 credit hours of course work in general education and must be chosen to satisfy the following requirements:

1. All students are required to take one American history course/political science course, one economics course, one humanities course, and [ENGLISH 20](#). The history course is to be selected from [HISTORY 112](#), [HISTORY 175](#), [HISTORY 176](#), or [POL SCI 90](#). The economics course may be either [ECON 121](#) or [ECON 122](#).
2. Depth requirement. Three credit hours must be taken in humanities or social sciences at the **2000-level** ~~400-level~~ or above and must be selected from **"The Approved List of Humanities and Social Science Courses for Engineering Degrees" maintained by the Office of Undergraduate Studies. ~~approved list.~~** This course must have as a prerequisite one of the humanities or social sciences courses already taken. Foreign language courses numbered **1180 70** ~~or 80~~ 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 300** ~~level~~. All courses taken to satisfy the depth requirement must be taken after graduating from high school.
3. **One** ~~One~~ course should be in the ethics area.
4. ~~Select from~~ **PHILOS 223, PHILOS 226, or PHILOS 236**. 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 20](#), and a literature course.
5. Any specific departmental requirements in the general studies area must be satisfied.
6. Special topics and special problems and honors seminars are allowed only by petition to and approval by the student's department chairman.

The Aerospace Engineering 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 two 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.

Freshman Year			
First Semester	Credits	Second Semester	Credits
FR ENG 10	1	IDE 20	3
CHEM 1 & CHEM 2 & CHEM 4 ¹	6	MATH 15 ⁴	4
ENGLISH 20	3	PHYSICS 23 ⁴	4
MATH 14 ⁴	4	H/SS Economics elective ³	3
H/SS History Elective ²	3		
	17		14

Sophomore Year			
First Semester	Credits	Second Semester	Credits
COMP SCI 73 or 74 ¹⁰	2	AERO ENG 180	2
COMP SCI 77 or 78 ¹⁰	1	AERO ENG 160 ⁴	3
CIV ENG 50 ⁴	3	MECH ENG 219 ⁴	3
MATH 22 ⁴	4	MATH 204 ⁴	3
PHYSICS 24 ⁴	4	CIV ENG 110 ⁴	3
AERO ENG 161 ⁴	3	Elective/Literature	3
	17		17
Junior Year			
First Semester	Credits	Second Semester	Credits
AERO ENG 213 ⁴	3	AERO ENG 251 ⁴	3
AERO ENG 231 ⁴	3	AERO ENG 261	3
AERO ENG 377	3	AERO ENG 271	3
ELEC ENG 281	3	AERO ENG 282	2
Electives-Advanced Math/Cmp Sc ⁵	3	Elective/Ethics ¹¹	3
		Elective/Communications ⁷	3
	15		17
Senior Year			
First Semester	Credits	Second Semester	Credits
AERO ENG 235	3	AERO ENG 281 or 382	3
AERO ENG 253	3	Electives-Technical ⁶	3
AERO ENG 280 or 380	2	Electives-Technical ⁶	3
AERO ENG 283	2	AERO ENG 285	1
Electives-Technical ⁷	3	Electives Free ⁹	2
Elective upper level/Hum/Soc Sci ⁸	3	Electives-Hum/Soc Sci	3
	16		15
Total Credits: 128			

¹ [CHEM 1](#), [CHEM 2](#) and [CHEM 4](#) or an equivalent training program approved by Missouri S&T.

² Must be one of the following: [POL SCI 90](#), [HISTORY 112](#), [HISTORY 175](#), or [HISTORY 176](#).

³ Must be one of the following: [ECON 121](#) or [ECON 122](#).

⁴ A grade of "C" or better in [CHEM 1](#), [MATH 14](#), [MATH 15](#), [MATH 22](#), [MATH 204](#), [PHYSICS 23](#), [PHYSICS 24](#), [CIV ENG 50](#), [CIV ENG 110](#), and computer programming elective, [AERO ENG 160](#), [AERO ENG 161](#), and [MECH ENG 219](#), as prerequisite for follow-up courses in the curriculum and for graduation.

⁵ Must be one of the following: [AERO ENG 330](#), [COMP SCI 228](#), [MATH 203](#), [MATH 208](#), [STAT 213](#), [STAT 215](#), or any 5000-level math or computer science course approved by the student's advisor.

⁶ Electives must be approved by the student's advisor. Nine hours of technical electives must be in Mechanical and Aerospace Engineering. Three hours of departmental technical electives must be at the 5000-level. [AERO ENG 377](#) and the 5000-level Asteroid Mining course co-listed with Geological Engineering are not to be used for 5000-level technical elective.

⁷ This course can be selected from [ENGLISH 60](#), [ENGLISH 160](#), [SP&M S 85](#), or the complete four-course sequence in Advanced ROTC ([MIL ARMY 105](#), [MIL ARMY 106](#), [MIL ARMY 207](#), and [MIL ARMY 208](#); or [MIL AIR 350](#), [MIL AIR 351](#), [MIL AIR 380](#) and [MIL AIR 381](#)).

⁸ Choose 2000-or higher-level course from the approved list. One of the other courses taken in humanities/social science should be a prerequisite for this course.

⁹ Each student is required to take two or more 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.

¹⁰ Computer Science requirement can be satisfied by taking [COMP SCI 53](#) and [COMP SCI 54](#).

¹¹ Must be a course on engineering ethics, business ethics, bio ethics, social ethics, or any ethics course approved by the student's advisor.

Note: All Aerospace Engineering students must take and pass the Aerospace Engineering Assessment Exam prior to graduation.

Justification for request Changes in course-level designations to be consistent with the course renumbering.

Supporting Documents

Course Reviewer Comments

Key: 141

Program Change Request

Date Submitted: 09/27/13 4:32 pm

Viewing: **ARC ENG-BS : Architectural Engineering BS**

File: 143.4

Last approved: 09/27/13 3:03 pm

Last edit: 12/05/13 12:26 pm

Changes proposed by: lahne

In Workflow

1. RCIVILEN Chair
2. CCC Secretary
3. Engineering DSCC Chair
4. CCC Meeting Agenda
5. Campus Curricula Committee Chair
6. FS Meeting Agenda
7. Faculty Senate Chair
8. Registrar
9. Peoplesoft

Catalog Pages [Architectural Engineering](#)
Using this Program

Start Term Fall 2014
Program Code ARC ENG-BS
Department Civil, Architectural, and Environmental Engineering
Title Architectural Engineering BS

Approval Path

1. 09/27/13 7:37 pm wschon: Approved for RCIVILEN Chair
2. 09/30/13 8:19 am lahne: Approved for CCC Secretary
3. 10/10/13 2:53 pm sraper: Approved for Engineering DSCC Chair
4. 12/05/13 12:25 pm lahne: Approved for CCC Meeting Agenda
5. 12/05/13 12:25 pm lahne: Rollback to CCC Meeting Agenda for Campus Curricula Committee Chair
6. 12/05/13 12:27 pm lahne: Approved for CCC Meeting Agenda
7. 12/08/13 7:36 am tauritz: Approved for Campus Curricula Committee Chair

Program Requirements and Description

Architectural Engineering Bachelor of Science

Entering freshmen desiring to study Architectural Engineering will be admitted to the Freshman Engineering Program. They will, however, be permitted, if they wish, to state a Architectural Engineering 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.

For the Bachelor of Science degree in Architectural Engineering a minimum of 128 credit hours is required. 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 Architectural Engineering.

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, one humanities course, and [ENGLISH 20](#). The history course is to be selected from [HISTORY 112](#) (preferred), [HISTORY 175](#), or ~~or~~ [HISTORY 176](#). The economics course may be either [ECON 121](#) or ~~or~~ [ECON 122](#). The humanities course must be selected from the approved lists for art, English, foreign languages, music, philosophy, speech and media studies, or theater.
2. Depth requirement. Three credit hours must be taken in humanities or social sciences at **the 2000-level** ~~the 100-level~~ or above and must be selected from "**The Approved List of Humanities and Social Science Courses for Engineering Degrees**" maintained by the Office of Undergraduate Studies. ~~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 70 or 80 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**. ~~300-level.~~ 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 20](#).
4. Any specific departmental requirements in the general studies area must be satisfied.
5. Special topics and special problems and honors seminars are allowed only by petition to and approval by the student's department chair.

The Architectural Engineering 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 Elective Footnote:

Each student is required to take three hours of free elective 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
CHEM 4	1	IDE 20	3
FR ENG 10 ²	1	MATH 15	4
CHEM 1 & CHEM 2	5	PHYSICS 23	4
MATH 14	4	General Ed Elective ¹	3
ENGLISH 20	3		

History

1. Sep 27, 2013 by lahne
2. Sep 27, 2013 by lahne

General Ed Elective ¹	3		
	17		14
Sophomore Year			
First Semester	Credits	Second Semester	Credits
CIV ENG 1²	3	IDE 150	2
CIV ENG 50²	3	STAT 213	3
MATH 22	4	CIV ENG 110²	3
PHYSICS 24	4	CIV ENG 120	1
ARCH ENG 3	2	ARCH ENG 103	3
		ART 203	3
		MATH 204	3
	16		18
Junior Year			
First Semester	Credits	Second Semester	Credits
ARCH ENG 217²	3	ARCH ENG 205	3
CIV ENG 230²	3	ARCH ENG 223	3
ELEC ENG 281	3	ARCH ENG 371	3
MECH ENG 227	3	CIV ENG 216	3
ARCH ENG 204	3	HISTORY 270	3
CIV ENG 215	3		
	18		15
Senior Year			
First Semester	Credits	Second Semester	Credits
ARCH ENG 210	1	ARCH ENG 298	3
ARCH ENG 221	3	ARCH ENG Technical Elective ^{3,4}	3
ARCH ENG 248	3	CIV ENG 229	3
HISTORY 375	3	General Education Elective ¹	3
ARCH ENG Technical Elective ^{3,4}	3	Free Elective ⁵	3
ENG MGT 137	2		
	15		15
Total Credits: 128			

¹ All general education 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.

² A grade of 'C' or better required to satisfy graduation requirements.

³ A grade of 'C' or better may be required in ARCH ENG technical elective prerequisite courses. Refer to the Missouri S&T undergraduate catalog for this prerequisite information.

⁴ Choose technical electives from approved lists under Emphasis Areas for Architectural Engineering Students. A maximum of 3 credits of independent study ([ARCH ENG 300](#) or [ARCH ENG 390](#)) may be used as a technical elective. Additional independent study course may be taken but will not count towards the B.S. Architectural Engineering degree.

⁵ 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.

Note: All Architectural Engineering students must take the Fundamentals of Engineering examination prior to graduation. A passing grade on this examination is not required to earn a B.S. degree, however, it is the first step toward becoming a registered professional engineer. This requirement is part of the Missouri S&T assessment process as described in Assessment Requirements found elsewhere in this catalog. Students must sign a release form giving the University access to their Fundamentals of Engineering Examination score.

Emphasis Areas and Course Listings by Area for Architectural Engineering Students

Area I, Structural Engineering

ARCH ENG 301	Special Topics	6
ARCH ENG 319	Applied Mechanics In Structural Engineering	3
ARCH ENG 320	Structural Analysis II	3
ARCH ENG 322	Analysis And Design Of Wood Structures	3
ARCH ENG 323	Computer Methods of Structural Analysis	3
ARCH ENG 326	Advanced Steel Structures Design	3
ARCH ENG 327	Advanced Concrete Structures Design	3
ARCH ENG 328	Prestressed Concrete Design	3
ARCH ENG 329	Foundation Engineering II	3
ARCH ENG 374	Infrastructure Strengthening With Composites	3
ARCH ENG 375	Low-Rise Building Analysis And Design	3
ARCH ENG 384	Structural Dynamics	3

Area II, Construction Engineering and Project Management

ARCH ENG 342	Construction Planning and Scheduling Strategies	3
ARCH ENG 345	Construction Methods	3
ARCH ENG 346	Management Of Construction Costs	3
ARCH ENG 348	Green Engineering: Analysis of Constructed Facilities	3
ARCH ENG 349	Engineering And Construction Contract Specifications	3
ENG MGT 313	Managerial Decision Making	3
ENG MGT 364	Value Analysis	3
ENG MGT 375	Total Quality Management	3

Area III, Environmental Systems for Buildings

ARCH ENG 301	Special Topics	0-6
ARCH ENG 365	Sustainability, Population, Energy, Water, and Materials	3
ARCH ENG 366	Indoor Air Pollution	3
ARCH ENG 372	Residential Renewable Energy Systems	3
ENG MGT 345	Energy and Sustainability Management Engineering	3

Mechanical Emphasis Courses

MECH ENG 309	Engineering Acoustics I	3
MECH ENG 366	Solar Energy Technology	3
MECH ENG 375	Mechanical Systems For Environmental Control	3

Electrical Emphasis Courses

ELEC ENG 235	Controllers For Factory Automation	3
ELEC ENG 352	Photovoltaic Systems Engineering	3
COMP ENG 111 & COMP ENG 112	Introduction To Computer Engineering and Computer Engineering Laboratory	4

Area IV, Construction Materials

ARCH ENG 319	Applied Mechanics In Structural Engineering	3
CIV ENG 313	Composition And Properties Of Concrete	3
CIV ENG 318	Smart Materials And Sensors	3
CIV ENG 356	Concrete Pavement Design	3
CER ENG 377	Principles Of Engineering Materials	3

Architectural Engineering Courses

ARCH ENG 103	Architectural Materials And Methods Of Construction	3
ARCH ENG 204	Architectural Design II	3
ARCH ENG 205	Building Electrical and Lighting Systems	3
ART 203	Architectural Design I	3

Architectural Engineering Courses (cross-list with existing civil engineering courses)

ARCH ENG 991	Course ARCH ENG 001 Not Found	
ARCH ENG 3	Engineering Communications	2
ARCH ENG 101	Special Topics	0-6
ARCH ENG 200	Special Problems	1-6
ARCH ENG 201	Special Topics	0-6
ARCH ENG 202	Cooperative Engineering Training	1
ARCH ENG 210	Senior Seminar: Engineering In A Global Society	1
ARCH ENG 217	Structural Analysis I	3
ARCH ENG 221	Structural Design In Metals	3
ARCH ENG 223	Reinforced Concrete Design	3
ARCH ENG 247	Ethical, Legal And Professional Engineering Practice	2
ARCH ENG 248	Fundamentals Of Contracts And Construction Engineering	3
ARCH ENG 298	Senior Design Project	3
ARCH ENG 300	Special Problems	6
ARCH ENG 301	Special Topics	6
ARCH ENG 320	Structural Analysis II	3
ARCH ENG 322	Analysis And Design Of Wood Structures	3

ARCH ENG 323	Computer Methods of Structural Analysis	3
ARCH ENG 326	Advanced Steel Structures Design	3
ARCH ENG 327	Advanced Concrete Structures Design	3
ARCH ENG 328	Prestressed Concrete Design	3
ARCH ENG 345	Construction Methods	3
ARCH ENG 346	Management Of Construction Costs	3
ARCH ENG 349	Engineering And Construction Contract Specifications	3
ARCH ENG 374	Infrastructure Strengthening With Composites	3
ARCH ENG 390	Undergraduate Research	6

Civil Engineering Courses (required courses, emphasis area, and/or technical electives)

CIV ENG 215	Fundamentals of Geotechnical Engineering	3
CIV ENG 216	Construction Materials, Properties And Testing	3
CIV ENG 229	Foundation Engineering	3
CIV ENG 230	Engineering Fluid Mechanics	3
CIV ENG 313	Composition And Properties Of Concrete	3
CIV ENG 317	Asphalt Pavement Design	3
CIV ENG 329	Foundation Engineering II	3
CIV ENG 341	Professional Aspects Of Engineering Practice	3
CIV ENG 345	Construction Methods	3
CIV ENG 346	Management Of Construction Costs	3
CIV ENG 349	Engineering And Construction Contract Specifications	3

-

Justification for
request

Supporting
Documents

Course Reviewer **lahne (12/05/13 12:25 pm):** Rollback: delete ARCH ENG 001
Comments

Key: 143

Program Change Request

Date Submitted: 09/25/13 11:56 am

Viewing: **ART-MI : Art Minor**

File: 144.1

Last edit: 09/27/13 2:21 pm

Changes proposed by: ivliyeva

Catalog Pages	Art	In Workflow <ol style="list-style-type: none"> 1. RPHILOSO Chair 2. CCC Secretary 3. Arts & Humanities DSCC Chair 4. CCC Meeting Agenda 5. Campus Curricula Committee Chair 6. FS Meeting Agenda 7. Faculty Senate Chair 8. Registrar 9. Peoplesoft
Using this Program		
Start Term	Fall 2014	
Program Code	ART-MI	
Department	Arts, Languages, & Philosophy	Approval Path <ol style="list-style-type: none"> 1. 09/25/13 1:22 pm lahne: Approved for RPHILOSO Chair 2. 09/27/13 2:22 pm lahne: Approved for CCC Secretary 3. 09/30/13 2:29 pm ivliyeva: Approved for Arts & Humanities DSCC Chair 4. 12/05/13 12:27 pm lahne: Approved for CCC Meeting Agenda 5. 12/08/13 7:38 am tauritzd: Approved for Campus Curricula Committee Chair
Title	Art Minor	

Program Requirements and Description

Art Minor

The Art Minor offers students the opportunity to pursue an area of focus in studio art, art history, and film studies.

Requirements:

The minor requires 15 hours, **including ART 80, including ART 80 Art Appreciation**, which is a required course. Students may take additional hours from these offerings:

ART 85	Study Of Film	3
ART 222	Revolution And Romanticism In The Arts 1785 - 1832	3
ART 255	Course ART 255 Not Found	
PHILOS 330	Course PHILOS 330 Not Found	
ART 250	Thematic Studies In Film & Literature	3
Any 3000-level Philosophy course		
Topics course from the following series:		
ART 101	Special Topics	
ART 201	Special Topics	
ART 301	Special Topics	
PHILOS 333	American Philosophy	3

In addition, students may take up to six hours of Studio classes.

Justification for request Replace Art 255 with Art 250
 Replace Phil 330 wiht Any Philosophy course at 3000 level

Supporting Documents

Course Reviewer Comments

Key: 144

Program Change Request

Date Submitted: 09/30/13 2:36 pm

Viewing: **BIOINFO-MI : Bioinformatics Minor**

File: 145.1

Last edit: 11/01/13 10:57 am

Changes proposed by: shannonk

In Workflow

1. RBIOLSCI Chair
2. CCC Secretary
3. Sciences DSCC Chair
4. CCC Meeting Agenda
5. Campus Curricula Committee Chair
6. FS Meeting Agenda
7. Faculty Senate Chair
8. Registrar
9. Peoplesoft

Approval Path

1. 10/01/13 1:54 pm aronstam: Approved for RBIOLSCI Chair
2. 10/08/13 10:09 am lahne: Approved for CCC Secretary
3. 10/28/13 7:12 pm tauritzd: Approved for Sciences DSCC Chair
4. 12/05/13 12:27 pm lahne: Approved for CCC Meeting Agenda
5. 12/08/13 7:39 am tauritzd: Approved for Campus Curricula Committee Chair

Catalog Pages [Bioinformatics Minor Curriculum](#)

Using this Program

Start Term **Fall 2014**

Program Code BIOINFO-MI

Department **Biological Sciences**

Title Bioinformatics Minor

Program Requirements and Description

Bioinformatics is the rapidly-developing field that applies computational methods to address biological questions, and includes new advances in computer science, mathematics, and biology. Students entering the field of bioinformatics should have some training in each of these fields.

The minor is designed for students pursuing a BS who would have the necessary prerequisites for the required courses. Students pursuing a BA may participate if the prerequisites for the required courses are fulfilled. Each department (Biological Sciences, Computer Science, Mathematics) will designate a minor advisor. The student's minor advisor will be chosen from outside of their major area of study.

Required courses:

BIO SCI 110	General Biology	3
BIO SCI 211	Cell Biology	3
or BIO SCI 231	General Genetics	
BIO SCI 331	Molecular Genetics	3
COMP SCI 53 & COMP SCI 54	Introduction To Programming and Introduction To Programming Laboratory	4
COMP SCI 153	Data Structures	3
COMP SCI 238	File Structures And Introduction To Database Systems	3
BIO SCI/COMP SCI 311	Bioinformatics (It is strongly recommended that this course be taken after the other Bio Sc and Cmp Sc requirements.)	3
STAT 301	Special Topics	0-6
or STAT 346	Regression Analysis	
or STAT 353	Statistical Data Analysis	
One additional course, 200 or above in Math, or 300 or above in Bio Sc or Cmp Sc, outside of the major area of study, and as agreed upon by the minor advisor (3+ hrs)		
One additional course, either at the 2000-level or above in MATH or COMP SCI, or at the 3000-level or above in BIO SCI, outside of the major area of study, and as agreed upon by the minor advisor.		3+

Justification for request Change requirements for one additional course to 2000 or above in Math or Comp Sci, or 3000 or above in Bio Sci to conform to renumbering.

Supporting Documents

Course Reviewer Comments

Key: 145

Program Change Request

Date Submitted: 09/24/13 6:09 pm

Viewing: **BUS&MS-BS : Business and Mgmt Systems BS**

File: 148.1

Last edit: 11/01/13 2:48 pm

Changes proposed by: barryf

Catalog Pages	Business and Management Systems	In Workflow <ol style="list-style-type: none"> 1. RINFSCTE Chair 2. CCC Secretary 3. Social Sciences DSCC Chair 4. CCC Meeting Agenda 5. Campus Curricula Committee Chair 6. FS Meeting Agenda 7. Faculty Senate Chair 8. Registrar 9. Peoplesoft
Using this Program		
Start Term	Fall 2014	
Program Code	BUS&MS-BS	
Department	RINFSCTE	Approval Path <ol style="list-style-type: none"> 1. 09/25/13 7:09 pm siauk: Approved for RINFSCTE Chair 2. 09/30/13 1:28 pm lahne: Approved for CCC Secretary 3. 10/09/13 4:32 pm barryf: Approved for Social Sciences DSCC Chair 4. 12/05/13 12:27 pm lahne: Approved for CCC Meeting Agenda 5. 12/08/13 7:41 am tauritzd: Approved for Campus Curricula Committee Chair
Title	Business and Mgmt Systems BS	

Program Requirements and Description

Bachelor of Science Business and Management Systems

In Business and Management Systems, the Bachelor of Science degree consists of 120 credit hours. First, all undergraduate students in Business and Management Systems are required to complete a prescribed General Education Requirements Core that corresponds to the recommendations of the Missouri State Coordinating Board for Higher Education and consists of 54 credit hours in the areas of Natural Systems, Human Institutions, Quantitative Skills, and Communication Skills. In addition, all undergraduate students are required to complete a 27 credit hour core consisting of courses in Information Technology, Management, and Entrepreneurship. A minimum grade of "C" is required for courses in these areas. Finally, the degree includes 12 credit hours of free electives.

The remaining 27 credit hours of the required 120 credit hours for the Business and Management Systems degree are divided into a prescribed 18 credit hour degree core and 9 credit hours of degree specific electives. A minimum grade of "C" is required in these courses. The electives for this degree are then chosen from business-related upper-level courses.

Freshman Year			
First Semester	Credits	Second Semester	Credits
PSYCH 50	3	MATH 4	3
BUS 10¹	1	IS&T 50	3
BUS 110	3	ENGLISH 65 or TCH.COM 65	3
ENGLISH 20	3	ECON 122	3
Science Elective ³	3	Science Elective ³	3
Laboratory w/ Science Elective ³	1		
	14		15
Sophomore Year			
First Semester	Credits	Second Semester	Credits
BUS 120	3	History Elective	3
MATH 12	4	FINANCE 250	3
IS&T 51	3	IS&T 151	3
ECON 121	3	ERP 246	3
SP&M S 85	3	POL SCI 90	3
	16		15
Junior Year			
First Semester	Credits	Second Semester	Credits
Business Elective	3	ECON 211	3
Speech or Tech Com Elective	3	BUS 380	3
MKT 311	3	ENGLISH 260 or TCH.COM 260	3
STAT 211	3	Business Elective	3
BUS 320	3	Free Elective	3
	15		15

Senior Year			
First Semester	Credits	Second Semester	Credits
Free Elective	3	Business Elective	3
BUS 230	3	BUS 396 ¹	3
BUS 360	3	BUS 375	3
Fine Art, Social Science, or Humanities Electives ²	3	Fine Art, Social Science, or Humanities Elective ²	3
Business Elective	3	Free Electives	3
	15		15
Total Credits: 120			

A grade of "C" or better is required in the following courses for graduation; , , , ~~BUS 396~~, ~~IS&T 60~~, ~~IS&T 61~~, [IS&T 151](#), [ERP 246](#), [BUS 110](#), [BUS 120](#) , ~~BUS 230~~, [ECON 121](#), [ECON 122](#), [MKT 311](#), [FINANCE 250](#), [BUS 375](#), [BUS 360](#), [BUS 320](#), [BUS 380](#), and [ECON 211](#).

¹ Writing Intensive Course

² Any course in the following areas not used for other degree requirements: Art, Economics, English, Foreign Language, History, Literature, Music, Philosophy, Political Science, Psychology, Sociology, Theater.

³ Any course in the following areas: Biology, Chemistry, Geology, Geological Engineering, Physics.

Areas of Concentration

All students are required to complete twelve credit hours chosen from **2000, 3000, 4000, 290** or **5000-level 300-level** courses in business, economics, finance, enterprise resource planning, or information science & technology. A "C" or better grade is required in all twelve credit hours. If the student chooses to designate an area of concentration for these courses, focusing on at least 3 courses (9 credits) in one area, he or she may do so. Students are not required to choose a concentration area. Areas of concentration are:

E-Commerce

IS&T 352	Advanced Web Development	3
IS&T 241	Electronic and Mobile Commerce	3
IS&T 286	Web and Digital Media Development	3
IS&T 336	Course IS&T 336 Not Found	
IS&T 342	E-Commerce Architecture	3
IS&T 357	Network Economy	3
IS&T 368	Law and Ethics in E-Commerce	3

Enterprise Resource Planning

Any 9 hours of ERP-designated courses at the 4000-level or above.

Finance

FINANCE 350	Corporate Finance II	3
FINANCE 260	Course FINANCE 260 Not Found	
FINANCE 360	Investments I	3
ECON 323	International Finance	3
Any other Finance course at the 3000-level or above.		

~~ECON 323~~, [ECON 330](#), and [ECON 337](#), ~~ECON 337~~, or ~~FINANCE 330~~ cannot be used toward this **concentration**. ~~specialization~~.

Human-Computer Interaction

IS&T 354	Advanced Web and Digital Media Development	3
IS&T 385	Human Computer Interaction	3
IS&T 386	Human-Computer Interaction Prototyping	3
IS&T 387	Human-Computer Interaction Evaluation	3

Management

BUS 311	Business Negotiations	3
BUS 315	Introduction to Teambuilding and Leadership	3
BUS 370	Human Resource Management	3
IS&T 351	Technological Innovation Management and Leadership	3

Marketing

MKT 321	Consumer Behavior	3
MKT 331	Digital Marketing and Promotions	3
MKT 350	Customer Focus and Satisfaction	3
MKT 380	Marketing Strategy	3
ERP 342	Customer Relationship Management in ERP Environment	3

Justification for request Correct for renumbering, remove incorrect course references, correct Finance area of concentration.

Supporting Documents

Course Reviewer Comments

Key: 148

Program Change Request

Date Submitted: 09/25/13 3:22 pm

Viewing: **MAT S E-MS : Materials Science and Engr MS**

File: 167.1

Last edit: 11/01/13 11:22 am

Changes proposed by: smiller

Catalog Pages	Materials Science and Engineering	In Workflow <ol style="list-style-type: none">1. RMATSENG Chair2. CCC Secretary3. Engineering DSCC Chair4. CCC Meeting Agenda5. Campus Curricula Committee Chair6. FS Meeting Agenda7. Faculty Senate Chair8. Registrar9. Peoplesoft
Using this Program		
Start Term	Fall 2014	
Program Code	MAT S E-MS	
Department	Materials Science & Engineering	Approval Path <ol style="list-style-type: none">1. 09/25/13 3:40 pm huebner: Approved for RMATSENG Chair2. 10/10/13 3:49 pm lahne: Approved for CCC Secretary3. 10/22/13 11:26 am sraper: Approved for Engineering DSCC Chair4. 12/05/13 12:28 pm lahne: Approved for CCC Meeting Agenda5. 12/08/13 7:42 am tauritzd: Approved for Campus Curricula Committee Chair
Title	Materials Science and Engr MS	

Program Requirements and Description

Degree Requirements

M.S. and Ph.D. degrees are offered in Materials Science and Engineering. Students may apply for either degree and may be admitted directly to the Ph.D. program upon approval (i.e., there is no M.S. requirement). Depending upon their intended career path, students may be encouraged to pursue one of the MSE graduate degrees or other degree programs noted above.

The total number of hours required for the M.S. in Materials Science and Engineering is 30. The M.S. with thesis is oriented toward the completion of a research project and the degree requirements are 18 hours of course work and 12 hours of research. It is recommended that the student complete the core courses offered by the department including [MS&E 421](#), [MS&E 422](#), [MS&E 421](#), [MS&E 422](#) and [MS&E 423](#) which ~~MS&E 423~~, which are graduate level crystallography, thermodynamics and kinetics. At least 6 hours of course work must be ~~6000-level~~ ~~400-level~~ courses. It is recommended that six additional hours be completed outside of the department. The other courses are chosen with the approval of the advisor.

For the non-thesis M.S. degree in Materials Science and Engineering, 30 hours of course work must be completed with a minimum of 12 hours at the ~~6000-level~~. ~~400-level~~.

The total number of hours required for the Ph.D. degree in Materials Science and Engineering is 72. Ph.D. students are required to complete the three core courses, [MS&E 421](#), [MS&E 422](#), ~~MS&E 421~~, ~~MS&E 422~~, and [MS&E 423](#). ~~To advance to Ph.D. MS&E 423~~. ~~To advance to Ph.D.~~ candidacy, the student must take and pass a qualifying exam. This must be completed prior to the beginning of the fifth semester after entering the graduate program. Students must also take and pass the comprehensive exam in accordance with Missouri S&T rules.

Justification for request Course renumbering

Supporting Documents

Course Reviewer Comments

Key: 167

Program Change Request

Date Submitted: 09/27/13 3:25 pm

Viewing: **MF ENG-MS : Manufacturing Engineering MS**

File: 173.1

Last edit: 11/01/13 3:14 pm

Changes proposed by: nisbett

Catalog Pages	Manufacturing Engineering	In Workflow <ol style="list-style-type: none"> 1. RMECHENG Chair 2. CCC Secretary 3. Engineering DSCC Chair 4. CCC Meeting Agenda 5. Campus Curricula Committee Chair 6. FS Meeting Agenda 7. Faculty Senate Chair 8. Registrar 9. Peoplesoft
Using this Program		
Start Term	Fall 2014	
Program Code	MF ENG-MS	
Department	Mechanical & Aerospace Engineering	Approval Path <ol style="list-style-type: none"> 1. 09/27/13 3:47 pm drallmei: Approved for RMECHENG Chair 2. 10/08/13 10:55 am lahne: Approved for CCC Secretary 3. 10/10/13 3:09 pm srafer: Approved for Engineering DSCC Chair 4. 12/05/13 12:28 pm lahne: Approved for CCC Meeting Agenda 5. 12/08/13 7:43 am tauritdz: Approved for Campus Curricula Committee Chair
Title	Manufacturing Engineering MS	

Program Requirements and Description

The MS program is a research-oriented degree where the courses supplement the thesis research. The ME program is designed such that the course selection is flexible and the student is allowed to take courses pertaining to his or her area of interest. A practice-orientated project is required by the ME program, which provides an opportunity for the student to participate in a practical project related to a manufacturing process. The ME program is structured so that individuals, such as working engineers, who wish to improve their knowledge and skills can complete their degree in one year.

The basic admission requirements include 1) B.S. degree in an ABET accredited engineering program; and 2) Ranked in upper third of undergraduate class OR a GPA greater than 3.0/4.0. The following test scores are required:

- A minimum GRE quantitative score of 155; minimum verbal plus quantitative score of 302; and a minimum analytical score of 3.5.
- For those not speaking English as their native language, a TOEFL score of 88 internet-based, 230 computer based or 570 paper based.

The MS program requires 30 credit hours and a thesis:

- 12 credit hours from the Manufacturing Core Areas
- 6 credit hours of **6000-level** ~~400-level~~ courses in Manufacturing
- 6 to 9 credit hours for thesis research
- 3 to 6 credit hours of graduate courses in Manufacturing as approved by the academic advisor

The ME Program requires 30 credit hours and a practice-oriented project. The course requirements include 12 credit hours from the Manufacturing Core Areas, 6 credit hours of **6000-level** ~~400-level~~ courses in Manufacturing; 3 credit hours of approved Mathematics/Computer Science or any suggested Manufacturing courses, 3 credit hours for work related to the practice-oriented project, and 6 credit hours of graduate courses in Manufacturing. The practice-orientated project is defined by the student and academic advisor. At the end of the project experience, the student should demonstrate not only the proficiency of operating certain manufacturing processes, but also the capability to improve the process. At the end of the ME program, a presentation and a report documenting the practice oriented projects are required. For both programs, at most 6 credit hours of two hundred level classes can be completed in the degree.

For both programs, each student must take at least one course from each of the core areas in Manufacturing Engineering during his or her first two semesters of graduate work. The core requirements may be deemed satisfied if a student has already taken a core course as a technical elective in his or her undergraduate program, thus allowing more freedom in the selection of other courses. The related courses in Manufacturing Core Areas are selected and offered from various departments.

The Manufacturing Core Areas include:

- Materials and Manufacturing Processes
- Process, Assembly and Product Engineering
- Manufacturing Competitiveness
- Manufacturing System Design

The graduate committee for each student in the interdisciplinary Master of Science degree program will consist of three faculty of which at least two must be from the Manufacturing Education Committee (MEC). The major advisor should also be a member of the Manufacturing Education Committee. The Master of Engineering student does not need a committee, but the advisor should be from MEC. MEC is formed by over 40 faculty members from various departments, such as Ceramic Engineering, Chemical Engineering, Computer Science, Electrical and Computer Engineering, Engineering Management, Mechanical and Aerospace Engineering, Metallurgical Engineering, Mining Engineering, and Business Administration. For details regarding the application, curriculum, courses in Manufacturing Core Areas, and MEC faculty, you may also wish to explore the program's web page at: <http://mfge.mst.edu>. Some examples of research areas in which you can specialize include:

- Design for Manufacturing/Assembly
- CAD/CAM/CIM
- Product/Process Development
- Manufacturing Management
- Manufacturing Processes
- Manufacturing Materials
- Lean Manufacturing
- Rapid Product Realization
- Programmable Controllers

- Assembly & Automation
- Manufacturing Plant Layout
- Jig, Fixture & Tool Design
- CNC machining
- Environmentally Friendly Manufacturing
- Product Quality Control

This is a truly interdisciplinary program, which will provide you with a variety of options in manufacturing. The existing laboratories which can be used in this proposed program include Computer Integrated Manufacturing Lab (CIM lab), Agile Manufacturing and Automated Inspection Lab (AMAIL), Rapid Prototyping Lab, Laser Aided Manufacturing Processes (LAMP) Lab, Augmented Reality Lab, High Pressure Waterjet Lab, Sustainable Design Lab, Laser Welding Lab, Composite Manufacturing Lab, Computer Vision Lab, Lab for Industrial Automation and Flexible Machining, Automated PC Board Milling Machine, Foundry to Melt and Cast Ferrous and Non-ferrous Alloys, Intelligent Control of Machining Lab and Digital Image and Signal Processing **Lab. Lab-**

Justification for request	This is to specify four-digit course numbering for all references in the curriculum that are not covered by the renumbering cross-walk tables
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Supporting Documents

Course Reviewer Comments

Key: 173

Program Change Request

Date Submitted: 09/16/13 10:06 am

Viewing: **CRTVWR-MI : Creative Writing Minor**

File: 177.1

Last edit: 09/16/13 10:06 am

Changes proposed by: kswenson

Catalog Pages	English	<div>5. Campus Curricula Committee Chair</div> <div>6. FS Meeting Agenda</div> <div>7. Faculty Senate Chair</div> <div>8. Registrar</div> <div>9. Peoplesoft</div>
Using this Program		
Start Term	Fall 2014	
Program Code	CRTVWR-MI	
Department	English and Technical Communication	Approval Path <div>1. 09/16/13 10:08 am kswenson: Approved for RENGLISH Chair</div> <div>2. 09/25/13 9:04 am lahne: Approved for CCC Secretary</div> <div>3. 09/25/13 9:12 am lahne: Rollback to CCC Secretary for Col DSCC Chair</div> <div>4. 09/25/13 9:15 am lahne: Approved for CCC Secretary</div> <div>5. 09/25/13 9:33 am lahne: Rollback to CCC Secretary for Humanities DSCC Chair</div> <div>6. 09/25/13 9:35 am lahne: Approved for CCC Secretary</div> <div>7. 09/25/13 10:39 am ivliyeva: Approved for Arts & Humanities DSCC Chair</div> <div>8. 12/05/13 12:28 pm lahne: Approved for CCC Meeting Agenda</div> <div>9. 12/08/13 7:43 am tauritzd: Approved for Campus Curricula Committee Chair</div>
Title	Creative Writing Minor	

Program Requirements and Description

Creative Writing The minor requires 12 hours including [ENGLISH 70](#) Creative Writing. Students are required to take an advanced writing workshop either [ENGLISH 205](#) Fiction Writing or [ENGLISH 208](#) Creative Nonfiction Writing. In consultation with the minor advisor, students will select two additional courses, one of which must be at the **3000-level** ~~300-level~~ or higher that emphasize literary craft. Suggested Electives: [ENGLISH 205](#), [ENGLISH 208](#), [ENGLISH 245](#), [ENGLISH 362](#), [ENGLISH 372](#), [ENGLISH 376](#), [ENGLISH 380](#), [ENGLISH 382](#).

Justification for request	Key: 177
Supporting Documents	
Course Reviewer Comments	

Program Change Request

Date Submitted: 09/16/13 2:42 pm

Viewing: **LIT&FIL-MI : Literature and Film Minor**

File: 178.1

Last edit: 11/01/13 2:59 pm

Changes proposed by: kswenson

Catalog Pages	English	<div>3. Campus Curricula Committee Chair</div> <div>6. FS Meeting Agenda</div> <div>7. Faculty Senate Chair</div> <div>8. Registrar</div> <div>9. Peoplesoft</div>
Using this Program		
Start Term	Fall 2014	
Program Code	LIT&FIL-MI	
Department	English and Technical Communication	<div>Approval Path</div> <div>1. 09/16/13 2:43 pm kswenson: Approved for RENGLISH Chair</div> <div>2. 09/25/13 9:58 am lahne: Approved for CCC Secretary</div> <div>3. 09/25/13 10:40 am ivliyeva: Approved for Arts & Humanities DSCC Chair</div> <div>4. 12/05/13 12:29 pm lahne: Approved for CCC Meeting Agenda</div> <div>5. 12/08/13 7:44 am tauritzd: Approved for Campus Curricula Committee Chair</div>
Title	Literature and Film Minor	
<div>Program Requirements and Description</div> <div>Literature and Film The minor requires 12 hours, including the core course, ENGLISH 177 Literature And Film. following required courses- and the core course, ENGLISH 177 Literature And Film (3 hours)- In addition, students will take 9 6 hours of electives in the field of literature and film studies. These electives can include but are not limited to ENGLISH 278 Thematic Studies In Literature And Film (3 hours), ART 250 Thematic Studies In Film & Literature (3 hours), to ART 250 Course ART 256 Not Found (-hours); ENGLISH 278 Thematic Studies In Literature And Film (3 hours); ENGLISH 279 Course ENGLISH 279 Not Found; ART 250 Thematic Studies In Film & Literature (3 hours)- and other film courses at the Art 2000-level or above. ART 251 Course ART 251 Not Found (hours).</div>		
Justification for request	Eliminating defunct courses.	
Supporting Documents		
Course Reviewer Comments		

Key: 178

Program Change Request

Date Submitted: 09/16/13 10:04 am

Viewing: **LIT-MI : Literature Minor**

File: 179.1

Last edit: 11/01/13 3:01 pm

Changes proposed by: kswenson

Catalog Pages Using this Program	English	<div>5. Sample Curriculum Committee Chair</div> <div>6. FS Meeting Agenda</div> <div>7. Faculty Senate Chair</div> <div>8. Registrar</div> <div>9. Peoplesoft</div>
Start Term	Fall 2014	
Program Code	LIT-MI	
Department	English and Technical Communication	
Title	Literature Minor	
Program Requirements and Description		Approval Path <div>1. 09/16/13 10:08 am kswenson: Approved for REGLISH Chair</div> <div>2. 09/25/13 9:57 am lahne: Approved for CCC Secretary</div> <div>3. 09/25/13 10:41 am ivliyeva: Approved for Arts & Humanities DSCC Chair</div> <div>4. 12/05/13 12:29 pm lahne: Approved for CCC Meeting Agenda</div> <div>5. 12/08/13 7:44 am tauritzd: Approved for Campus Curricula Committee Chair</div>
Literature To complete this minor, students must take 12 hours of Literature courses offered by the English Department; at least 9 hours of these must be at the 2000 299 -or 3000-level . 399-level .		
Justification for request		
Supporting Documents		
Course Reviewer Comments		

Key: 179

Program Change Request

Date Submitted: 09/15/13 11:36 am

Viewing: **TCH COM-MI : Technical Communication Minor**

File: 181.1

Last edit: 11/01/13 11:50 am

Changes proposed by: kswenson

Catalog Pages	English	<div>5. Campus Curricula Committee Chair</div> <div>6. FS Meeting Agenda</div> <div>7. Faculty Senate Chair</div> <div>8. Registrar</div> <div>9. Peoplesoft</div>
Using this Program		
Start Term	Fall 2014	
Program Code	TCH COM-MI	
Department	English and Technical Communication	<div>Approval Path</div> <div>1. 09/15/13 11:39 am kswenson: Approved for</div> <div>REGLISH Chair</div> <div>2. 09/25/13 12:46 pm lahne: Approved for CCC Secretary</div> <div>3. 09/25/13 3:38 pm ivliyeva: Approved for Arts & Humanities DSCC Chair</div> <div>4. 12/05/13 12:29 pm lahne: Approved for CCC Meeting Agenda</div> <div>5. 12/08/13 7:45 am tauritzd: Approved for Campus Curricula Committee Chair</div>
Title	Technical Communication Minor	
<div>Program Requirements and Description</div> <div>Technical Communication To complete this minor students must take TCH COM 65, TCH COM 240, and TCH COM 260 plus TCH COM 65, TCH COM 240, AND TCH COM 260 plus six additional hours elected from the 3000-level or above 300-level technical communication courses.</div>		
Justification for request	Updating in keeping with course renumbering.	
Supporting Documents		
Course Reviewer Comments		

Key: 181

Program Change Request

Date Submitted: 09/15/13 12:38 pm

Viewing: **PSYCH-MI : Psychology Minor**

File: 183.1

Last edit: 09/15/13 12:38 pm

Changes proposed by: nstone

Catalog Pages Using this Program	Psychology	<div>5. Campus Curriculum Committee Chair</div> <div>6. FS Meeting Agenda</div> <div>7. Faculty Senate Chair</div> <div>8. Registrar</div> <div>9. Peoplesoft</div>
Start Term	Fall 2014	<div>Approval Path</div> <div>1. 09/15/13 12:46 pm nstone: Approved for RPSYCHOL Chair</div> <div>2. 09/25/13 9:21 am lahne: Approved for CCC Secretary</div> <div>3. 09/26/13 8:54 am barryf: Approved for Social Sciences DSCC Chair</div> <div>4. 12/05/13 12:29 pm lahne: Approved for CCC Meeting Agenda</div> <div>5. 12/08/13 7:47 am tauritzd: Approved for Campus Curricula Committee Chair</div>
Program Code	PSYCH-MI	
Department	Psychological Science	
Title	Psychology Minor	
<div>Program Requirements and Description</div> <div>General Psychology Minor requirements require 15 hours of courses in Psychology. At least nine of these hours must be at the 3000-level 200-level or above.</div>		
Justification for request	Needs to be in line with course re-numbering (no longer 200-level and above. Needs to be 3000-level and above.	
Supporting Documents		
Course Reviewer Comments		

Key: 183

Program Change Request

Date Submitted: 09/25/13 3:21 pm

Viewing: **CR ENG-MS : Ceramic Engineering MS**

File: 184.1

Last edit: 11/01/13 2:53 pm

Changes proposed by: smiller

Catalog Pages Using this Program	Ceramic Engineering	5. Campus Curricula Committee Chair 6. FS Meeting Agenda 7. Faculty Senate Chair 8. Registrar 9. Peoplesoft
Start Term	Fall 2014	Approval Path 1. 09/25/13 3:40 pm huebner: Approved for RMA TSENG Chair 2. 09/27/13 2:33 pm lahne: Approved for CCC Secretary 3. 10/10/13 2:53 pm sraper: Approved for Engineering DSCC Chair 4. 12/05/13 12:29 pm lahne: Approved for CCC Meeting Agenda 5. 12/08/13 7:48 am tauritzd: Approved for Campus Curricula Committee Chair
Program Code	CR ENG-MS	
Department	Materials Science & Engineering	
Title	Ceramic Engineering MS	
Program Requirements and Description		
M.S. and Ph.D. degrees are offered in Ceramic Engineering. The total number of hours required for the M.S. in Ceramic Engineering is 30. A minimum of 6 hours of 6000-level 400-level lectures and a minimum of 11 hours of graduate research on the Missouri S&T campus are required. A maximum of 6 hours of 4000-level 200-level lecture credit may be accepted.		
Justification for request		
Supporting Documents		
Course Reviewer Comments		

Key: 184

Program Change Request

Date Submitted: 09/25/13 12:20 pm

Viewing: **PHIL-MI : Philosophy Minor**

File: 187.1

Last edit: 12/05/13 12:31 pm

Changes proposed by: ivliyeva

Catalog Pages	Philosophy	In Workflow 1. RPHILOSO Chair 2. CCC Secretary 3. Arts & Humanities DSCC Chair 4. CCC Meeting Agenda 5. Campus Curricula Committee Chair 6. FS Meeting Agenda 7. Faculty Senate Chair 8. Registrar 9. Peoplesoft
Using this Program		
Start Term	Fall 2014	
Program Code	PHIL-MI	
Department	Arts, Languages, & Philosophy	Approval Path 1. 09/26/13 10:33 am lahne: Approved for RPHILOSO Chair 2. 09/27/13 2:29 pm lahne: Approved for CCC Secretary 3. 09/30/13 2:30 pm ivliyeva: Approved for Arts & Humanities DSCC Chair 4. 12/05/13 12:31 pm lahne: Approved for CCC Meeting Agenda 5. 12/08/13 7:49 am tauritzd: Approved for Campus Curricula Committee Chair
Title	Philosophy Minor	

Program Requirements and Description

Philosophy Minor

1. A student with a minor in Philosophy must meet the following requirements:
 - a. Twelve hours in Philosophy course beyond [PHILOS 5](#) Introduction To Philosophy ([PHILOS 5](#) is a prerequisite to a minor in **Philosophy**). ~~philosophy~~.
 - b. Six of the twelve hours must be completed in Philosophy courses **numbered 4000** ~~numbered 300~~-or above.
2. A student should declare his or her intention to minor in Philosophy by his or her junior year.
3. A member of the Philosophy staff will act as the student's minor advisor. The student and his or her minor advisor will plan a course of study to meet the specific interests and needs of the student.

Justification for request

Supporting Documents

Course Reviewer Comments

Key: 187

Program Change Request

Date Submitted: 09/25/13 12:26 pm

Viewing: **PHILTCH-MI : Philosophy of Technology Minor**

File: 188.1

Last edit: 12/05/13 12:31 pm

Changes proposed by: ivliyeva

Catalog Pages	Philosophy	In Workflow 1. RPHILOSO Chair 2. CCC Secretary 3. Arts & Humanities DSCC Chair 4. CCC Meeting Agenda 5. Campus Curricula Committee Chair 6. FS Meeting Agenda 7. Faculty Senate Chair 8. Registrar 9. Peoplesoft
Using this Program		
Start Term	Fall 2014	
Program Code	PHILTCH-MI	
Department	Arts, Languages, & Philosophy	Approval Path 1. 09/26/13 10:33 am lahne: Approved for RPHILOSO Chair 2. 09/27/13 2:38 pm lahne: Approved for CCC Secretary 3. 09/30/13 2:30 pm ivliyeva: Approved for Arts & Humanities DSCC Chair 4. 12/05/13 12:31 pm lahne: Approved for CCC Meeting Agenda 5. 12/08/13 7:49 am tauritzd: Approved for Campus Curricula Committee Chair
Title	Philosophy of Technology Minor	

Program Requirements and Description

Philosophy of Technology Minor

To qualify, all students must take 15 hours of course work in the following areas of **Philosophy**, **Political Science** ~~philosophy, political science~~ and **History**. ~~history~~. Nine or more of these hours will need to be in **Philosophy**. ~~philosophy~~.

Mandatory:		
PHILOS 15	Introduction To Logic	3
At least two of the following, one of which must be a philosophy class:		
PHILOS 345	Philosophy Of Science	3
PHILOS 320	Minds And Machines	3
HISTORY 375	Architecture, Technology and Society; 1750 to Present	3
POL SCI 325	Course POL SCI 325 Not Found	
Additional courses from:		
PHILOS 5	Introduction To Philosophy	3
BIO SCI 150	Biotechnology in Film	3
PHILOS 223	Bioethics	3
HISTORY 270	History of Technology	3
HISTORY 271	Twentieth Century Technology And Society	3

Justification for request

Supporting Documents

Course Reviewer Comments

Key: 188

Program Change Request

Date Submitted: 09/25/13 3:25 pm

Viewing: **MAT SE-PHD : Materials Science and Engr PhD**

File: 204.1

Last edit: 11/01/13 3:10 pm

Changes proposed by: smiller

Start Term	Fall 2014	In Workflow <ol style="list-style-type: none">1. RMATSENG Chair2. CCC Secretary3. Engineering DSCC Chair4. CCC Meeting Agenda5. Campus Curricula Committee Chair6. FS Meeting Agenda7. Faculty Senate Chair8. Registrar9. Peoplesoft
Program Code	MAT SE-PHD	
Department	Materials Science & Engineering	
Title	Materials Science and Engr PhD	

Program Requirements and Description**Degree Requirements**

M.S. and Ph.D. degrees are offered in Materials Science and Engineering. Students may apply for either degree and may be admitted directly to the Ph.D. program upon approval (i.e., there is no M.S. requirement). Depending upon their intended career path, students may be encouraged to pursue one of the MSE graduate degrees or other degree programs noted above.

The total number of hours required for the Ph.D. degree in Materials Science and Engineering is 72. Ph.D. students are required to complete the three core courses, [MS&E 421](#), [MS&E 422](#), and [MS&E 423](#). To advance to Ph.D. candidacy, the student must take and pass a qualifying exam. This must be completed prior to the beginning of the fifth semester after entering the graduate program. Students must also take and pass the comprehensive exam in accordance with Missouri S&T rules.

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Justification for request

Supporting Documents

Course Reviewer Comments

Approval Path

1. 09/25/13 3:40 pm huebner: Approved for RMATSENG Chair
2. 09/30/13 11:04 am lahne: Approved for CCC Secretary
3. 10/10/13 2:54 pm sraper: Approved for Engineering DSCC Chair
4. 12/05/13 12:32 pm lahne: Approved for CCC Meeting Agenda
5. 12/08/13 7:50 am tauritzd: Approved for Campus Curricula Committee Chair

Key: 204

Program Change Request

Date Submitted: 09/25/13 3:26 pm

Viewing: **MT ENG-PHD : Metallurgical Engineering PhD**

File: 209.1

Last edit: 09/25/13 3:26 pm

Changes proposed by: smiller

Start Term	Fall 2014	In Workflow <ol style="list-style-type: none">1. RMATSENG Chair2. CCC Secretary3. Engineering DSCC Chair4. CCC Meeting Agenda5. Campus Curricula Committee Chair6. FS Meeting Agenda7. Faculty Senate Chair8. Registrar9. Peoplesoft
Program Code	MT ENG-PHD	
Department	Materials Science & Engineering	
Title	Metallurgical Engineering PhD	

Program Requirements and Description**Degree Requirements**

M.S. and Ph.D. degrees are offered in Metallurgical Engineering.

The minimum number of hours (beyond the bachelor's degree) required for the Ph.D. in Metallurgical Engineering is 72. At least 12 hours of course work outside metallurgy is recommended, a minimum of 24 hours will be dissertation research, and a minimum of 24 hours must be course work. Students will also be required to take and pass qualifying and comprehensive exams in accordance with Missouri S&T rules.

-

Justification for request

Supporting Documents

Course Reviewer Comments

Approval Path

1. 09/25/13 3:41 pm huebner: Approved for RMATSENG Chair
2. 09/27/13 2:36 pm lahne: Approved for CCC Secretary
3. 10/10/13 2:57 pm sraper: Approved for Engineering DSCC Chair
4. 12/05/13 12:32 pm lahne: Approved for CCC Meeting Agenda
5. 12/08/13 7:51 am tauritzd: Approved for Campus Curricula Committee Chair

Key: 209

Program Change Request

Date Submitted: 09/25/13 11:58 am

Viewing: **FRENCH-MI : French Minor**

File: 217.1

Last edit: 12/05/13 12:32 pm

Changes proposed by: ivliyeva

Catalog Pages	<u>Foreign Languages</u>	In Workflow <ol style="list-style-type: none"> 1. RPHILOSO Chair 2. CCC Secretary 3. Arts & Humanities DSCC Chair 4. CCC Meeting Agenda 5. Campus Curricula Committee Chair 6. FS Meeting Agenda 7. Faculty Senate Chair 8. Registrar 9. Peoplesoft
Using this Program		
Start Term	Fall 2014	
Program Code	FRENCH-MI	
Department	Arts, Languages, & Philosophy	Approval Path <ol style="list-style-type: none"> 1. 09/25/13 1:33 pm lance: Approved for RPHILOSO Chair 2. 09/27/13 2:30 pm lahne: Approved for CCC Secretary 3. 09/30/13 2:29 pm ivliyeva: Approved for Arts & Humanities DSCC Chair 4. 12/05/13 12:32 pm lahne: Approved for CCC Meeting Agenda 5. 12/08/13 7:51 am tauritzd: Approved for Campus Curricula Committee Chair
Title	French Minor	

Program Requirements and Description

French Minor

A French minor will consist of nine hours beyond the 12 hours B.A. ~~foreign language requirement selected in consultation with a faculty advisor.~~ **foreign language requirement selected in consultation** ~~The additional nine hours must be at the 100-level or higher,~~ with a faculty advisor. **The additional nine hours must be at the 2000-level or higher, with** at least two of the courses at the **4000-level.** ~~300-level.~~

Justification for request

Supporting Documents

Course Reviewer Comments

Key: 217

Program Change Request

Date Submitted: 09/25/13 12:04 pm

Viewing: **GERMAN-MI : German Minor**

File: 218.1

Last edit: 12/05/13 12:33 pm

Changes proposed by: ivliyeva

Catalog Pages Using this Program	<u>Foreign Languages</u>	5. Campus Curricula Committee Chair 6. FS Meeting Agenda 7. Faculty Senate Chair 8. Registrar 9. Peoplesoft
Start Term	Fall 2014	Approval Path 1. 09/25/13 1:33 pm lahne: Approved for RPHILOSO Chair 2. 09/27/13 2:31 pm lahne: Approved for CCC Secretary 3. 09/30/13 2:29 pm ivliyeva: Approved for Arts & Humanities DSCC Chair 4. 12/05/13 12:33 pm lahne: Approved for CCC Meeting Agenda 5. 12/08/13 7:52 am tauritzd: Approved for Campus Curricula Committee Chair
Program Code	GERMAN-MI	
Department	Arts, Languages, & Philosophy	
Title	German Minor	
Program Requirements and Description		
German Minor		
A German minor will consist of nine hours beyond the 12 hours B.A. foreign language requirement selected in consultation with a faculty advisor. The additional nine hours must be at the the 2000-level the 400-level or higher, with at least two of the courses at the 4000-level. 300-level.		
Justification for request		
Supporting Documents		
Course Reviewer Comments		

Key: 218

Program Change Request

Date Submitted: 09/25/13 12:27 pm

Viewing: **RUSS-MI : Russian Minor**

File: 219.1

Last edit: 12/05/13 12:33 pm

Changes proposed by: ivliyeva

Catalog Pages	<u>Foreign Languages</u>	<div>5. Campus Curricula Committee Chair</div> <div>6. FS Meeting Agenda</div> <div>7. Faculty Senate Chair</div> <div>8. Registrar</div> <div>9. Peoplesoft</div>
Using this Program		
Start Term	Fall 2014	
Program Code	RUSS-MI	
Department	Arts, Languages, & Philosophy	<div>Approval Path</div> <div>1. 09/26/13 10:34 am lance: Approved for RPHILOSO Chair</div> <div>2. 09/27/13 2:26 pm laine: Approved for CCC Secretary</div> <div>3. 09/30/13 2:31 pm ivliyeva: Approved for Arts & Humanities DSCC Chair</div> <div>4. 12/05/13 12:33 pm laine: Approved for CCC Meeting Agenda</div> <div>5. 12/08/13 7:53 am tauritdz: Approved for Campus Curricula Committee Chair</div>
Title	Russian Minor	
Program Requirements and Description		
Russian Minor		
A Russian minor will consist of nine hours beyond the 12 hours B.A. foreign language requirement selected in consultation with a faculty advisor. The additional nine hours must be at the 2000-level 400-level or higher, with at least two of the courses at the 4000-level. 300-level.		
Justification for request		
Supporting Documents		
Course Reviewer Comments		

Key: 219

Program Change Request

Date Submitted: 09/25/13 12:28 pm

Viewing: **SPAN-MI : Spanish Minor**

File: 220.1

Last edit: 12/05/13 12:33 pm

Changes proposed by: ivliyeva

Catalog Pages	Foreign Languages	<div>5. Campus Curricula Committee Chair</div> <div>6. FS Meeting Agenda</div> <div>7. Faculty Senate Chair</div> <div>8. Registrar</div> <div>9. Peoplesoft</div>
Using this Program		
Start Term	Fall 2014	
Program Code	SPAN-MI	
Department	Arts, Languages, & Philosophy	<div>Approval Path</div> <div>1. 09/26/13 10:34 am lance: Approved for RPHILOSO Chair</div> <div>2. 09/27/13 2:26 pm lahne: Approved for CCC Secretary</div> <div>3. 09/30/13 2:31 pm ivliyeva: Approved for Arts & Humanities DSCC Chair</div> <div>4. 12/05/13 12:33 pm lahne: Approved for CCC Meeting Agenda</div> <div>5. 12/08/13 7:53 am tauritzd: Approved for Campus Curricula Committee Chair</div>
Title	Spanish Minor	
Program Requirements and Description		
Spanish Minor		
A Spanish minor will consist of nine hours beyond the 12 hours B.A. foreign language requirement selected in consultation with a faculty advisor. The additional nine hours must be at the 2000-level 400-level or higher, with at least two of the courses at the 4000-level. 300-level.		
Justification for request		
Supporting Documents		
Course Reviewer Comments		

Key: 220

Program Change Request

Date Submitted: 09/25/13 3:59 pm

Viewing: **MATH-MI : Mathematics Minor**

File: 223.1

Last edit: 12/05/13 12:34 pm

Changes proposed by: imorgan

Catalog Pages	Mathematics	In Workflow <ol style="list-style-type: none"> 1. RMATHEMA Chair 2. CCC Secretary 3. Sciences DSCC Chair 4. CCC Meeting Agenda 5. Campus Curricula Committee Chair 6. FS Meeting Agenda 7. Faculty Senate Chair 8. Registrar 9. Peoplesoft
Using this Program		
Start Term	Fall 2014	
Program Code	MATH-MI	
Department	Mathematics & Statistics	Approval Path <ol style="list-style-type: none"> 1. 09/25/13 10:11 pm sclark: Approved for RMATHEMA Chair 2. 09/27/13 2:39 pm lahne: Approved for CCC Secretary 3. 10/28/13 7:14 pm tauritzd: Approved for Sciences DSCC Chair 4. 12/05/13 12:34 pm lahne: Approved for CCC Meeting Agenda 5. 12/08/13 7:54 am tauritzd: Approved for Campus Curricula Committee Chair
Title	Mathematics Minor	

Program Requirements and Description

Math Minor Curriculum

The minor will consist of at least 12 hours of mathematics/statistics courses at the **3000** ~~200~~ or higher **level**, ~~level~~, 9 hours of which must be completed in residence at Missouri S&T and 3 hours of which must be at the **4000** ~~300~~ or higher level, and passing all of them with at least a grade of "C". Further, [MATH 204](#) and [MATH 229](#) cannot both be counted, [MATH 229](#) and [MATH 208](#) cannot both be counted, and at most one of [STAT 211](#), [STAT 213](#), [STAT 215](#) and [STAT 217](#) may be counted. Finally, the specific choice of courses is subject to the approval of the minor advisor.

* [COMP SCI 228](#) Introduction To Numerical Methods may be substituted for one of these courses.

Justification for request The intent is to keep the requirement the same as it is currently.

Supporting Documents

Course Reviewer Comments

Key: 223