

**Minutes of the Campus Curricula Committee Meeting**

**October 30, 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 Jennifer Thorpe.

The committee voted to amend the agenda to review EC submissions first.

The following curriculum forms were discussed and approved:

**Experimental Course Forms:**

File #4000	File #4009
File #4001	File #4010
File #4002	File #4012
File #4008	

**Degree Change Forms:**

File #1.1	File #81.1
File #2.6	File #86.1
File #44.2	File #88.3
File #45.1	File #89.1
File #49.1	File #91.1
File #53.1	File #102.1
File #58.1	File #120.1
File #71.1	File #122.1
File #73.1	File #133.1
File #74.1	File #135.1
File #75.1	File #186.1

The items below were tabled, pending clarification from the submitting department.

File #48.1	English and Technical Communication – English BA
File #141.1	Mechanical and Aerospace Engineering – Aerospace Engineering BS

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

File #136.1	Arts, Languages, and Philosophy – Theatre Minor
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Due to the number of agenda items and the time required to review each degree change, the following forms will be reviewed at the next CCC meeting on December 4, 2013.

- File #143.4 Civil, Architectural, and Environmental Engineering – Architectural Engineering BS
- File #144.1 Arts, Languages, and Philosophy – Art Minor
- File #148.1 Business and Information Technology – Business and Management Systems BS
- File #173.1 Mechanical and Aerospace Engineering – Manufacturing Engineering MS
- File #177.1 English and Technical Communication – Creative Writing Minor
- File #178.1 English and Technical Communication – Literature and Film Minor
- File #179.1 English and Technical Communication – Literature Minor
- File #181.1 English and Technical Communication – Technical Communication Minor
- File #183.1 Psychological Science – Psychology Minor
- File #184.1 Materials Science and Engineering – Ceramic Engineering MS
- File #185.1 Materials Science and Engineering – Ceramic Engineering PhD
- File #187.1 Arts, Languages, and Philosophy – Philosophy Minor
- File #188.1 Arts, Languages, and Philosophy – Philosophy of Technology Minor
- File #204.1 Materials Science and Engineering – Materials Science and Engineering PhD
- File #209.1 Materials Science and Engineering – Metallurgical Engineering PhD
- File #217.1 Arts, Languages, and Philosophy – French Minor
- File #218.1 Arts, Languages, and Philosophy – German Minor
- File #219.1 Arts, Languages, and Philosophy – Russian Minor
- File #220.1 Arts, Languages, and Philosophy – Spanish Minor

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 11:40 am.



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Daniel Tauritz, Chair  
Missouri S&T Campus Curricula Committee

## Course Inventory Change Request

### New Experimental Course Proposal

Date Submitted: 09/16/13 2:58 pm

Viewing: **MIN ENG 401.TBD : Managing Social and Environmental Risks in Mining**

File: 4000

Last edit: 10/30/13 10:05 am

Changes proposed by: jrussell

Requested Spring 2014  
Effective Change Date

Department Mining & Nuclear Engineering  
Discipline Mining Engineering (MIN ENG)  
Course Number 401  
Topic ID TBD  
Title Managing Social and Environmental Risks in Mining  
Abbreviated Course Title Socio & Env Mining Risk  
Instructors Michelle Jarvie Eggart, PhD, PE

Catalog Description This course is an introduction to responsible mining. It focuses on industry and NGO programs around sustainability and reporting in mining, financial community response, community of interest engagement and participation, and safety and crisis response and management.

Prerequisites Min Eng 376 or Equivalent

Field Trip Statement

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

Justification for new course: Department request.

Semester(s) previously taught

Co-Listed Courses:

Course Reviewer Comments

#### In Workflow

1. RMINNUCL Chair
2. CCC Secretary
3. Engineering DSCC Chair
4. CCC Meeting Agenda
5. Campus Curricula Committee Chair
6. Registrar
7. Peoplesoft

#### Approval Path

1. 09/16/13 3:02 pm frimpong: Approved for RMINNUCL Chair
2. 09/25/13 11:35 am lahne: Approved for CCC Secretary
3. 10/10/13 2:56 pm sraper: Approved for Engineering DSCC Chair
4. 11/01/13 10:16 am lahne: Approved for CCC Meeting Agenda
5. 11/07/13 6:17 pm tauritzd: Approved for Campus Curricula Committee Chair

Key: 4000

## Course Inventory Change Request

### New Experimental Course Proposal

Date Submitted: 09/16/13 3:01 pm

Viewing: **MIN ENG 401.TBD : Biodiversity, Closure, and Compliance**

File: 4001

Last edit: 11/01/13 10:17 am

Changes proposed by: jrussell

Requested	Spring 2014
Effective Change Date	
Department	Mining & Nuclear Engineering
Discipline	Mining Engineering (MIN ENG)
Course Number	401
Topic ID	TBD
Title	Biodiversity, Closure, and Compliance
Abbreviated Course Title	Biodivers Closure & Comp
Instructors	Michelle Jarvie Eggart, PhD, PE

Catalog Description	Course focuses on biodiversity baseline methods, services, offsets & management. It also includes mine closure & reclamation planning & practices for new uses of post-mining land and community engagement. Environmental monitoring & compliance will also be addressed using baseline studies, zero-liquid discharges and citizen-science & monitoring partnership.
Prerequisites	Min Eng 376 or Equivalent
Field Trip Statement	
Credit Hours	LEC: 3      LAB: 0      IND: 0      RSD: 0      Total: 3

Justification for new course:	Department request.
Semester(s) previously taught	
Co-Listed Courses:	

Course Reviewer  
Comments

#### In Workflow

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

#### Approval Path

1. 09/16/13 3:02 pm  
frimpong:  
Approved for RMINNUCL Chair
2. 09/25/13 11:35 am  
lahne: Approved for CCC Secretary
3. 10/10/13 2:55 pm  
srapser: Approved for Engineering DSCC Chair
4. 11/01/13 10:19 am  
lahne: Approved for CCC Meeting Agenda
5. 11/07/13 6:18 pm  
tauritzd:  
Approved for Campus Curricula Committee Chair

Key: 4001

## Course Inventory Change Request

### New Experimental Course Proposal

Date Submitted: 09/16/13 3:03 pm

Viewing: **MIN ENG 401.TBD : Energy, Tailings, and Water Management**

File: 4002

Last edit: 10/30/13 10:13 am

Changes proposed by: jrussell

Requested	Spring 2014
Effective Change Date	
Department	Mining & Nuclear Engineering
Discipline	Mining Engineering (MIN ENG)
Course Number	401
Topic ID	TBD
Title	Energy, Tailings, and Water Management
Abbreviated Course Title	Energy Tail/Water Mgt
Instructors	Michelle Jarvie Eggart, PhD, PE

Catalog Description	This course focuses on energy management efforts and greenhouse gas reductions and offsets. It also deals with tailings management, consolidation and waste rock stockpile management. It will also address mine site water conservation or recycling including surrounding water resources, storm water runoff and effluent quality improvements.				
Prerequisites	Min Eng 376 or Equivalent				
Field Trip Statement					
Credit Hours	LEC: 3	LAB: 0	IND: 0	RSD: 0	Total: 3

Justification for new course:	Department request.
Semester(s) previously taught	
Co-Listed Courses:	

Course Reviewer  
Comments

#### In Workflow

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

#### Approval Path

1. 09/16/13 3:04 pm  
frimpong:  
Approved for  
RMINNUCL Chair
2. 09/25/13 11:35 am  
lahne: Approved  
for CCC Secretary
3. 10/10/13 2:56 pm  
sraprer: Approved  
for Engineering  
DSCC Chair
4. 11/01/13 10:20 am  
lahne: Approved  
for CCC Meeting  
Agenda
5. 11/07/13 6:19 pm  
tauritzd:  
Approved for  
Campus Curricula  
Committee Chair

Key: 4002

## Course Inventory Change Request

**New Experimental Course Proposal**

Date Submitted: 09/16/13 4:02 pm

Viewing: **ECON 301.TBD : Mining Industry Economics II**

File: 4008

Last edit: 09/16/13 4:02 pm

Changes proposed by: marcys

Requested	Spring 2014
Effective Change Date	
Department	Economics
Discipline	Economics (ECON)
Course Number	301
Topic ID	TBD
Title	Mining Industry Economics II
Abbreviated Course Title	Min Ind Economics II
Instructors	Stewart Gillies

Catalog Description	Mining industry & national economies. Social & economic significance of mined commodities. Marketing of mined commodities. Mine financing, project loans, leasing & innovative approaches to min financing. Mining feasibility studies, gov't influence & policy, mining indus foreign inv, investment strategies, mining taxation & cost prediction. Case studies.
Prerequisites	Econ 121 or Econ 122
Field Trip Statement	
Credit Hours	LEC: 3      LAB: 0      IND: 0      RSD: 0      Total: 3

Justification for new course: This course was approved at the December 5, 2012 curriculum committee meeting as Min Eng 301 but the Econ co-list that should have been on that form was inadvertently left off. This form is to correct that error.

Semester(s) previously taught

Co-Listed Courses: MIN ENG 301 - Special Topics

Course Reviewer  
Comments

In Workflow

1. **RECONOMI Chair**
2. **CCC Secretary**
3. **Social Sciences DSCC Chair**
4. **CCC Meeting Agenda**
5. **Campus Curricula Committee Chair**
6. **Registrar**
7. Peoplesoft

Approval Path

1. 09/17/13 2:16 pm gelles: Approved for RECONOMI Chair
2. 09/25/13 9:16 am lahne: Approved for CCC Secretary
3. 09/26/13 8:54 am barryf: Approved for Social Sciences DSCC Chair
4. 11/01/13 2:56 pm lahne: Approved for CCC Meeting Agenda
5. 11/07/13 6:21 pm tauritzd: Approved for Campus Curricula Committee Chair

Key: 4008

## Course Inventory Change Request

### New Experimental Course Proposal

Date Submitted: 09/25/13 2:38 pm

Viewing: **MIN ENG 401.TBD : Advanced Mine Ventilation**

File: 4009

Last edit: 10/30/13 10:18 am

Changes proposed by: jrussell

Requested	Spring 2014
Effective Change Date	
Department	Mining & Nuclear Engineering
Discipline	Mining Engineering (MIN ENG)
Course Number	401
Topic ID	TBD
Title	Advanced Mine Ventilation
Abbreviated Course Title	Advanced Mine Vent
Instructors	Dr. Stewart Gillies

Catalog Description	Effects of fires on the mine ventilation system including the principle of combustion, source of ignition underground, the simulation of mine fires with modern software and use of inertization systems. Booster fans, diesel particulate matter, mine dusts, and mine ventilation planning.				
Prerequisites	MIN ENG 318				
Field Trip Statement					
Credit Hours	LEC: 2	LAB: 1	IND: 0	RSD: 0	Total: 3

Justification for new course:	Department request.
Semester(s) previously taught	
Co-Listed Courses:	

Course Reviewer  
Comments

#### In Workflow

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

#### Approval Path

1. 09/25/13 3:22 pm  
frimpong:  
Approved for  
RMINNUCL Chair
2. 09/27/13 2:40 pm  
lahne: Approved  
for CCC Secretary
3. 10/10/13 2:55 pm  
srafer: Approved  
for Engineering  
DSCC Chair
4. 11/01/13 10:42  
am  
lahne: Approved  
for CCC Meeting  
Agenda
5. 11/07/13 6:22 pm  
tauritzd:  
Approved for  
Campus Curricula  
Committee Chair

Key: 4009

## Course Inventory Change Request

### New Experimental Course Proposal

Date Submitted: 10/09/13 4:39 pm

Viewing: **IS&T 301.TBD : Introduction to Big Data Analytics**

File: 4010

Last edit: 10/30/13 10:20 am

Changes proposed by: barryf

Requested	Spring 2014
Effective Change Date	
Department	RINFSCTE
Discipline	Info Science & Technology (IS&T)
Course Number	301
Topic ID	TBD
Title	Introduction to Big Data Analytics
Abbreviated Course Title	Intro Big Data Analytics
Instructors	Dr. Michael Hilgers

**Catalog Description**  
This course addresses the foundations of using predictive statistics on big data sets to impact decision-making. Focus is applied examples using realistic data. Models implemented include regression (parametric/nonparametric), classification, decision trees, and clustering with analytical estimation accomplished using popular software.

**Prerequisites**  
Calculus and statistics knowledge

**Field Trip Statement**

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

**Justification for new course:**  
Plan to make this a requirement for new Graduate Certificates.

**Semester(s) previously taught**  
None

**Co-Listed Courses:**

**Course Reviewer Comments**

In Workflow

1. RINFSCTE Chair
2. CCC Secretary
3. Social Sciences DSCC Chair
4. CCC Meeting Agenda
5. Campus Curricula Committee Chair
6. Registrar
7. Peoplesoft

Approval Path

1. 10/09/13 4:44 pm  
siau: Approved for RINFSCTE Chair
2. 10/10/13 1:38 pm  
lahne: Approved for CCC Secretary
3. 10/10/13 1:45 pm  
barryf: Approved for Social Sciences DSCC Chair
4. 11/01/13 10:42 am  
lahne: Approved for CCC Meeting Agenda
5. 11/07/13 6:23 pm  
tauritzd: Approved for Campus Curricula Committee Chair

Key: 4010



## Course Inventory Change Request

### New Experimental Course Proposal

Date Submitted: 10/08/13 10:30 am

Viewing: **MECH ENG 401.TBD : Iterative Learning and Repetitive Process Control**

File: 4012

Last edit: 10/08/13 3:16 pm

Changes proposed by: nisbett

Requested	Spring 2014
Effective Change Date	
Department	Mechanical & Aerospace Engineering
Discipline	Mechanical Engineering (MECH ENG)
Course Number	401
Topic ID	TBD
Title	Iterative Learning and Repetitive Process Control
Abbreviated Course Title	Iter & Rep Proc Control
Instructors	Dr. Doug Bristow

Catalog Description	Fundamentals of control system analysis and design for systems with periodic references/disturbances with and without resetting. Internal model principle, stability, robustness, and performance analysis. Frequency and time domain design of repetitive control and iterative learning control. Repetitive processes, 2-D stability analysis, and 2-D LQR.
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Prerequisites	MECH ENG 381 or ELEC ENG 431
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Field Trip Statement	
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Credit Hours	LEC: 3	LAB: 0	IND: 0	RSD: 0	Total: 3
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Justification for new course:	This is an important area of research in controls.
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Semester(s) previously taught	None
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Co-Listed Courses:	AERO ENG 401 - Special Topics
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Course Reviewer Comments	
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In Workflow

1. RMECHENG Chair
2. CCC Secretary
3. Engineering DSCC Chair
4. CCC Meeting Agenda
5. Campus Curricula Committee Chair
6. Registrar
7. Peoplesoft

Approval Path

1. 10/08/13 2:08 pm drallmei: Approved for RMECHENG Chair
2. 10/08/13 3:16 pm lahne: Approved for CCC Secretary
3. 10/10/13 2:57 pm sraper: Approved for Engineering DSCC Chair
4. 11/01/13 10:44 am lahne: Approved for CCC Meeting Agenda
5. 11/07/13 6:24 pm tauritzd: Approved for Campus Curricula Committee Chair

Key: 4012

## Program Change Request

Date Submitted: 09/27/13 2:54 pm

Viewing: **AE ENG-MI : Aerospace Engineering Minor**

File: 1.1

Last edit: 11/01/13 10:45 am

Changes proposed by: nisbett

In Workflow

1. RMECHENG Chair
2. CCC Secretary
3. Engineering DSCC Chair

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

4. CCC Meeting Agenda
5. Campus Curricula Committee Chair

Start Term **Fall 2014**  
Program Code AE ENG-MI  
Department Mechanical & Aerospace Engineering  
Title Aerospace Engineering Minor

6. FS Meeting Agenda
7. Faculty Senate Chair
8. Registrar
9. Peoplesoft

Program Requirements and Description

Approval Path

### Requirements for a Minor in Aerospace Engineering

A student who receives a bachelor of science degree in an accredited engineering program from Missouri S&T may receive a minor in aerospace engineering by completing the 15 hours of courses listed below. Students must satisfy the prerequisite requirements for each course. The department granting the bachelor of science degree shall determine whether or not courses taken for the minor may also be used to fulfill the requirements of the B.S. degree.

1. 09/27/13 3:45 pm drallmei: Approved for RMECHENG Chair
2. 09/27/13 3:47 pm lahne: Approved for CCC Secretary
3. 10/10/13 2:47 pm sraper: Approved for Engineering DSCC Chair
4. 11/01/13 10:44 am lahne: Approved for CCC Meeting Agenda
5. 11/07/13 6:32 pm tauritzd: Approved for Campus Curricula Committee Chair

<a href="#">AERO ENG 161</a>	Aerospace Vehicle Performance	3
<a href="#">AERO ENG 213</a>	Aerospace Mechanics I	3
<a href="#">AERO ENG 231</a>	Aerodynamics I	3
<a href="#">AERO ENG 251</a>	Aerospace Structures I	3
AERO ENG 3000-level 3-hour lecture course (student choice)		3

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.

Supporting Documents

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Course Reviewer

Key: 1

Comments

## Program Change Request

Date Submitted: 09/27/13 3:18 pm

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

File: 2.6

Last approved: 09/27/13 3:10 pm

Last edit: 11/01/13 10:50 am

Changes proposed by: nisbett

### In Workflow

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

Catalog Pages	<a href="#">Aerospace Engineering</a>
Using this Program	
Start Term	Fall <del>2014</del> 2013
Program Code	AE ENG-MS
Department	Mechanical & Aerospace Engineering
Title	Aerospace Engineering MS

### Program Requirements and Description

The master of science thesis program consists of a minimum of 30 credit hours, including the following requirements: at least 21 credit hours of lecture courses, at least 6 credit hours of ME 490, at least 9 credit hours of lecture courses in the MAE department (of which at least 3 credit hours must be at the **6000-level**), ~~4xx-level~~, at least 3 credit hours of mathematics, statistics, or computer science (AE/ME 330: Applied Computational Methods may be used to satisfy this requirement), and at least 6 credit hours of **6000-level** ~~4xx~~-lecture courses. A master of science non-thesis program consists of a minimum of 30 credit hours, including the following requirements: at least 24 credit hours in the MAE department and at least 9 credit hours of **6000-level** ~~4xx~~-lecture courses (of which at least 6 credit hours must be in the MAE department). Note that no course below the **5000-level** ~~3xx-level~~ may be applied to the degree requirements.

A student holding an MS degree and pursuing the doctor of philosophy degree must complete at least 60 total credit hours, including the following requirements: at least 24 credit hours of lecture courses, at least 36 credit hours of ME 490, at least 12 credit hours of course work in the MAE department, at least 3 credit hours of mathematics, statistics, or computer science (AE/ME 330: Applied Computational Methods may be used to satisfy this requirement), and at least 9 credit hours of **6000-level** ~~4xx~~-courses (of which at least 6 credit hours must be in the MAE department). In addition to these course requirements, a candidate must prepare a dissertation based on analytical, numerical, and/or experimental research. Note that no course below the **5000-level** ~~3xx~~-level may be applied to the degree requirements.

A student holding a BS degree and pursuing the direct doctor of philosophy degree must complete at least 90 total credit hours, including the following requirements: at least 45 credit hours of lecture courses, at least 45 credit hours of ME 490, at least 21 credit hours of course work in the MAE department, at least 6 credit hours of mathematics, statistics, or computer science (AE/ME 330: Applied Computational Methods may be used to satisfy three credit hours of this requirement), and at least 15 credit hours of **6000-level** ~~4xx~~-courses (of which at least 9 credit hours must be in the MAE department). In addition to these course requirements, a candidate must prepare a dissertation based on analytical, numerical, and/or experimental research. Note that no course below the **5000-level** ~~3xx~~-level may be applied to the degree requirements.

A candidate for the degree of doctor of philosophy must pass a qualifying examination. The candidate is considered to have passed the qualifying examination if the candidate has taken at least four courses and has a **GPA** ~~GPA~~  $\geq 3.5$  at the end of the candidate's fourth semester. At least two courses must be in the MAE department, one of which must be at the **6000-level**. ~~4xx-level~~.

### Approval Path

1. 09/27/13 3:45 pm  
drallmei:  
Approved for  
RMECHENG Chair
2. 09/27/13 3:47 pm  
lahne: Approved  
for CCC Secretary
3. 10/10/13 2:52 pm  
sraper: Approved  
for Engineering  
DSCC Chair
4. 11/01/13 10:50  
am  
lahne: Approved  
for CCC Meeting  
Agenda
5. 11/07/13 6:32 pm  
tauritzd:  
Approved for  
Campus Curricula  
Committee Chair

### History

1. Sep 27, 2013 by  
lahne

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

Supporting Documents

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Course Reviewer

Key: 2

Comments

## Program Change Request

Date Submitted: 09/24/13 11:59 am

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

File: 44.2

Last approved: 09/24/13 11:05 am

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

Changes proposed by: sraper

Catalog Pages	<a href="#">Engineering Management</a>	In Workflow 1. <b>RENGMNGT Chair</b> 2. <b>CCC Secretary</b> 3. <b>Engineering DSCC Chair</b> 4. <b>CCC Meeting Agenda</b> 5. <b>Campus Curricula Committee Chair</b> 6. <b>FS Meeting Agenda</b> 7. Faculty Senate Chair 8. Registrar 9. Peoplesoft
Using this Program		
Start Term	Fall <del>2014</del> <b>2013</b>	
Program Code	ENG MG-BS	
Department	Engineering Management and Systems Engineering	
Title	Engineering Management BS	

### Program Requirements and Description

## Bachelor of Science Engineering Management

Entering freshmen intending to study Engineering Management are admitted to the Freshman Engineering Program. They may, however, state an Engineering Management preference, which will be used as a consideration for available freshman departmental scholarships. The focus of the Freshman Engineering program is on enhanced advising and career counseling, with the goal of providing to the student the information necessary to make an informed decision regarding the choice of a major. The Bachelor of Science degree in Engineering Management requires a minimum of 128 credit hours. These requirements are in addition to credit received for algebra, trigonometry, and basic ROTC courses. An average of at least two grade points per credit hour must be attained. At least two grade points per credit hour must also be attained in all courses taken in Engineering Management.

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

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](#), [HISTORY 175](#), [HISTORY 176](#), or [POL SCI 90](#). The economics course may be either [ECON 121](#) or [ECON 122](#). The humanities course must be selected from "**The Approved List of Humanities and Social Sciences Courses the approved lists for Engineering Degrees**" maintained by the Office of Undergraduate Studies. ~~art, English, foreign languages, music, philosophy, speech and media studies, or theater.~~

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. 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-level or above**. ~~300 level~~. All courses taken to satisfy the depth requirement must be taken after graduating from high school.

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](#).

Any specific departmental requirements in the general studies area must be satisfied.

Special topics, special problems and honors seminars are allowed only by petition to and approval by the student's department ~~chair, chairman.~~

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

- ### Approval Path
- 09/24/13 12:14 pm  
lahne: Approved for RENG MNGT Chair
  - 09/30/13 1:26 pm  
lahne: Approved for CCC Secretary
  - 10/10/13 2:53 pm  
sraper: Approved for Engineering DSCC Chair
  - 11/01/13 11:10 am  
lahne: Approved for CCC Meeting Agenda
  - 11/07/13 6:36 pm  
tauritzd: Approved for Campus Curricula Committee Chair

- ### History
- Sep 24, 2013 by lahne

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
<a href="#">FR ENG 10</a>	1	<a href="#">IDE 20</a>	3
<a href="#">CHEM 1</a>	4	<a href="#">MATH 151</a>	4
<a href="#">CHEM 2</a>	1	<a href="#">PHYSICS 231</a>	4
<a href="#">CHEM 4</a>	1	<a href="#">ECON 121</a> or <a href="#">122</a>	3
<a href="#">MATH 141</a>	4	Humanities Elective <sup>2</sup>	3
<a href="#">ENGLISH 20</a>	3		
<a href="#">HISTORY 112</a> , or <a href="#">175</a> , or <a href="#">176</a> , or <a href="#">POL SCI 903</a>	3		
	17		17
Sophomore Year			
First Semester	Credits	Second Semester	Credits
<a href="#">MATH 221</a>	4	<a href="#">MATH 2041</a>	3
<a href="#">PHYSICS 241</a>	4	<a href="#">STAT 215</a> or <a href="#">2171</a>	3
<a href="#">CIV ENG 501</a>	3	<a href="#">ENG MGT 1341</a>	3
<a href="#">ENG MGT 1371</a>	2	<a href="#">ENG MGT 1471</a>	3
<a href="#">ENG MGT 2131</a>	3	<a href="#">IDE 150</a>	2
		<a href="#">PSYCH 50</a>	3
	16		17
Junior Year			
First Semester	Credits	Second Semester	Credits
<a href="#">ENG MGT 2531</a>	3	<a href="#">ENG MGT 2661</a>	3
<a href="#">CIV ENG 110</a>	3	<a href="#">MECH ENG 227</a>	3
<a href="#">CIV ENG 120</a>	1	<a href="#">ELEC ENG 281</a>	3
<a href="#">ENG MGT 2511</a>	3	<a href="#">ENGLISH 160</a>	3
<a href="#">COMP SCI 741</a>	2	<a href="#">ENG MGT 2541</a>	3
<a href="#">COMP SCI 78</a>	1		
<a href="#">SP&amp;M S 85</a> or <a href="#">SP&amp;M S 181</a>	3		
	16		15
Senior Year			
First Semester	Credits	Second Semester	Credits
Emphasis Area Required Course	3	ENG MGT Technical Elective	3
Emphasis Area Required Course	3	ENG MGT Technical Elective	3
Emphasis Area Required Course	3	<a href="#">ENG MGT 2991</a>	3
<a href="#">ENG MGT 2601</a>	3	Upper Level Hum/SS	3
ENG MGT Technical Elective	3	Free Elective	3
	15		15

Total Credits: 128

## Example Emphasis Area Programs for Engineering Management Students

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

### Management of Technology

<a href="#">ENG MGT 320</a> <del>ENG MGT 320</del>	Technical Entrepreneurship	3
<a href="#">ENG MGT 327</a>	<del>ENG MGT 327</del> Legal Environment	3
<a href="#">ENG MGT 356</a>	<del>ENG MGT 356</del> Industrial System Simulation	3
<a href="#">ENG MGT 366</a>	<del>ENG MGT 366</del> Supply Chain Management Systems	3
ENG MGT Technical Electives (In consultation with your advisor)		6

Industrial Engineering		
<del>ENG MGT 257</del>	<del>ENG MGT 257</del>	Materials Handling And Plant Layout 3
<del>ENG MGT 311 OR ENG MGT 4330</del>	<del>ENG MGT 311</del>	Human Factors 3
<del>ENG MGT 356</del>	<del>ENG MGT 356</del>	Industrial System Simulation 3
<del>ENG MGT 382</del>	<del>ENG MGT 382</del>	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	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 8 and MATH 21 may be substituted for MATH 14 and MATH 15, 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 Associate Engineering Manager Certification 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. Students must sign a release form giving the University access to their Associate Engineering Manager Certification score.

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Justification for request      Emg MGT 311 IS A Dual Career course number. 4330 is for undergraduates and is a required change for the new course numbering system.

Supporting Documents

Course Reviewer Comments



## Program Change Request

Date Submitted: 09/24/13 10:53 am

Viewing: **ENG MGT-MI : Engineering Management Minor**

File: 45.1

Last edit: 11/01/13 11:12 am

Changes proposed by: sraper

Catalog Pages Using this Program	<a href="#">Engineering Management</a>
Start Term	<b>Fall 2014</b>
Program Code	ENG MGT-MI
Department	Engineering Management and Systems Engineering
Title	Engineering Management Minor

- In Workflow
1. **RENGMNGT 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

### Program Requirements and Description

### Minor in Engineering Management

A student who receives a bachelor of science degree in an accredited engineering program from Missouri S&T may receive a minor in Engineering Management by completing 15 hours of the courses listed below.

- Approval Path
1. 09/24/13 11:14 am  
enke: Approved for RENGMNGT Chair
  2. 09/24/13 11:18 am  
lahne: Approved for CCC Secretary
  3. 09/24/13 12:22 pm  
lahne: Rollback to CCC Secretary for CCC Meeting Agenda
  4. 09/24/13 12:32 pm  
lahne: Approved for CCC Secretary
  5. 09/25/13 9:09 am  
lahne: Rollback to CCC Secretary for Col DSCC Chair
  6. 09/25/13 9:12 am  
lahne: Approved for CCC Secretary
  7. 09/25/13 10:09 am  
sraper: Approved for Engineering DSCC Chair

- 8. 11/01/13 11:12 am  
lahne: Approved for CCC Meeting Agenda
- 9. 11/07/13 6:45 pm  
tauritzd: Approved for Campus Curricula Committee Chair

<a href="#"><u>ENG MGT 134</u></a>	Managing Engineering And Technology	3
<a href="#"><u>ENG MGT 147</u></a>	Engineering Accounting and Finance	3
<a href="#"><u>ENG MGT 253</u></a>	Operations And Production Management	3
Eng Mgt 3000, 4000, or 5000-level course work chosen in consultation with minor advisor.		6
Total Credits		15

Justification for request      To meet new course renumbering requirements.  
 (Item four of the course list above should be changed to the following: Eng Mgt 3000, 4000, or 5000 level course work chosen in consultation with minor advisor. Credit hours remain at 6.)

Supporting Documents  
 Course Reviewer  
 Comments

Key: 45

## Program Change Request

Date Submitted: 09/24/13 6:11 pm

Viewing: **ERP-MI : Enterprise Resource Plan Minor**

File: 49.1

Last edit: 09/30/13 2:07 pm

Changes proposed by: barryf

Catalog Pages	<a href="#">Information Science and Technology</a>	In Workflow
Using this Program		<ol style="list-style-type: none"> <li>1. RINFSCTE Chair</li> <li>2. CCC Secretary</li> <li>3. Social Sciences DSCC Chair</li> <li>4. CCC Meeting Agenda</li> <li>5. Campus Curricula Committee Chair</li> </ol>
Start Term	<b>Fall 2014</b>	6. FS Meeting Agenda
Program Code	ERP-MI	7. Faculty Senate Chair
Department	RINFSCTE	8. Registrar
Title	Enterprise Resource Plan Minor	9. Peoplesoft

### Program Requirements and Description

Minor in Enterprise Resource Planning (ERP)

A minor in ERP requires the following 15 hours of course work:

### Approval Path

1. 09/25/13 7:09 pm  
siauk: Approved for RINFSCTE Chair
2. 09/30/13 2:08 pm  
lahne: Approved for CCC Secretary
3. 10/09/13 4:32 pm  
barryf: Approved for Social Sciences DSCC Chair
4. 11/01/13 11:13 am  
lahne: Approved for CCC Meeting Agenda
5. 11/08/13 1:27 pm  
tauritzd: Approved for Campus Curricula Committee Chair

<a href="#">BUS 120</a>	Financial Accounting	3
<a href="#">ERP 246</a>	Introduction to Enterprise Resource Planning	3
<a href="#">ERP 346</a>	Enterprise Resource Planning Systems Design and Implementation	3
And 6 hours of electives from any other ERP-designated courses at the 4000-level or above		6
Total Credits		15

Justification for request: Correct for renumbering, fix title.

Supporting Documents

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Course Reviewer

Key: 49

Comments

## Program Change Request

Date Submitted: 09/30/13 2:43 pm

Viewing: **ETHICS-MI : Ethics Minor**

File: 53.1

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

Changes proposed by: ivliyeva

Catalog Pages	<a href="#">Philosophy</a>	<p>In Workflow</p> <ol style="list-style-type: none"> <li>1. <b>RPHILOSO Chair</b></li> <li>2. <b>CCC Secretary</b></li> <li>3. <b>Arts &amp; Humanities DSCC Chair</b></li> <li>4. <b>CCC Meeting Agenda</b></li> <li>5. <b>Campus Curricula Committee Chair</b></li> <li>6. <b>FS Meeting Agenda</b></li> <li>7. Faculty Senate Chair</li> <li>8. Registrar</li> <li>9. Peoplesoft</li> </ol>
Using this Program		
Start Term	<b>Fall 2014</b>	
Program Code	ETHICS-MI	
Department	Arts, Languages, & Philosophy	
Title	Ethics Minor	

### Program Requirements and Description

## Ethics Minor

To qualify, all students must take 15 hours of course work from the following list of which at least 6 hours are from **the 4000-level**: ~~the 300 level~~:

### Approval Path

1. 09/30/13 4:05 pm  
lahne: Approved for RPHILOSO Chair
2. 10/07/13 3:49 pm  
lahne: Approved for CCC Secretary
3. 10/07/13 4:01 pm  
ivliyeva:  
Approved for Arts & Humanities DSCC Chair
4. 11/01/13 11:14 am  
lahne: Approved for CCC Meeting Agenda
5. 11/08/13 1:28 pm  
tauritzd:  
Approved for Campus Curricula Committee Chair

<a href="#">PHILOS 5</a>	Introduction To Philosophy	3
<a href="#">PHILOS 15</a>	Introduction To Logic	3
<a href="#">PHILOS 75</a>	Comparative Religious Philosophy	3
<a href="#">PHILOS 223</a>	Bioethics	3
<a href="#">PHILOS 225</a>	Engineering Ethics	3
<a href="#">PHILOS 235</a>	Business Ethics	3
<a href="#">PHILOS 335</a>	Philosophy Of Religion	3
<a href="#">PHILOS 340</a>	Social Ethics	3
<a href="#">PHILOS 350</a>	Environmental Ethics	3

<a href="#">PHILOS 360</a>	Foundations Of Political Conflict	3
<a href="#">PHILOS 368</a>	Law and Ethics in E-Commerce	3

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Justification for  
request

Supporting  
Documents

Course Reviewer **lahne (09/30/13 8:24 am)**: Rollback: Please update the reference to "300 level"  
Comments courses.

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Key: 53

## Program Change Request

Date Submitted: 09/24/13 6:11 pm

Viewing: **FINANCE-MI : Finance Minor**

File: 58.1

Last edit: 11/01/13 11:15 am

Changes proposed by: barryf

Catalog Pages	<u><a href="#">Business and Management Systems</a></u>	In Workflow <b>1. RINFSCTE Chair</b> <b>2. CCC Secretary</b> <b>3. Social Sciences DSCC Chair</b>
Using this Program		
Start Term	<b>Fall 2014</b>	<b>4. CCC Meeting Agenda</b>
Program Code	FINANCE-MI	<b>5. Campus Curricula Committee Chair</b>
Department	RINFSCTE	<b>6. FS Meeting Agenda</b>
Title	Finance Minor	7. Faculty Senate Chair
		8. Registrar
		9. Peoplesoft

### Program Requirements and Description

Minor in Finance

A minor in **Finance** ~~Finance\*~~ requires the following 15 hours of course work:

### Approval Path

- 09/25/13 7:09 pm  
siau: Approved for RINFSCTE Chair
- 09/30/13 10:37 am  
lahne: Approved for CCC Secretary
- 10/09/13 4:33 pm  
barryf: Approved for Social Sciences DSCC Chair
- 11/01/13 11:15 am  
lahne: Approved for CCC Meeting Agenda
- 11/08/13 1:29 pm  
tauritzd: Approved for Campus Curricula Committee Chair

<u><a href="#">ECON 121</a></u>	Principles Of Microeconomics	3
or <u><a href="#">ECON 122</a></u>	Principles Of Macroeconomics	
<u><a href="#">FINANCE 250</a></u>	Corporate Finance I	3
<del>And 9 hours of FINANCE courses at the 300-level (FINANCE 290, Undergraduate Research, is acceptable).</del>		
<u><a href="#">FINANCE 360</a></u>	<b>Investments I</b>	<b>3</b>
<u><a href="#">ECON 323</a></u>	<b>International Finance</b>	<b>3</b>
<b>And 3 hours of FINANCE courses at the 3000-level or above (Undergraduate Research is acceptable).</b>		

Correct for renumbering. Correct and expand the course list.

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Justification for  
request  
Supporting  
Documents  
Course Reviewer  
Comments

Key: 58



## Program Change Request

Date Submitted: 08/26/13 12:33 pm

Viewing: **HIST-MI : History Minor**

File: 71.1

Last edit: 09/25/13 11:39 am

Changes proposed by: dewittp

Catalog Pages	<a href="#">History</a>
Using this Program	
Start Term	<b>Fall 2014</b>
Program Code	HIST-MI
Department	History and Political Science
Title	History Minor

- In Workflow
1. RHISTORY 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

### Program Requirements and Description

### History Minor Curriculum

The History/Political Science Department offers a minor in history. To qualify, all students must take 15 hours of course work in history to include:

[Course List](#)

- Approval Path
1. 08/27/13 7:21 am  
lgragg: Approved for RHISTORY Chair
  2. 09/25/13 11:41 am  
lahne: Approved for CCC Secretary
  3. 09/25/13 11:49 am  
ivliyeva: Approved for Arts & Humanities DSCC Chair
  4. 11/01/13 11:17 am  
lahne: Approved for CCC Meeting Agenda
  5. 11/08/13 5:10 pm  
tauritzd: Approved for Campus Curricula Committee Chair

<a href="#">HISTORY 111</a>	Early Western Civilization	3
or <a href="#">HISTORY 112</a>	Modern Western Civilization	
<a href="#">HISTORY 175</a>	American History To 1877	3
or <a href="#">HISTORY 176</a>	American History Since 1877	
An additional 9 hours of an approved sequence of 2000 or higher level courses.		9
<del><a href="#">HISTORY 111</a></del>	<del>Early Western Civilization</del>	<del>3</del>
<del>or <a href="#">HISTORY 112</a></del>	<del>Modern Western Civilization</del>	
<del><a href="#">HISTORY 175</a></del>	<del>American History To 1877</del>	<del>3</del>
<del>or <a href="#">HISTORY 176</a></del>	<del>American History Since 1877</del>	

~~An additional 9 hours of HISTORY 200 or 300 level courses.~~

9

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Justification for request      Course Renumbering Initiative

Supporting Documents

Course Reviewer Comments

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Key: 71

## Program Change Request

Date Submitted: 09/24/13 6:11 pm

Viewing: **IST-MS : Info Science & Tech MS**

File: 73.1

Last edit: 11/01/13 11:18 am

Changes proposed by: barryf

Catalog Pages	<a href="#">Information Science and Technology</a>	In Workflow <b>1. RINFSCTE Chair</b> <b>2. CCC Secretary</b> <b>3. Social Sciences DSCC Chair</b> <b>4. CCC Meeting Agenda</b> <b>5. Campus Curricula Committee Chair</b> <b>6. FS Meeting Agenda</b>
Using this Program		
Start Term	<b>Fall 2014</b>	
Program Code	IST-MS	
Department	RINFSCTE	7. Faculty Senate Chair
Title	Info Science & Tech MS	8. Registrar
		9. Peoplesoft

### Program Requirements and Description

### Degree Requirements

M.S. with Thesis: The M.S. degree with thesis requires the completion of 24 hours of graduate course work (**5000-level or above**), ~~(a minimum of 12 at the 400 level)~~, 6 hours of **research, research (IS&T 490)**, and the successful completion and defense of a research thesis.

M.S. without Thesis: The M.S. degree without thesis requires the completion of 30 hours of graduate course work (**5000-level and above**). **Courses below** ~~(a minimum of 15 at the 5000-level will not count toward the M.S. 400 level)~~ **degree, even if they are taken to fulfill prerequisites.**

The following core courses are required of all M.S. students in Information Science and Technology. These courses are designated to ensure that all IST masters students study the four information systems perspectives of networks and web design, human perception, application implementation, and organizational systems.

<a href="#">IS&amp;T 351</a>	Technological Innovation Management and Leadership
<a href="#">IS&amp;T 385</a>	Human Computer Interaction
<a href="#">IS&amp;T 436</a>	Foundations of Internet Computing
<a href="#">IS&amp;T 461</a>	Advanced Information Systems Project Management

### Approval Path

- 09/25/13 7:09 pm  
siau: Approved for RINFSCTE Chair
- 09/30/13 11:06 am  
lahne: Approved for CCC Secretary
- 10/09/13 4:33 pm  
barryf: Approved for Social Sciences DSCC Chair
- 11/01/13 11:18 am  
lahne: Approved for CCC Meeting Agenda
- 11/08/13 1:37 pm  
tauritzd: Approved for Campus Curricula Committee Chair

Justification for request: Corrected for renumbering. Fix title. Specify clearly that only graduate courses are accepted toward the degree.

Supporting Documents

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Course Reviewer

Key: 73

Comments

## Program Change Request

Date Submitted: 09/24/13 6:11 pm

Viewing: **IST-MI : Information Sci & Tech Minor**

File: 74.1

Last edit: 11/01/13 11:19 am

Changes proposed by: barryf

Catalog Pages	<a href="#">Information Science and Technology</a>	In Workflow
Using this Program		1. RINFSCTE Chair
		2. CCC Secretary
		3. Social Sciences DSCC Chair
		4. CCC Meeting Agenda
		5. Campus Curricula Committee Chair
Start Term	<b>Fall 2014</b>	6. FS Meeting Agenda
Program Code	IST-MI	7. Faculty Senate Chair
Department	RINFSCTE	8. Registrar
Title	Information Sci & Tech Minor	9. Peoplesoft

### Program Requirements and Description

Minor in Information Science and Technology

A minor in Information Science and Technology requires 15 hours of courses:

### Approval Path

- 09/25/13 7:09 pm  
siauk: Approved for RINFSCTE Chair
- 09/30/13 10:58 am  
lahne: Approved for CCC Secretary
- 10/09/13 4:33 pm  
barryf: Approved for Social Sciences DSCC Chair
- 11/01/13 11:19 am  
lahne: Approved for CCC Meeting Agenda
- 11/08/13 1:35 pm  
tauritzd: Approved for Campus Curricula Committee Chair

<a href="#">IS&amp;T 50</a>	Introduction to Management Information Systems	3
<a href="#">IS&amp;T 51</a>	Implementing Information Systems: User Perspective	3
<a href="#">IS&amp;T 151</a>	Implementing Information Systems: Data Perspective	3
<a href="#">ERP 246</a>	Introduction to Enterprise Resource Planning	3
Any IS&T or ERP course at the 2000-level or above.		3
Total Credits		15

Justification for request: Correct for renumbering, fix title.

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Supporting  
Documents  
Course Reviewer  
Comments

Key: 74

## Program Change Request

Date Submitted: 09/24/13 6:10 pm

Viewing: **IST-BS : Information Science and Tch BS**

File: 75.1

Last edit: 09/30/13 10:50 am

Changes proposed by: barryf

Catalog Pages	<a href="#">Information Science and Technology</a>	In Workflow 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	IST-BS	
Department	RINFSCTE	
Title	Information Science and Tch BS	

### Program Requirements and Description

## Bachelor of Science Information Science and Technology

In Information Science and Technology, the Bachelor of Science degree consists of 120 credit hours. First, all undergraduate students in Information Science and Technology 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 Information Science and Technology degree are divided into a prescribed 18 credit hour degree core and 9 credit hours of specific degree electives. A minimum grade of "C" is required in these courses. The Information Science and Technology Degree requires courses in Database Management, Systems Analysis, Web and Digital Media Development, Computing Internals, Networks and Communications, and E-Commerce. The electives for this degree consist of advanced coursework in the areas introduced by the required courses.

#### Freshman Year

First Semester	Credits	Second Semester	Credits
<a href="#">BUS 101</a>	1	<a href="#">PSYCH 50</a>	3
<a href="#">ENGLISH 20</a>	3	<a href="#">MATH 12</a>	4
<a href="#">MATH 45</a>	3	<a href="#">IS&amp;T 51</a>	3
Science Elective2	3	<a href="#">BUS 110</a>	3
<a href="#">IS&amp;T 50</a>	3	<a href="#">BUS 120</a>	3
Laboratory w/Science Elective	1		
	14		16

#### Sophomore Year

First Semester	Credits	Second Semester	Credits
<a href="#">ECON 122</a>	3	Fine Art, Social Science, or Humanities Elective3	3
<a href="#">SP&amp;M S 85</a>	3	<a href="#">IS&amp;T 231</a>	3
<a href="#">IS&amp;T 151</a>	3	Science Elective2	3
<a href="#">ENGLISH 65</a> or <a href="#">TCH.COM 65</a>	3	<a href="#">STAT 211</a>	3

### Approval Path

- 09/25/13 7:09 pm  
siau: Approved for RINFSCTE Chair
- 09/30/13 10:51 am  
lahne: Approved for CCC Secretary
- 10/09/13 4:33 pm  
barryf: Approved for Social Sciences DSCC Chair
- 11/01/13 11:20 am  
lahne: Approved for CCC Meeting Agenda
- 11/08/13 1:35 pm  
tauritzd: Approved for Campus Curricula Committee Chair

<a href="#">ERP 246</a>	3	<a href="#">ECON 121</a>	3
	15		15
Junior Year			
First Semester	Credits	Second Semester	Credits
<a href="#">IS&amp;T 286</a>	3	IS&T Elective	3
<a href="#">FINANCE 250</a>	3	<a href="#">IS&amp;T 243</a>	3
<a href="#">IS&amp;T 223</a>	3	<a href="#">MKT 311</a>	3
<a href="#">IS&amp;T 233</a>	3	<a href="#">IS&amp;T 241</a>	3
IS&T Elective	3	<a href="#">ENGLISH 260</a> or <a href="#">TCH COM 260</a>	3
	15		15
Senior Year			
First Semester	Credits	Second Semester	Credits
Free Electives	6	<a href="#">BUS 396</a>	3
Fine Art, Social Science, or Humanities Elective	3	<a href="#">POL SCI 90</a>	3
Speech or Tech Com Elective	3	IS&T Elective or Emphasis Area	3
History Elective	3	Free Electives	6
	15		15

Total Credits: 120

A grade of "C" or better is required in the following courses for graduation; [BUS 10](#), ~~[BUS 10](#)~~, ~~[BUS 396](#)~~, [IS&T 50](#), [IS&T 51](#), [IS&T 151](#), ~~[ERP 246](#)~~, [BUS 110](#), [BUS 120](#), [MKT 311](#), [FINANCE 250](#), [ECON 121](#), [ECON 122](#), [IS&T 286](#), [IS&T 223](#), [IS&T 231](#), [IS&T 233](#), [IS&T 241](#), and [IS&T 243](#).

1 Writing Intensive Course

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

3 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.

4 A grade of "C" or better is required in IS&T Electives and Emphasis Area courses for graduation. Students choosing the Human-Computer Interaction Emphasis Area must take [IS&T 385](#), [IS&T 386](#), and [IS&T 387](#). Students choosing the Enterprise Resource Planning Emphasis Area must take 9 hours of ERP-designated courses at the 4000-level or above. Students who choose no Emphasis Area must take three courses from: IS&T 4000-level or above, [COMP SCI 317](#), [COMP SCI 362](#).

5 [MATH 2](#) may be substituted for [MATH 4](#).

## Emphasis Areas

Two Emphasis Areas may be taken to specialize if the student wishes to do so. The first, Human-Computer Interaction, consists of three courses:

<a href="#">IS&amp;T 385</a>	Human Computer Interaction	3
<a href="#">IS&amp;T 386</a>	Human-Computer Interaction Prototyping	3
<a href="#">IS&amp;T 387</a>	Human-Computer Interaction Evaluation	3

The second Emphasis Area, Enterprise Resource Planning, consists of any 9 hours of ERP-designated courses at the **4000-level or above**. ~~300-level.~~

Justification for request: Corrected for renumbering. Fix title.

Supporting Documents

Course Reviewer Comments



## Program Change Request

Date Submitted: 09/24/13 6:12 pm

Viewing: **MARKET-MI : Marketing Minor**

File: 81.1

Last edit: 11/01/13 11:21 am

Changes proposed by: barryf

Catalog Pages	<a href="#">Business and Management Systems</a>	In Workflow
Using this Program		1. RINFSCTE Chair
		2. CCC Secretary
		3. Social Sciences DSCC Chair
		4. CCC Meeting Agenda
		5. Campus Curricula Committee Chair
Start Term	Fall 2014	6. FS Meeting Agenda
Program Code	MARKET-MI	7. Faculty Senate Chair
Department	RINFSCTE	8. Registrar
Title	Marketing Minor	9. Peoplesoft

### Program Requirements and Description

#### Minor in Marketing

A minor in **Marketing** ~~Marketing\*~~ requires the following 15 hours of course work:

### Approval Path

- 09/25/13 7:09 pm  
siau: Approved for RINFSCTE Chair
- 09/30/13 11:00 am  
lahne: Approved for CCC Secretary
- 10/09/13 4:34 pm  
barryf: Approved for Social Sciences DSCC Chair
- 11/01/13 11:21 am  
lahne: Approved for CCC Meeting Agenda
- 11/08/13 1:38 pm  
tauritzd: Approved for Campus Curricula Committee Chair

<a href="#">ECON 121</a>	Principles Of Microeconomics	3
or <a href="#">ECON 122</a>	Principles Of Macroeconomics	
<a href="#">MKT 311</a>	Marketing	3
9 hours from the following list:		9
<a href="#">MKT 321</a>	Consumer Behavior	
<a href="#">MKT 331</a>	Digital Marketing and Promotions	
<a href="#">MKT 350</a>	Customer Focus and Satisfaction	
<a href="#">MKT 380</a>	Marketing Strategy	
<a href="#">ERP 342</a>	Customer Relationship Management in ERP Environment	

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Other Marketing electives approved by the department (MKT 3000 and above)

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Justification for request      Corrected for renumbering.

Supporting Documents

Course Reviewer Comments

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Key: 81

## Program Change Request

Date Submitted: 09/27/13 2:51 pm

Viewing: **MC ENG-BS : Mechanical Engineering BS**

File: 86.1

Last edit: 11/01/13 12:57 pm

Changes proposed by: nisbett

Catalog Pages	<a href="#">Mechanical Engineering</a>	In Workflow
Using this Program		1. RMECHENG Chair
		2. CCC Secretary
		3. Engineering DSCC Chair
		4. CCC Meeting Agenda
		5. Campus Curricula Committee Chair
Start Term	<b>Fall 2014</b>	6. FS Meeting Agenda
Program Code	MC ENG-BS	7. Faculty Senate Chair
Department	Mechanical & Aerospace Engineering	8. Registrar
Title	Mechanical Engineering BS	9. Peoplesoft

### Program Requirements and Description

## Bachelor of Science Mechanical Engineering

Entering freshmen desiring to study Mechanical Engineering will be admitted to the Freshman Engineering Program. They will, however, be permitted, if they wish, to state a Mechanical 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 Mechanical 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. An average of at least two grade points per credit hour must also be attained in all courses taken in Mechanical 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:

All students are required to take one history 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](#). The humanities course must be selected from "[The Approved List of Humanities and Social Science Courses the approved lists for Engineering Degrees](#)" maintained by the Office of Undergraduate Studies. ~~art, English, foreign languages, music, philosophy, speech and media studies, or theater.~~

Depth requirement. Three credit hours must be taken in humanities or social sciences at the **2000-level** ~~100-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** ~~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.

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](#).

Any specific departmental requirements in the general studies area must be satisfied.

Special topics and special problems and honors seminars are allowed only by petition to and approval by the student's department chairman.

The Mechanical 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

### Approval Path

- 09/27/13 3:45 pm  
drallmei:  
Approved for  
RMECHENG Chair
- 10/08/13 10:51 am  
lahne: Approved  
for CCC Secretary
- 10/10/13 3:09 pm  
sraper: Approved  
for Engineering  
DSCC Chair
- 11/01/13 1:02 pm  
lahne: Approved  
for CCC Meeting  
Agenda
- 11/08/13 1:41 pm  
tauritzd:  
Approved for  
Campus Curricula  
Committee Chair

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 six hours of free electives in consultation with his/her academic advisor. Credits which do not count towards this requirement are deficiency courses (such as algebra and trigonometry), and extra credits in required courses. Any courses outside of Engineering and Science must be at least three credit hours.

Freshman Year			
First Semester	Credits	Second Semester	Credits
<a href="#">FR ENG 10</a>	1	<a href="#">IDE 20</a>	3
<a href="#">CHEM 1a</a>	4	<a href="#">MATH 15a, b</a>	4
<a href="#">CHEM 2</a>	1	<a href="#">PHYSICS 23a</a>	4
<a href="#">MATH 14a, b</a>	4	<a href="#">ECON 121</a> or <a href="#">122</a>	3
<a href="#">ENGLISH 20</a>	3	Elective-Hum or Soc Scif	3
<a href="#">HISTORY 112</a> , or <a href="#">175</a> , or <a href="#">176</a> , or <a href="#">POL SCI 903</a>	3		
	16		17
Sophomore Year			
First Semester	Credits	Second Semester	Credits
Programming Electivea, c	3	<a href="#">MECH ENG 161</a>	3
<a href="#">CIV ENG 50a</a>	3	<a href="#">MECH ENG 219a</a>	3
<a href="#">MATH 22a</a>	4	<a href="#">MECH ENG 160a</a>	3
<a href="#">PHYSICS 24a</a>	4	<a href="#">MATH 204a</a>	3
<a href="#">MECH ENG 153</a>	3	<a href="#">MET ENG 121a</a>	3
	17		15
Junior Year			
First Semester	Credits	Second Semester	Credits
<a href="#">MECH ENG 213</a>	3	<a href="#">MECH ENG 211a</a>	3
<a href="#">MECH ENG 221</a>	3	<a href="#">MECH ENG 208</a>	3
<a href="#">ELEC ENG 281</a>	3	<a href="#">MECH ENG 225</a>	3
<a href="#">CIV ENG 110a</a>	3	<a href="#">MECH ENG 231</a>	3
<a href="#">CIV ENG 120</a>	1	<a href="#">MECH ENG 240</a>	2
Elective-Advanced Math/Stat or Cmp Sce	3	Elective-Communicationsd	3
	16		17
Senior Year			
First Semester	Credits	Second Semester	Credits
<a href="#">MECH ENG 242</a>	2	<a href="#">ENG MGT 124</a>	1
<a href="#">MECH ENG 279</a>	3	<a href="#">ENG MGT 137</a>	2
MECH ENG technical electiveg	3	<a href="#">MECH ENG 261</a>	3
Free electivei	3	<a href="#">MECH ENG 280</a>	1
Literature electivef	3	MECH ENG 5000-level technical electiveg	3
Elective-Advanced Hum or Soc Scif	3	Free Electivei	3
	17		13

Total Credits: 128

**Note:** Students must satisfy the common engineering freshman year course requirements, and be admitted into the department, in addition to the sophomore, junior and senior year requirements listed above with a minimum of 128 hours.

a A grade of "C" or better is required in [CHEM 1](#), [MATH 14](#), [MATH 15](#), [MATH 22](#), [MATH 204](#), [PHYSICS 23](#), [PHYSICS 24](#), programming elective, [MET ENG 121](#), [CIV ENG 50](#), [CIV ENG 110](#), [MECH ENG 219](#), [MECH ENG 160](#), and [MECH ENG 211](#), both as prerequisite for follow-up courses in the curriculum and for graduation.

b [MATH 8](#) and [MATH 21](#) may be substituted for [MATH 14](#) and [MATH 15](#), respectively.

c The programming elective consists of a lecture and lab combination, and may be selected from [COMP SCI 73/COMP SCI 77](#), [COMP SCI 74/COMP SCI 78](#), or [COMP SCI 53/COMP SCI 54](#). Note that [COMP SCI 53/COMP SCI 54](#) requires one more credit hour than the other options.

dThis course must be selected from the following: [ENGLISH 60](#), [ENGLISH 160](#) or [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](#)).

- e This course must be selected from the following: [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.
- f All 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.
- g Electives must be approved by the student's advisor. Six hours of technical electives, which may not include [AERO ENG 202/MECH ENG 202/MECH ENG 202](#), [MECH ENG 300](#) or [MECH ENG 390](#), must be in the Department of Mechanical and Aerospace Engineering. At least three of these technical elective hours in the Department must be at the 5000 level. Honors students have special requirements for technical electives.
- h All Mechanical 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.
- i Each student is required to take six 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.

## Energy Conversion Emphasis Area for Mechanical Engineering

Students desiring to obtain a Bachelor of Science degree in Mechanical Engineering with an Emphasis Area in Energy Conversion must satisfy all the requirements of the Bachelor of Science degree in Mechanical Engineering, with the additional stipulation that four courses must be taken as follows:

- a. Two courses from the following list: 6
- |                                       |  |
|---------------------------------------|--|
| <a href="#">MECH ENG/AERO ENG 327</a> | Combustion Processes                         |
| <a href="#">MECH ENG 333</a>          | Internal Combustion Engines                  |
| <a href="#">MECH ENG 366</a>          | Solar Energy Technology                      |
| <a href="#">MECH ENG 371</a>          | Environmental Controls                       |
| <a href="#">MECH ENG 375</a>          | Mechanical Systems For Environmental Control |
| <a href="#">AERO ENG 369</a>          | Introduction To Hypersonic Flow              |
| <a href="#">AERO ENG 335</a>          | Aerospace Propulsion Systems                 |
- b. One course from the following list: 3
- |                                       |                                    |
|---------------------------------------|------------------------------------|
| <a href="#">MECH ENG/AERO ENG 319</a> | Advanced Thermodynamics            |
| <a href="#">MECH ENG/AERO ENG 325</a> | Intermediate Heat Transfer         |
| <a href="#">MECH ENG/AERO ENG 331</a> | Intermediate Thermofluid Mechanics |
| <a href="#">MECH ENG/AERO ENG 339</a> | Computational Fluid Dynamics       |
- c. One additional course from either list "a" or list "b", or from the following list: 3
- |                              |                                      |
|------------------------------|--------------------------------------|
| <a href="#">ECON 355</a>     | Energy Economics                     |
| <a href="#">ELEC ENG 352</a> | Photovoltaic Systems Engineering     |
| <a href="#">ENV ENG 367</a>  | Introduction To Air Pollution        |
| <a href="#">NUC ENG 317</a>  | Two-phase Flow in Energy Systems - I |

**Note:** By using the free electives and technical electives to satisfy the above requirements, this emphasis area requires the same total number of credit hours as the BSME degree. A change of major form should be submitted to designate the Energy Conversion Emphasis Area

## Manufacturing Processes Emphasis Area for Mechanical Engineering

Students desiring to obtain a Bachelor of Science in Mechanical Engineering with an Emphasis Area in Manufacturing Processes must satisfy all requirements of the Bachelor of Science in Mechanical Engineering with the additional stipulation that four courses must be taken as follows:

- a. The following course: 3
- |                              |               |
|------------------------------|---------------|
| <a href="#">MECH ENG 253</a> | Manufacturing |
|------------------------------|---------------|
- b. One course from the following Manufacturing/Automation courses: 3
- |                              |   |
|------------------------------|---|
| <a href="#">MECH ENG 353</a> | Computer Numerical Control Of Manufacturing Processes |
| <a href="#">MECH ENG 355</a> | Manufacturing Equipment Automation                    |
| <a href="#">MECH ENG 349</a> | Robotic Manipulators And Mechanisms                   |
| <a href="#">MECH ENG 306</a> | Material Processing By High-Pressure Water Jet        |
- c. One course from the following Design courses: 3
- |                              |  |
|------------------------------|--|
| <a href="#">MECH ENG 363</a> | Principles And Practice Of Computer Aided Design |
| <a href="#">MECH ENG 356</a> | Design For Manufacture                           |
| <a href="#">MECH ENG 302</a> | Synthesis Of Mechanisms                          |
- d. One course from the following list: 3

[MECH ENG 308](#) Rapid Product Design And Optimization  
[MECH ENG 358](#) Integrated Product Development

e. The Math/Stat elective must be one of the following:

3

[STAT 213](#) Applied Engineering Statistics  
[STAT 215](#) Engineering Statistics

A suggested sequence for the Junior and Senior years is given below. Note that by using the free electives and technical electives to satisfy the above requirements, this emphasis area requires the same total number of credit hours as the BSME degree. A change of major form should be submitted to designate the Manufacturing Processes Emphasis Area.

Junior Year			
First Semester	Credits	Second Semester	Credits
<a href="#">MECH ENG 213</a>	3	<a href="#">MECH ENG 211a</a>	3
<a href="#">ELEC ENG 281</a>	3	<a href="#">MECH ENG 231</a>	3
<a href="#">MECH ENG 221</a>	3	<a href="#">MECH ENG 225</a>	3
<a href="#">CIV ENG 110a</a>	3	<a href="#">MECH ENG 240</a>	2
<a href="#">CIV ENG 120</a>	1	<a href="#">MECH ENG 253</a>	3
<a href="#">STAT 213</a> or <a href="#">215</a>	3	Elective-Communicationsd	3
	16		17
Senior Year			
First Semester	Credits	Second Semester	Credits
<a href="#">MECH ENG 242</a>	2	<a href="#">ENG MGT 124</a>	1
<a href="#">MECH ENG 279</a>	3	<a href="#">ENG MGT 137</a>	2
<a href="#">MECH ENG 208</a>	3	<a href="#">MECH ENG 261</a>	3
Manufacturing Technical Electivef3		<a href="#">MECH ENG 280</a>	1
Manufacturing Technical Electivef3		Manufacturing Technical Electivef3	
Elective Literature	3	Electives-Hum or Soc Sci	3
	17		13

Total Credits: 63

a A grade of "C" or better is required in [CHEM 1](#), [MATH 14](#), [MATH 15](#), [MATH 22](#), [MATH 204](#), [PHYSICS 23](#), [PHYSICS 24](#), programming elective, [MET ENG 121](#), [CIV ENG 50](#), [CIV ENG 110](#), [MECH ENG 219](#), [MECH ENG 160](#) and [MECH ENG 211](#), both as prerequisite for follow-up courses in the curriculum and for graduation.

b [MATH 8](#) and [MATH 21](#) may be substituted for [MATH 14](#) and [MATH 15](#), respectively.

c The programming elective consists of a lecture and lab combination, and may be selected from [COMP SCI 73/COMP SCI 77](#), [COMP SCI 74/COMP SCI 78](#), or [COMP SCI 53/COMP SCI 54](#). Note that [COMP SCI 53/COMP SCI 54](#) requires one more credit hour than the other options.

d This course must be selected from the following: [ENGLISH 60](#), [ENGLISH 160](#) or [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](#)).

e To include at least one course in literature. All 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.

f The nine hours of Manufacturing technical elective must be selected as follows:

One course from the following Manufacturing/Automation courses: [MECH ENG 353](#), [MECH ENG 355](#), [MECH ENG 349](#), [MECH ENG 306](#).

One of the following Design courses: [MECH ENG 363](#), [MECH ENG 356](#), [MECH ENG 302](#).

Once course from the following list: [MECH ENG 308](#), [MECH ENG 358](#).

g All Mechanical 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.

## Mechanical Design and Analysis Emphasis Area

Students desiring to obtain a Bachelor of Science in Mechanical Engineering with an Emphasis Area in Mechanical Design and Analysis must satisfy all requirements of the Bachelor of Science in Mechanical Engineering, with the additional stipulation that four courses must be taken as follows:

a. One design course from the following list:

3

[MECH ENG 209](#) Machine Design II  
[MECH ENG 302](#) Synthesis Of Mechanisms  
[MECH ENG 304](#) Compliant Mechanism Design  
[MECH ENG 308](#) Rapid Product Design And Optimization

<a href="#">MECH ENG 315</a>	Concurrent Engineering
<a href="#">MECH ENG 356</a>	Design For Manufacture
<a href="#">MECH ENG 357</a>	Integrated Product And Process Design
<a href="#">MECH ENG 360</a>	Probabilistic Engineering Design
<a href="#">MECH ENG 363</a>	Principles And Practice Of Computer Aided Design
<a href="#">IDE 220</a>	Engineering Design Methodology

b. One analysis course from the following list:

3

<a href="#">MECH ENG 307</a>	Vibrations I
<a href="#">MECH ENG 311</a>	Introduction To Continuum Mechanics
<a href="#">MECH ENG 312</a>	Introduction to Finite Element Analysis
<a href="#">MECH ENG 313</a>	Intermediate Dynamics Of Mechanical And Aerospace Systems
<a href="#">MECH ENG 322</a>	Introduction To Solid Mechanics
<a href="#">MECH ENG 338</a>	Fatigue Analysis
<a href="#">MECH ENG 349</a>	Robotic Manipulators And Mechanisms
<a href="#">MECH ENG 378</a>	Mechatronics

c. Two additional courses from either of the previous lists.

6

Note that by using the free electives and technical electives to satisfy the above requirements, this emphasis area requires the same total number of credit hours as the BSME degree A change of major form should be submitted to designate the Mechanical Design and Analysis Emphasis Area.

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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.

Supporting Documents

Course Reviewer Comments

Key: 86

## Program Change Request

Date Submitted: 09/27/13 3:21 pm

Viewing: **MC ENG-MS : Mechanical Engineering MS**

File: 88.3

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

Last edit: 11/01/13 11:37 am

Changes proposed by: nisbett

Catalog Pages	<a href="#">Mechanical Engineering</a>	In Workflow
Using this Program		<ol style="list-style-type: none"> <li>1. RMECHENG Chair</li> <li>2. CCC Secretary</li> <li>3. Engineering DSCC Chair</li> <li>4. CCC Meeting</li> </ol>
Start Term	Fall 2013	Agenda
Program Code	MC ENG-MS	5. Campus Curricula Committee Chair
Department	Mechanical & Aerospace Engineering	6. FS Meeting
Title	Mechanical Engineering MS	Agenda
		7. Faculty Senate Chair
		8. Registrar
		9. Peoplesoft

### Program Requirements and Description

The master of science thesis program consists of a minimum of 30 credit hours, including the following requirements: at least 21 credit hours of lecture courses, at least 6 credit hours of ME 490, at least 9 credit hours of lecture courses in the MAE department (of which at least 3 credit hours must be at the **6000-level**, ~~4xx-level~~), at least 3 credit hours of mathematics, statistics, or computer science (AE/ME 330: Applied Computational Methods may be used to satisfy this requirement), and at least 6 credit hours of **6000-level** ~~4xx~~ lecture courses. A master of science non-thesis program consists of a minimum of 30 credit hours, including the following requirements: at least 24 credit hours in the MAE department and at least 9 credit hours of **6000-level** ~~4xx~~ lecture courses (of which at least 6 credit hours must be in the MAE department). Note that no course below the **5000-level** ~~3xx-level~~ may be applied to the degree requirements.

A student holding an MS degree and pursuing the doctor of philosophy degree must complete at least 60 total credit hours, including the following requirements: at least 24 credit hours of lecture courses, at least 36 credit hours of ME 490, at least 12 credit hours of course work in the MAE department, at least 3 credit hours of mathematics, statistics, or computer science (AE/ME 330: Applied Computational Methods may be used to satisfy this requirement), and at least 9 credit hours of **6000-level** ~~4xx~~ courses (of which at least 6 credit hours must be in the MAE department). In addition to these course requirements, a candidate must prepare a dissertation based on analytical, numerical, and/or experimental research. Note that no course below the **5000-level** ~~3xx-level~~ may be applied to the degree requirements.

A student holding a BS degree and pursuing the direct doctor of philosophy degree must complete at least 90 total credit hours, including the following requirements: at least 45 credit hours of lecture courses, at least 45 credit hours of ME 490, at least 21 credit hours of course work in the MAE department, at least 6 credit hours of mathematics, statistics, or computer science (AE/ME 330: Applied Computational Methods may be used to satisfy three credit hours of this requirement), and at least 15 credit hours of **6000-level** ~~4xx~~ courses (of which at least 9 credit hours must be in the MAE department). In addition to these course requirements, a candidate must prepare a dissertation based on analytical, numerical, and/or experimental research. Note that no course below the **5000-level** ~~3xx-level~~ may be applied to the degree requirements.

A candidate for the degree of doctor of philosophy must pass a qualifying examination. The candidate is considered to have passed the qualifying examination if the candidate has taken at least four courses and has a **GPA** ~~GPA~~  $\geq 3.5$  at the end of the candidate's fourth semester. At least two courses must be in the MAE department, one of which must be at the **6000-level**. ~~4xx-level~~.

Approval Path
1. 09/27/13 3:46 pm drallmei: Approved for RMECHENG Chair
2. 10/08/13 10:55 am lahne: Approved for CCC Secretary
3. 10/10/13 3:10 pm sraper: Approved for Engineering DSCC Chair
4. 11/01/13 11:38 am lahne: Approved for CCC Meeting Agenda
5. 11/08/13 1:43 pm tauritzd: Approved for Campus Curricula Committee Chair
History
1. Sep 27, 2013 by lahne

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: 88

## Program Change Request

Date Submitted: 09/27/13 3:23 pm

Viewing: **MC ENG-PHD : Mechanical Engineering PhD**

File: 89.1

Last edit: 09/27/13 3:23 pm

Changes proposed by: nisbett

Start Term	<b>Fall 2014</b>
Program Code	MC ENG-PHD
Department	Mechanical & Aerospace Engineering
Title	Mechanical Engineering PhD

In Workflow

1. RMECHENG Chair
2. CCC Secretary
3. Engineering DSCC Chair
4. CCC Meeting Agenda
5. Campus Curricula Committee Chair
6. FS Meeting Agenda

Program Requirements and Description

A student pursuing the doctor of philosophy degree normally follows a program of 90 semester hours beyond the B.S. degree or 60 semester hours beyond the M.S. degree. For those with M.S. degree, the 60 hours will consist of 24 hours of course work and 36 hours of thesis research. The Ph.D. course work must satisfy the departmental core course requirements for the M.S. degree. For the 24 hours of course work, a minimum of 12 hours must be completed within the department and at least three credit hours of mathematics/statistics. At least nine credit hours of course work must be at the **6000-level** ~~400-level~~ in the major field of study. In addition to these course requirements, a candidate must prepare a dissertation based on analytical and/or experimental research in a major area. This research must be equivalent to a minimum of 36 hours beyond the M.S. degree. There are no foreign language requirements for the master of science, doctor of engineering and doctor of philosophy degrees in mechanical engineering. However, a reading knowledge of one foreign language, German, French or Russian, may be required for the doctor of philosophy degree if the candidate's advisory committee feels that it is necessary. A candidate for the degree of doctor of philosophy must pass a qualifying examination. The qualifying examination consists of taking a minimum of nine credit hours of approved graduate course work at the **5000-300-**and **6000-level, 400-level,** including six hours in the major field, of which three hours must be at the **6000-level, 400-level,** and three hours of mathematics/statistics. To pass the qualifying examination, a student must have obtained a grade of B or better for all the courses with a GPA of at least 3.25. The comprehensive examination and the final examination, consisting of the dissertation defense, are conducted according to the rules of the Graduate Faculty and the department. The Graduate Faculty has residency requirements which must be satisfied by all doctoral students.

7. Faculty Senate Chair
8. Registrar
9. Peoplesoft

Approval Path

1. 09/27/13 3:46 pm  
drallmei:  
Approved for RMECHENG Chair
2. 10/08/13 10:55 am  
lahne: Approved for CCC Secretary
3. 10/10/13 3:10 pm  
sraper: Approved for Engineering DSCC Chair
4. 11/01/13 11:39 am  
lahne: Approved for CCC Meeting Agenda
5. 11/08/13 1:44 pm  
tauritzd:  
Approved for Campus Curricula Committee Chair

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

Supporting Documents

Course Reviewer Comments

Key: 89

## Program Change Request

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

Viewing: **MT ENG-MS : Metallurgical Engineering MS**

File: 91.1

Last edit: 11/01/13 11:40 am

Changes proposed by: smiller

Start Term	<b>Fall 2014</b>
Program Code	MT ENG-MS
Department	Materials Science & Engineering
Title	Metallurgical Engineering MS

In Workflow

1. **RMATSENG Chair**
2. **CCC Secretary**
3. **Engineering DSCC Chair**
4. **CCC Meeting Agenda**
5. **Campus Curricula Committee Chair**
6. **FS Meeting Agenda**

Program Requirements and Description

7. Faculty Senate Chair
8. Registrar
9. Peoplesoft

### Degree Requirements

Approval Path

M.S. and Ph.D. degrees are offered in Metallurgical Engineering. Recognizing the educational value of research, most metallurgical engineering M.S. degree candidates complete a thesis program. Non-thesis exceptions may be granted in special circumstances.

The total number of hours required for the M.S. in Metallurgical Engineering is 30. A minimum of 6 hours of **6000-level 400-level** lectures and a minimum of ~~11~~ 11 hours graduate research on the Missouri S&T campus are required. A maximum of 6 hours of **4000-level 200-level** lectures may be accepted.

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.

1. 09/25/13 3:41 pm huebner: Approved for RMATSENG Chair
2. 09/27/13 2:45 pm lahne: Approved for CCC Secretary
3. 10/10/13 2:57 pm sraper: Approved for Engineering DSCC Chair
4. 11/01/13 11:40 am lahne: Approved for CCC Meeting Agenda
5. 11/08/13 1:44 pm tauritzd:

Justification for request

Supporting Documents

Course Reviewer

Comments

Key: 91

Approved for Campus Curricula Committee Chair

## Program Change Request

Date Submitted: 09/25/13 12:16 pm

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

File: 102.1

Last edit: 09/25/13 12:16 pm

Changes proposed by: ivliyeva

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

Start Term **Fall 2014**  
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. **CCC Meeting Agenda**
  5. **Campus Curricula Committee Chair**
  6. **FS Meeting Agenda**
  7. Faculty Senate Chair
  8. Registrar
  9. Peoplesoft

### Program Requirements and Description

## Multiculturalism & Diversity Minor

The minor requires 15 hours in a minimum of 3 of 4 Humanities and Social Sciences (HSS) departments: the Departments of Arts, Languages & Philosophy; English & Technical Communication; History & Political Science; and Psychology. The academic home for this minor will be the HSS 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.

- Approval Path
1. 09/25/13 1:34 pm  
lahne: Approved for RPHILOSO Chair
  2. 09/27/13 2:37 pm  
lahne: Approved for CCC Secretary
  3. 09/30/13 2:29 pm  
ivliyeva: Approved for Arts & Humanities DSCC Chair
  4. 11/01/13 11:41 am  
lahne: Approved for CCC Meeting Agenda
  5. 11/08/13 1:46 pm  
tauritzd: Approved for Campus Curricula Committee Chair

#### Arts, Languages & Philosophy:

One 3rd level basic study course in a foreign language (German, Spanish, French, or Russian) \*

<a href="#">FRENCH 360</a>	French Culture And Civilization	3
<a href="#">PHILOS 340</a>	Social Ethics	3
<a href="#">RUSSIAN 360</a>	Russian Civilization	3
<a href="#">SP&amp;M S 235</a>	Intercultural Communication	3
English and Technical Communication:		
<a href="#">ENGLISH 102</a>	World Literature I: From The Beginnings To The Renaissance	3
<a href="#">ENGLISH 215</a>	Literature By Women	3

<a href="#">ENGLISH 230</a>	African American Literature	3
<a href="#">ENGLISH 378</a>	The American Experience	3
History and Political Science:		
<a href="#">HISTORY 226</a>	Modern East Asia	3
<a href="#">HISTORY 355</a>	<del>Course HISTORY 355 Not Found</del>	
<a href="#">HISTORY 360</a>	<del>Course HISTORY 360 Not Found</del>	
<a href="#">POL SCI 226</a>	International Relations	3
<a href="#">POL SCI 350</a>	The Politics Of The Third World	3
Psychology:		
<a href="#">PSYCH 350</a>	Psychology of Women	3
<a href="#">PSYCH 380</a>	Cross-Cultural Psychology	3
<a href="#">HISTORY 330</a>	<b>European Migrations and Nationalism Formation (remove Hist 335, replace with Hist 330)</b>	<b>3</b>
<a href="#">HISTORY 227</a>	<b>History of Japan (Remove Hist 360, replace with Hist 227)</b>	<b>3</b>

\* Specific 3rd Level Language Courses, as listed below.

<a href="#">FRENCH 80</a>	French Readings And Composition	4
<a href="#">FRENCH 90</a>	<del>Course FRENCH 90 Not Found</del>	
<a href="#">FRENCH 110</a>	Basic French Conversation	2
<a href="#">FRENCH 360</a>	<b>French Culture And Civilization</b>	<b>3</b>
<a href="#">FRENCH 170</a>	Masterpieces Of French Literature	3
<a href="#">FRENCH 180</a>	Basic French Composition	3
<a href="#">FRENCH 311</a>	Advanced French Conversation	2
<a href="#">FRENCH 370</a>	Survey Of French Literature I(Early Period)	3
<a href="#">FRENCH 375</a>	Survey Of French Literature II(Modern Period)	3
<a href="#">GERMAN 70</a>	<del>Course GERMAN 70 Not Found</del>	
<a href="#">GERMAN 90</a>	<del>Course GERMAN 90 Not Found</del>	
<a href="#">GERMAN 110</a>	Basic German Conversation	2
<a href="#">GERMAN 170</a>	Masterpieces Of German Literature	3
<a href="#">GERMAN 180</a>	<del>Course GERMAN 180 Not Found</del>	
<a href="#">GERMAN 311</a>	<del>Course GERMAN 311 Not Found</del>	
<a href="#">GERMAN 370</a>	<del>Course GERMAN 370 Not Found</del>	
<a href="#">GERMAN 375</a>	<del>Course GERMAN 375 Not Found</del>	
<a href="#">GERMAN 385</a>	<del>Course GERMAN 385 Not Found</del>	
<a href="#">GERMAN 80</a>	<b>Classical And Modern German Readings (Remove German 70, replace with German 80)</b>	<b>4</b>
<a href="#">RUSSIAN 80</a>	Readings In Science And Literature	4
<a href="#">RUSSIAN 110</a>	Basic Russian Conversation	2
<a href="#">RUSSIAN 170</a>	Masterpieces Of Russian Literature	3
<a href="#">RUSSIAN 180</a>	<del>Course RUSSIAN 180 Not Found</del>	
<a href="#">RUSSIAN 311</a>	<del>Course RUSSIAN 311 Not Found</del>	
<a href="#">RUSSIAN 370</a>	Survey Of Russian Literature I (Early Period)	3
<a href="#">RUSSIAN 330</a>	<b>Business Russian</b>	<b>3</b>
<a href="#">RUSSIAN 320</a>	<b>Russian Phonetics and Intonation</b>	<b>3</b>
<a href="#">RUSSIAN 375</a>	Survey Of Russian Literature II(Modern Period)	3

<a href="#">SPANISH 80</a>	Readings And Composition	4
<a href="#">SPANISH 90</a>	<a href="#">Course SPANISH 90 Not Found</a>	
<a href="#">SPANISH 110</a>	Basic Spanish Conversation	2
<a href="#">SPANISH 160</a>	Hispanic Culture	3
<a href="#">SPANISH 170</a>	Masterpieces Of Hispanic Literature	3
<a href="#">SPANISH 180</a>	Intermediate Spanish Composition	3
<a href="#">SPANISH 311</a>	Advanced Spanish Conversation	2
<a href="#">SPANISH 377</a>	Spanish-American Novel And Short Story	3
<a href="#">SPANISH 378</a>	<a href="#">Course SPANISH 378 Not Found</a>	

Justification for request

Supporting Documents

Course Reviewer Comments

Key: 102

## Program Change Request

Date Submitted: 08/26/13 12:38 pm

Viewing: **POL SC-MI : Political Science Minor**

File: 120.1

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

Changes proposed by: dewittp

Catalog Pages	<a href="#">Political Science</a>	In Workflow <b>1. RHISTORY Chair</b> <b>2. CCC Secretary</b> <b>3. Arts &amp; Humanities DSCC Chair</b> <b>4. CCC Meeting Agenda</b> <b>5. Campus Curricula Committee Chair</b> <b>6. FS Meeting Agenda</b> 7. Faculty Senate Chair 8. Registrar 9. Peoplesoft
Using this Program		
Start Term	<b>Fall 2014</b>	
Program Code	POL SC-MI	
Department	History and Political Science	
Title	Political Science Minor	

### Program Requirements and Description

### Political Science Minor Curriculum

(Missouri S&T)

The Department of History and Political Science offers a minor degree in Political Science which must include 15 hours divided as follows: completion of [POL SCI 90](#), ~~POL SCI 90 American Government~~, plus an approved sequence of 12 hours of **upper 200 and 300**-level courses.

Justification for request Course Renumbering Initiative

Supporting Documents

Course Reviewer Comments

### Approval Path

- 08/27/13 7:22 am  
lragg: Approved for RHISTORY Chair
- 09/27/13 2:27 pm  
lahne: Approved for CCC Secretary
- 09/30/13 2:30 pm  
ivliyeva: Approved for Arts & Humanities DSCC Chair
- 11/01/13 11:45 am  
lahne: Approved for CCC Meeting Agenda
- 11/08/13 5:33 pm  
tauritzd: Approved for Campus Curricula Committee Chair

Key: 120

## Program Change Request

Date Submitted: 09/26/13 8:49 pm

Viewing: **PRE MBA-MI : Pre MBA Minor**

File: 122.1

Last edit: 09/26/13 8:49 pm

Changes proposed by: barryf

Catalog Pages	<a href="#">Business and Management Systems</a>	In Workflow <b>1. RINFSCTE Chair</b> <b>2. CCC Secretary</b> <b>3. Social Sciences DSCC Chair</b>
Using this Program		
Start Term	<b>Fall 2014</b>	<b>4. CCC Meeting Agenda</b>
Program Code	PRE MBA-MI	<b>5. Campus Curricula Committee Chair</b>
Department	RINFSCTE	<b>6. FS Meeting Agenda</b>
Title	Pre MBA Minor	7. Faculty Senate Chair
		8. Registrar
		9. Peoplesoft

### Program Requirements and Description

#### Pre MBA Minor

A minor in Pre MBA\* will prepare students to enter an accredited MBA program at Missouri S&T or elsewhere. This minor requires the following 39 hours of course work:

### Approval Path

- 09/26/13 8:51 pm  
siau: Approved for RINFSCTE Chair
- 09/30/13 11:02 am  
lahne: Approved for CCC Secretary
- 10/09/13 4:34 pm  
barryf: Approved for Social Sciences DSCC Chair
- 11/01/13 11:46 am  
lahne: Approved for CCC Meeting Agenda
- 11/08/13 1:50 pm  
tauritzd: Approved for Campus Curricula Committee Chair

<a href="#">PSYCH 50</a>	General Psychology	3
<a href="#">MATH 8</a>	Calculus With Analytic Geometry I	5
or <a href="#">MATH 12</a>	Business Calculus	
or <a href="#">MATH 14</a>	Calculus For Engineers I	
<a href="#">ECON/STAT 111</a>	Business And Economic Statistics I	3
or <a href="#">STAT 115</a>	Statistics For The Social Sciences I	
or <a href="#">STAT 211</a>	Statistical Tools For Decision Making	
or <a href="#">STAT 213</a>	Applied Engineering Statistics	
or <a href="#">STAT 215</a>	Engineering Statistics	



or <a href="#">STAT 217</a>	Introduction To Probability And Statistics	
<a href="#">ECON 121</a>	Principles Of Microeconomics	3
<a href="#">ECON 122</a>	Principles Of Macroeconomics	3
<a href="#">BUS 110</a>	Introduction to Management and Entrepreneurship	3
<a href="#">BUS 120</a>	Financial Accounting	3
<a href="#">BUS 320</a>	Managerial Accounting	3
<a href="#">BUS 230</a>	Business Law	3
<a href="#">MKT 311</a>	Marketing	3
<a href="#">FINANCE 250</a>	Corporate Finance I	3
<a href="#">BUS 360</a>	Business Operations	3
<a href="#">IS&amp;T 50</a>	Introduction to Management Information Systems	3

\*At least 6 hours of the minor course work must be taken in residence at Missouri S&T.

Justification for request      Correct to remove courses in Eng Mgt that have been discontinued.

Supporting Documents

Course Reviewer Comments

Key: 122

## Program Change Request

Date Submitted: 09/16/13 2:32 pm

Viewing: **TCH CM-MIG : Technical Communication Minor**

File: 133.1

Last edit: 11/01/13 11:48 am

Changes proposed by: kswenson

Catalog Pages	<u><a href="#">Technical Communication</a></u>
Using this Program	
Start Term	<b>Fall 2014</b>
Program Code	TCH CM-MIG
Department	English and Technical Communication
Title	Technical Communication Minor

In Workflow

1. **REGLISH 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

Program Requirements and Description

### Technical Communication Graduate Minor

The technical communication program offers a graduate-level minor that is open to any graduate student. The minor is designed to strengthen the written, oral, and visual communication skills of students majoring in the sciences, engineering, management, information systems, or other fields. The minor will be particularly useful for those students who will pursue the "paper option" thesis or dissertation. The minor will also be beneficial for those students who will make oral or poster presentations at technical conferences, write journal articles, prepare research proposals, design technical web pages, or prepare technical marketing information.

The program requires a minimum of 12 hours of credit (excluding all courses taken for undergraduate credit). A minimum of 6 hours of ~~4000-level 300~~ or ~~above 400-level~~ courses with the TCH COM designation is required. At least 6 additional hours of technical communication intensive courses are required. The additional courses may come from courses with the TCH COM designation, the list of approved technical communication intensive courses, and/or technical communication intensive courses from any academic discipline with the approval of the minor advisor and the English and Technical Communication Department. Students can elect to pursue this minor at any point during their graduate studies by submitting the Application for a Designated Graduate Minor form (available at <http://registrar.mst.edu/documents/gradminorapp.pdf>) to the English and Technical Communication Department. Upon application, each student will be assigned a minor advisor who will work with the student to develop a proposed list of courses to fulfill the program requirements.

### Approved Technical Communication Intensive Courses

All TCH COM courses, 4000-level and above

<u><a href="#">BIO SCI 451</a></u>	<b>Environmental Microbiology</b>	<b>3</b>
<u><a href="#">BUS 311</a></u>	<b>Business Negotiations</b>	<b>3</b>
<u><a href="#">ENGLISH 281</a></u>	<b>Theory Of Written Communication</b>	<b>3</b>
<u><a href="#">ENGLISH 392</a></u>	<b>Advanced Writing For Science &amp; Engineering</b>	<b>3</b>
<u><a href="#">GEO ENG 352</a></u>	<b>International Engineering and Design</b>	<b>3</b>
<u><a href="#">IS&amp;T 487</a></u>	<b>Research Methods in Human-Computer Interaction</b>	<b>3</b>
<u><a href="#">MATH 209</a></u>	<b>Foundations Of Mathematics</b>	<b>3</b>
<u><a href="#">MATH 303</a></u>	<b>Methods of Applied Mathematics</b>	<b>3</b>

Approval Path

1. 09/16/13 2:34 pm  
kswenson:  
Approved for  
REGLISH Chair
2. 09/25/13 1:20 pm  
lahne: Approved  
for CCC Secretary
3. 09/25/13 3:38 pm  
ivliyeva:  
Approved for Arts  
& Humanities  
DSCC Chair
4. 11/01/13 11:48  
am  
lahne: Approved  
for CCC Meeting  
Agenda
5. 11/08/13 1:52 pm  
tauritzd:  
Approved for  
Campus Curricula  
Committee Chair

<a href="#">MATH 308</a>	Linear Algebra II	3
<a href="#">MATH 354</a>	Mathematical Logic I	3
<a href="#">MS&amp;E 422</a>	Thermodynamics and Phase Equilibria	3

The Technical Communication Graduate Minor Advisory Committee will evaluate other courses, upon the request of students or faculty, for inclusion on the approved list or on a case-by-case basis for individual programs.

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Justification for request Updated in keeping with renumbering.

Supporting Documents

Course Reviewer Comments

Key: 133

## Program Change Request

Date Submitted: 09/16/13 2:34 pm

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

File: 135.1

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

Changes proposed by: kswenson

Catalog Pages	<a href="#">Technical Communication</a>
Using this Program	
Start Term	<b>Fall 2014</b>
Program Code	TCH COM-MS
Department	English and Technical Communication
Title	Technical Communication MS

- In Workflow
1. **REGLISH 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

### Program Requirements and Description

### Degree Requirements

The following 10 courses (totaling 30 credit hours) are required for the **M.S.:** ~~M.S.~~

- Approval Path
1. 09/16/13 2:34 pm  
kswenson:  
Approved for  
REGLISH Chair
  2. 09/30/13 10:48 am  
lahne: Approved  
for CCC Secretary
  3. 09/30/13 2:31 pm  
ivliyeva:  
Approved for Arts  
& Humanities  
DSCC Chair
  4. 11/01/13 11:50 am  
lahne: Approved  
for CCC Meeting  
Agenda
  5. 11/08/13 1:53 pm  
tauritzd:  
Approved for  
Campus Curricula  
Committee Chair

<a href="#">TCH COM 302</a>	<b>Research Methods in Technical Communication</b>	<b>3</b>
<a href="#">TCH COM 325</a>	<b>Help Authoring</b>	<b>3</b>
<a href="#">TCH COM 331</a>	<b>Technical Editing</b>	<b>3</b>
<a href="#">TCH COM 334</a>	<b>Usability Studies</b>	<b>3</b>
<a href="#">TCH COM 361</a>	<b>History of Technical Communication</b>	<b>3</b>
<a href="#">TCH COM 402</a>	<b>Foundations of Technical Communication</b>	<b>3</b>
<a href="#">TCH COM 409</a>	<b>Web-Based Communication</b>	<b>3</b>
<a href="#">TCH COM 411</a>	<b>Advanced International Technical Communication</b>	<b>3</b>

<a href="#">TCH COM 420</a>	<b>Advanced Theories of Visual Technical Communication</b>	<b>3</b>
<a href="#">TCH COM 433</a>	<b>Advanced Proposal Writing</b>	<b>3</b>
Total Credits		30

A student completing the master's degree will also take a comprehensive exam during his/her final ~~semester. semester and prepare a portfolio of projects.~~ If the student chooses to do a thesis instead of the exam, and the technical communication faculty ~~give gives~~ their approval to this plan, the student will have to take 6 hours of **advisor-approved 4000-level and in addition to the** above **TCH COM coursework in addition to the above** 10-course sequence.

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Justification for request Updated in keeping with renumbering.

Supporting Documents

Course Reviewer Comments

Key: 135

## Program Change Request

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

Viewing: **BUS AD-MBA : Business Administration MBA**

File: 186.1

Last edit: 11/01/13 12:14 pm

Changes proposed by: barryf

Catalog Pages [Business Administration](#)  
Using this Program

Start Term **Fall 2014**  
Program Code BUS AD-MBA  
Department RINFSCTE  
Title Business Administration MBA

In Workflow

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

Program Requirements and Description

Approval Path

1. 09/25/13 7:09 pm  
siau: Approved for RINFSCTE Chair
2. 09/27/13 3:35 pm  
lahne: Approved for CCC Secretary
3. 09/30/13 10:09 am  
barryf: Approved for Social Sciences DSCC Chair
4. 11/01/13 12:16 pm  
lahne: Approved for CCC Meeting Agenda
5. 11/08/13 1:56 pm  
tauritzd: Approved for Campus Curricula Committee Chair

### Degree Requirements

In today's business environment, management requires the ability to leverage information across business functions and knowledge across internal and external boundaries. Students work in teams on comprehensive business cases, live simulations and real company assigned projects throughout the MBA Program. [Degree Requirements](#)

The Missouri S&T MBA requires a total of 36 graduate credit hours (5000-level and above) and is offered in two (2) parts: the MBA Core (21 credits) and electives (15 credits). The MBA core classes include [BUS 421 Teambuilding and Leadership](#), [BUS 422 International Marketing](#), [BUS 423 Corporate Information Systems Management](#), [BUS 424 Managerial Accounting and Control](#), [BUS 425 Supply Chain and Project Management](#), [BUS 426 Integration of Business Areas](#), and [BUS 427 Managerial Finance](#). Core courses may not be waived or substituted for other courses under any circumstances. Courses below the 5000-level will not count toward the MBA degree, even if they are taken to fulfill prerequisites. A maximum of 6 credit hours may be taken outside the Business and Information Technology department, except where taking one of the approved Graduate Certificates listed below requires otherwise.

~~Please note that the MBA Program does not accept transfer credits from other institutions. The MBA core classes include Teambuilding and Leadership, International Marketing, MIS and Databases, Managerial Accounting for Monitoring and Control, Operations, Managerial Finance and Strategy. Core courses may not be waived or substituted for other courses under any circumstances. In today's business environment, management requires the ability to leverage information across business functions and knowledge across internal and external boundaries. Students work in teams on comprehensive business cases, live simulations and real company assigned projects throughout the MBA Program. To fulfill the 15 credits hours of electives, students may choose to complete either a Graduate Certificate from the list below for certificate track or a specialization area which is comprised of 12 credit hours of the electives: hours of electives.~~

#### Digital Media

Digital Supply Chain Management (**Specialization Area**)

Electronic and Social Commerce

~~Students may choose from the following options:~~ Enterprise Resource Planning (**Certificate**)

Entrepreneurship and Technological Innovation

Human-Computer Interaction (**Certificate**)

Management and Leadership

Mobile Business and Technology

Project Management (Information ~~Information~~ Systems - Offered by Business and Information Technology) ~~Project Management (Certificate)~~

Project Management (Offered by Engineering Management program)

**Military Construction Management (Offered by Engineering Management program)**

**Military Geological Engineering (Offered by Geological Sciences and Engineering program)**

~~Management (Specialization Area) Management for Sustainable Business (Certificate) Marketing (Specialization Area) Supply Chain Management (Specialization Area)~~

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Justification for request      Corrections relative to renumbering, clarification that only graduate courses are accepted, provide updated list of Graduate Certificates, update titles of core courses (changed via CC Forms last year).

Supporting Documents

Course Reviewer Comments

Key: 186