



Campus Curricula Committee Meeting Agenda

August 16, 2016

9:00-10:30 a.m., 106B Parker Hall

Discussion of meeting times for 2016-17

Review of submitted Course Change forms:

File #2160.1 Ceramic Engineering 3220: Phase Equilibria
File #519.1 Ceramic Engineering 3240: Applied Glass Forming
File #1040.4 Chemical Engineering 2100: Chemical Engineering Material & Energy Balances
File #4311 Chemical Engineering 2111: Introduction to Phase Equilibrium
File #4279 Chemical Engineering 3111: Numerical Computing in Chemical and Biochemical Engineering
File #4282 Chemical Engineering 3131: Separations in Chemical and Biochemical Engineering
File #4285 Chemical Engineering 4091: Chemical Process Design I
File #862.4 Chemical Engineering 4097: Chemical Process Design II
File #797.1 Chemical Engineering 4220: Biochemical Reactor Laboratory
File #4310 Chemical Engineering 5220: Intermediate Engineering Thermodynamics
File #4314 Electrical Engineering 5345: PLC Motion Control
File #399.1 Explosives Engineering 6464: Advanced Blast Vibration Analysis and Prediction
File #363.1 Geological Engineering 5556: Renewable Energy Systems
File #4309 Mechanical Engineering 6481: Advanced Topics in Decision and Control
File #4321 Metallurgical Engineering 3410: Applied Metal Forming
File #1596.1 Metallurgical Engineering 5150: Introduction to Particulate Materials
File #4317 Mining Engineering 6712: Managing Social and Environmental Risks in Mining
(Intro to Responsible Mining)
File# 4315 Mining Engineering 6912: Simulation of Mining Systems
File #4316 Mining Engineering 6923: Geostatistics
File #215.1 Music 4010: Symphonic Bands
File #1671.1 Petroleum Engineering 4311: Reservoir Characterization
File #2544.1 Philosophy 3223: Bioethics
File #1772.1 Philosophy 3225: Engineering Ethics
File #2281.1 Philosophy 3235: Business Ethics

Review of submitted Degree Change forms:

File #146.12 Biological Sciences: Biological Sciences BA
File #150.44 Chemical Engineering: Chemical Engineering BS
File #14.3 Chemical Engineering: Chemical Engineering MS



Review of submitted Experimental Course forms:

File #4318	Education 2001.001: Introduction of STEM Education
File #4322	English 2001.001: Graphic Novel
File #4307	Explosives Engineering 6001.002: High Speed Imaging Methods in Explosives Engineering
File #4323	Petroleum Engineering 4001.001: Well Plugging and Abandonment

Course Inventory Change Request

Date Submitted: 03/30/16 9:57 am

Viewing: **CER ENG 3220 : Phase Equilibria**

File: 2160.1

Last edit: 07/11/16 2:52 pm

Changes proposed by: smiller

Programs
referencing this
course

[CR ENG-BS: Ceramic Engineering BS](#)
[GL&GPH-BS: Geology and Geophysics BS](#)
[MT ENG-BS: Metallurgical Engineering BS](#)

Requested Effective Change Date
Fall **2016** ~~2014~~

Department
Materials Science & Engineering

Discipline
Ceramic Engineering (CER ENG)

Course Number
3220

Title
Phase Equilibria

Abbreviated Course Title
Phase Equilibria

Catalog Description
The study of unary, binary and ternary inorganic, phase equilibrium systems with examples for solving practical engineering problems.

Prerequisites
"C" or better grade in Chem **1320 or Met Eng 1210.** ~~1320.~~

Field Trip Statement

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

Required for Majors
Yes ~~No~~

Elective for Majors
No

Justification for
Added the Materials Science & Engineering equivalent to the second semester of

In Workflow

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

Approval Path

1. 03/30/16 10:00 am
mjokeefe:
Approved for
RMATSENG Chair
2. 04/04/16 7:50 am
Kaylon Buckner (kleb6b):
Approved for CCC Secretary
3. 04/27/16 4:23 pm
sraeper: Approved for Engineering DSCC Chair

change: chemistry prerequisite

Semesters

previously
offered as an
experimental
course

Co-Listed

Courses:

Course Reviewer

Comments

Key: 2160
[Preview Bridge](#)

Course Inventory Change Request

Date Submitted: 07/06/16 2:09 pm

Viewing: **CER ENG 3240 : Applied Glass Forming**

File: 519.1

Last edit: 07/07/16 8:26 am

Changes proposed by: smiller

Requested **Spring 2017** ~~Fall 2014~~

Effective Change

Date

Department Materials Science & Engineering

Discipline Ceramic Engineering (CER ENG)

Course Number 3240

Title Applied Glass Forming

Abbreviated Applied Glass Forming

Course Title

Catalog

Description

Examines the properties and behavior of molten glass along with basic forming techniques, including off-hand shaping, molding and casting.

Prerequisites

"C" or better grade in either Cer Eng 2210 or Met Eng 1210. **Freshmen standing or sophomore standing only.**

Field Trip

Statement

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

Required for No

Majors

Elective for No

Majors

Justification for

change:

Course is designed for early undergraduates. The department offers an advanced class in glass science (Cer Eng 5230) for upper level students.

Semesters

In Workflow

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

Approval Path

1. 07/07/16 8:25 am
mjokeefe:
Approved for
RMATSENG Chair
2. 07/07/16 8:26 am
Kaylon Buckner
(kleb6b):
Approved for CCC
Secretary
3. 07/07/16 11:51
am
sraaper: Approved
for Engineering
DSCC Chair

previously
offered as an
experimental
course

Co-Listed
Courses:

Course Reviewer
Comments

Key: 519

[Preview Bridge](#)

Course Inventory Change Request

Date Submitted: 04/08/16 4:22 pm

Viewing: **CHEM ENG 2100 : Chemical Engineering Material & Energy Balances**

File: 1040.4

Last approved: 05/04/15 3:20 am

Last edit: 07/14/16 9:13 am

Changes proposed by: forcinit

Programs
referencing this
course

[AP MATH-BS: Applied Mathematics BS](#)
[CH ENG-BS: Chemical Engineering BS](#)
[EV ENG-BS: Environmental Engineering BS](#)

Other Courses
referencing this
course

In The Prerequisites:
[CHEM ENG 2110 : Chemical Engineering Thermodynamics I](#)
[CHEM ENG 3100 : Chemical Engineering Fluid Flow](#)
[CHEM ENG 3120 : Chemical Engineering Thermodynamics II](#)

Requested
Effective Change
Date

Fall **2016** ~~2015~~

Department Chemical and Biochemical Engineering

Discipline Chemical Engineering (CHEM ENG)

Course Number 2100

Title Chemical Engineering Material & Energy Balances

Abbreviated Course Title Chem Eng Mat & Energy Balances

Catalog
Description

The application of mathematics, physics and chemistry to industrial chemical processes. The use of equations of state, chemical reaction stoichiometry, and the conservation of mass and energy to solve chemical engineering problems.

Prerequisites

Chem **1320** or **Geology 3410**; ~~1320~~; Math 1215 or **Math 1221**; ~~(or 1221)~~; preceded or ~~or~~ accompanied by **Physics Phys**-1135.

Field Trip

In Workflow

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

Approval Path

1. 04/08/16 4:24 pm
aldahhanm:
Approved for
RCHEMENG Chair
2. 04/09/16 3:18 pm
Kaylon Buckner
(kleb6b):
Approved for CCC
Secretary
3. 04/27/16 4:24 pm
srafer: Approved
for Engineering
DSCC Chair

History

1. May 4, 2015 by
luksc (1040.1)

Statement	
Credit Hours	LEC: 2 LAB: 1 IND: 0 RSD: 0 Total: 3
Required for Majors	Yes
Elective for Majors	No
Justification for change:	Environmental Engineering students take ChE 2100 but their vast majority takes Geo 3410 instead of Chem 1320. Adding "or Geo 3410" (under prerequisites) facilitates the enrollment of Env. Eng. students in our class.
Semesters previously offered as an experimental course	
Co-Listed Courses:	
Course Reviewer Comments	

Key: 1040
[Preview Bridge](#)

Course Inventory Change Request

New Course Proposal

Date Submitted: 04/07/16 4:36 pm

Viewing: **CHEM ENG 2111 : Introduction to Phase Equilibrium**

File: 4311

Last edit: 07/14/16 9:18 am

Changes proposed by: forcinit

Requested Fall 2016

Effective Change

Date

Department Chemical and Biochemical Engineering

Discipline Chemical Engineering (CHEM ENG)

Course Number 2111

Title Introduction to Phase Equilibrium

Abbreviated Phase Equilibrium

Course Title

Catalog

Description

This course is intended as a supplement to a mechanical Thermodynamics 1 course to prepare students for Thermodynamics 2. Review of the first and second law of thermodynamics for pure substances with emphasis on finding data for pure substances via fundamental relations and equations of state; phase equilibrium and fugacity of pure substances.

Prerequisites

Thermodynamics 1 from outside Missouri S&T and Math 2222.

Field Trip

Statement

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

Required for No

Majors

Elective for No

Majors

Justification for We have found that students transferring Mechanical Engineering Thermodynamics

In Workflow

1. RCHEMENG Chair

2. CCC Secretary

3. Engineering DSCC Chair

4. Pending CCC Agenda post

5. CCC Meeting Agenda

6. Campus Curricula Committee Chair

7. FS Meeting Agenda

8. Faculty Senate Chair

9. Registrar

10. Ishelton

11. Peoplesoft

Approval Path

1. 04/08/16 3:15 am aldahhanm:

Approved for RCHEMENG Chair

2. 04/08/16 11:35 am

Kaylon Buckner (kleb6b):

Approved for CCC Secretary

3. 04/27/16 4:24 pm sraper: Approved

for Engineering DSCC Chair

new course: do not have the necessary foundation in phase equilibria to be successful in our second thermodynamics course (Phase Equilibrium for multicomponents)

Semesters previously offered as an experimental course This course was offered only once as ChE 4000 (special problems) this semester.

Co-Listed Courses:

Course Reviewer Comments **kleb6b (04/08/16 11:34 am):** It is taught by Dr. C. Luks. She has two or three students and she does it via WEB. We expect to have a hand full of students per semester who will need to take the class.

Key: 4311
[Preview Bridge](#)

Course Inventory Change Request

New Course Proposal

Date Submitted: 04/08/16 11:41 am

Viewing: **CHEM ENG 3111 : Numerical Computing in Chemical and Biochemical Engineering**

File: 4279

Last edit: 04/08/16 2:18 pm

Changes proposed by: forcinit

Programs
referencing this
course

[CH ENG-BS: Chemical Engineering BS](#)

Other Courses
referencing this
course

In The Prerequisites:
[CHEM ENG 3150 : Chemical Engineering Reactor Design](#)

Requested
Effective Change
Date

Fall 2016

Department

Chemical and Biochemical Engineering

Discipline

Chemical Engineering (CHEM ENG)

Course Number

3111

Title

Numerical Computing in Chemical and Biochemical Engineering

Abbreviated
Course Title

Numerical Computing

Catalog

Description

The students are introduced to the concepts of engineering problem formulation, model building, and multi scale models. Matlab, spreadsheet and polymath computing are used to solve chemical engineering problems involving systems of linear and non linear algebraic equations, and ordinary and partial differential equations.

Prerequisites

Math 3304 and both Comp Sci 1971 and Comp Sci 1981 or Comp Sci 1972 and Comp Sci 1982. Admitted to the Chemical Engineering Program.

Field Trip

In Workflow

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

Approval Path

1. 04/08/16 2:15 pm
aldahhanm:
Approved for
RCHEMENG Chair
2. 04/08/16 2:18 pm
Kaylon Buckner
(kleb6b):
Approved for CCC
Secretary
3. 04/27/16 4:25 pm
srafer: Approved
for Engineering
DSCC Chair

Statement	
Credit Hours	LEC: 2 LAB: 1 IND: 0 RSD: 0 Total: 3
Required for Majors	Yes
Elective for Majors	No
Justification for new course:	I added Comp Sci 1972 and 1972 as prerequisites because our students can take either 1971/1981 or 1972/1982
Semesters previously offered as an experimental course	
Co-Listed Courses:	
Course Reviewer Comments	sraper (01/13/16 3:30 pm): Changed "Mathlab" to Matlab. imorgan (02/02/16 10:29 pm): CCC changed Comp Sci 1970 and 1980 to 1971 and 1981 because the Fortran courses 1970 and 1980 are not currently being offered. kleb6b (04/08/16 9:15 am): Rollback: Rollback

Key: 4279
[Preview Bridge](#)

Course Inventory Change Request

New Course Proposal

Date Submitted: 04/08/16 11:43 am

Viewing: **CHEM ENG 3131 : Separations in Chemical and Biochemical Engineering**

File: 4282

Last edit: 04/08/16 2:18 pm

Changes proposed by: forcinit

Programs
referencing this
course

[CH ENG-BS: Chemical Engineering BS](#)

Other Courses
referencing this
course

In The Prerequisites:

[CHEM ENG 4091 : Chemical Process Design I](#)

[CHEM ENG 4110 : Chemical Engineering Process Dynamics And Control](#)

[CHEM ENG 4130 : Chemical Engineering Laboratory II](#)

[CHEM ENG 5250 : Isolation and Purification of Biologicals](#)

Requested
Effective Change
Date

Fall 2016

Department

Chemical and Biochemical Engineering

Discipline

Chemical Engineering (CHEM ENG)

Course Number

3131

Title

Separations in Chemical and Biochemical Engineering

Abbreviated
Course Title

Separations

Catalog
Description

Flash and column distillation. McCabe-Thiele method, plate efficiencies. Azeotropes.
Batch distillation. Absorption and stripping. Washing and leaching.

Prerequisites

Chem Eng 3101, Chem Eng 3111 and Chem Eng 3120. Admitted to the Chemical Engineering Program.

Field Trip

In Workflow

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

Approval Path

1. 04/08/16 2:15 pm
aldahhanm:
Approved for
RCHEMENG Chair
2. 04/08/16 2:18 pm
Kaylon Buckner
(kleb6b):
Approved for CCC
Secretary
3. 04/27/16 4:25 pm
sraper: Approved
for Engineering
DSCC Chair

Statement					
Credit Hours	LEC: 3	LAB: 0	IND: 0	RSD: 0	Total: 3
Required for Majors	Yes				
Elective for Majors	No				
Justification for new course:	See attached DC form. When I submitted this form in December I forgot to add 3111 as a prerequisite.				
Semesters previously offered as an experimental course					
Co-Listed Courses:					
Course Reviewer Comments	kleb6b (04/08/16 9:15 am): Rollback: Rollback				

Key: 4282
[Preview Bridge](#)

Course Inventory Change Request

New Course Proposal

Date Submitted: 04/08/16 11:45 am

Viewing: **CHEM ENG 4091 : Chemical Process Design I**

File: 4285

Last edit: 04/08/16 2:19 pm

Changes proposed by: forcinit

Programs referencing this course	<u>CH ENG-BS: Chemical Engineering BS</u>
Other Courses referencing this course	<u>In The Prerequisites:</u> <u>CHEM ENG 4097 : Chemical Process Design II</u>

Requested
Effective Change
Date

Fall 2016

Department

Chemical and Biochemical Engineering

Discipline

Chemical Engineering (CHEM ENG)

Course Number

4091

Title

Chemical Process Design I

Abbreviated
Course Title

Process Design I

Catalog
Description

Economic analysis of a chemical process including capital requirements, operating costs, earnings, and profits. The economic balance is applied to chemical engineering operations and processes. Optimization and scheduling techniques are applied to process evaluation. Preliminary process design and use of simulations software.

Prerequisites

Either (Chem Eng 3150, Chem Eng 3131 and Chem Eng 3141) or (Chem Eng 3150 and preceded or accompanied by Chem Eng 5250).

Field Trip
Statement

In Workflow

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

Approval Path

1. 04/08/16 2:15 pm
aldahhanm:
Approved for
RCHEMENG Chair
2. 04/08/16 2:19 pm
Kaylon Buckner
(kleb6b):
Approved for CCC
Secretary
3. 04/27/16 4:25 pm
srafer: Approved
for Engineering
DSCC Chair

Credit Hours	LEC: 1	LAB: 2	IND: 0	RSD: 0	Total: 3
Required for Majors	Yes				
Elective for Majors	No				
Justification for new course:	See attached DC form. I changed the title of the course to make it consistent with our Chemical Process Design 2 course				
Semesters previously offered as an experimental course					
Co-Listed Courses:					
Course Reviewer Comments	kleb6b (04/08/16 9:16 am): Rollback: Rollback				

Key: 4285
[Preview Bridge](#)

Course Inventory Change Request

Date Submitted: 04/08/16 11:51 am

Viewing: **CHEM ENG 4097 : Chemical Process Design II**

File: 862.4

Last approved: 05/04/15 3:20 am

Last edit: 04/08/16 2:20 pm

Changes proposed by: forcinit

Programs CH ENG-BS: Chemical Engineering BS
referencing this
course

Requested **Fall 2016 2015**
Effective Change
Date

Department Chemical and Biochemical Engineering

Discipline Chemical Engineering (CHEM ENG)

Course Number 4097

Title Chemical Process Design II

Abbreviated Process Design II
Course Title

Catalog
Description

Engineering principles involved in the design and layout of chemical process equipment. Material and energy balances, equipment selection and design, and preconstruction cost estimation are performed for a capstone design project. Communication emphasized course.

Prerequisites

Chem Eng 3130 and Chem Eng 3150; preceded or accompanied by Chem Eng 4110 and Chem Eng **4096 or Chem Eng 4091. 4096-**

Field Trip
Statement

Credit Hours	LEC: 1	LAB: 2	IND: 0	RSD: 0	Total: 3
Required for Majors	Yes				

In Workflow

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

Approval Path

1. 04/08/16 2:15 pm aldahhanm: Approved for RCHEMENG Chair
2. 04/08/16 2:19 pm Kaylor Buckner (kleb6b): Approved for CCC Secretary
3. 04/27/16 4:25 pm sraper: Approved for Engineering DSCC Chair

History

1. May 4, 2015 by luksc (862.1)

Elective for Majors	No
Justification for change:	The new prerequisite is needed to reflect the proposed new curriculum (See attached DC form). I changed the punctuation of the prerequisites to make them more clear.
Semesters previously offered as an experimental course	
Co-Listed Courses:	
Course Reviewer	kleb6b (12/23/15 1:38 pm): Might want to clarify this prereq?
Comments	kleb6b (04/08/16 9:16 am): Rollback: Rollback

Key: 862
[Preview Bridge](#)

Course Inventory Change Request

Date Submitted: 04/08/16 11:57 am

Viewing: **CHEM ENG 4220 : Biochemical Reactor Laboratory**

File: 797.1

Last edit: 04/08/16 2:20 pm

Changes proposed by: forcinit

Programs
referencing this
course

CH ENG-BS: Chemical Engineering BS

Requested Effective Change Date
Fall **2016** ~~2014~~

Department
Chemical and Biochemical Engineering

Discipline
Chemical Engineering (CHEM ENG)

Course Number
4220

Title
Biochemical Reactor Laboratory

Abbreviated Course Title
Bioreactor Laboratory

Catalog Description
Introduction to the unit operations involved with the production of biochemicals. The experiments emphasize the isolation of proteins and enzymes from tissue and bacteria cells. This is a communications emphasized course.

Prerequisites
Chem Eng 3200 and preceded or accompanied by Chem Eng **4210; or preceded or accompanied by Chem Eng 5250 and Chem Eng 4210.**

Field Trip
Statement

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

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

Elective for
No

In Workflow

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

Approval Path

1. 04/08/16 2:15 pm
aldahhanm:
Approved for
RCHEMENG Chair
2. 04/08/16 2:20 pm
Kaylon Buckner
(kleb6b):
Approved for CCC
Secretary
3. 04/27/16 4:25 pm
sraper: Approved
for Engineering
DSCC Chair

Majors

Justification for
change:

This is a mandatory course for Biochemical Engineering Emphasis majors. The new prerequisite is needed to reflect the changes in the proposed new curriculum (see attached DC form). The credit hours for this class in the new curriculum remain at 3 but one credit hour is used for lectures.

I changed the phrasing of the prerequisites and I added Chem 4210 in the second sentence.

Semesters
previously
offered as an
experimental
course

Co-Listed
Courses:

Course Reviewer **kleb6b (12/23/15 1:42 pm):** Clarify prereq?

Comments **kleb6b (04/08/16 9:16 am):** Rollback: Rollback

Key: 797

[Preview Bridge](#)

Course Inventory Change Request

New Course Proposal

Date Submitted: 04/07/16 2:49 pm

Viewing: **CHEM ENG 5220 : Intermediate Engineering**

Thermodynamics

File: 4310

Last edit: 04/08/16 6:47 am

Changes proposed by: forcinit

Programs
referencing this
course

[CH ENG-MS: Chemical Engineering MS](#)

Requested
Effective Change
Date

Fall 2016

Department

Chemical and Biochemical Engineering

Discipline

Chemical Engineering (CHEM ENG)

Course Number

5220

Title

Intermediate Engineering Thermodynamics

Abbreviated
Course Title

Intermediate Thermo

Catalog

Description

Review thermodynamic principles for pure fluids and mixtures. Emphasis on applications for the chemical industry and use of fundamental relations and equations of state.

Prerequisites

Senior or graduate standing.

Field Trip

Statement

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

Required for
Majors

Yes

In Workflow

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

Approval Path

1. 04/08/16 3:15 am
aldahhanm:
Approved for
RCHEMENG Chair
2. 04/08/16 6:47 am
Kaylon Buckner
(kleb6b):
Approved for CCC
Secretary
3. 04/27/16 4:25 pm
srafer: Approved
for Engineering
DSCC Chair

Elective for Majors	No
Justification for new course:	We currently offer two undergraduate thermo classes and an advanced thermodynamics class, which consists of a combination of classical and statistical thermodynamics. The new thermo class falls in between these two categories and it is focused on topics of industrial relevance. The class will be mandatory for M.S. students without thesis and a tech elective for undergraduate students.
Semesters previously offered as an experimental course	
Co-Listed Courses:	
Course Reviewer Comments	

Key: 4310
[Preview Bridge](#)

Course Inventory Change Request

New Course Proposal

Date Submitted: 04/21/16 10:17 am

Viewing: **ELEC ENG 5345 : PLC Motion Control**

File: 4314

Last edit: 04/25/16 7:00 am

Changes proposed by: martins

Requested	Spring 2017
Effective Change	
Date	
Department	Electrical and Computer Engineering
Discipline	Electrical Engineering (ELEC ENG)
Course Number	5345
Title	PLC Motion Control
Abbreviated	PLC Motion Control
Course Title	

Catalog

Description

Factory automation motion control integrated with programmable logic controllers, servo control, variable-speed drive control, PackML state model, sizing motors and drives, machine safety, and experience with commercial hardware/software. Laboratory exercises on small-scale standard applications such as coordinated motion of multiple axes and camming.

Prerequisites

Elec Eng 3340.

Field Trip

Statement

Credit Hours	LEC: 2	LAB: 1	IND: 0	RSD: 0	Total: 3
Required for Majors	No				
Elective for Majors	Yes				

Justification for Motion control in automation is becoming increasingly important knowledge and

In Workflow

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

Approval Path

1. 04/22/16 9:16 pm
Daryl Beetner (daryl): Approved for RELECENG Chair
2. 04/25/16 7:00 am
Kaylon Buckner (kleb6b): Approved for CCC Secretary
3. 04/27/16 4:27 pm
srafer: Approved for Engineering DSCC Chair

new course: this course satisfies demand from companies that hire our graduates and from distance students. The equipment acquired for the laboratory part of this course was funded through industry donations, matched by the campus.

Semesters
previously
offered as an
experimental
course

SP 2015 and SP 2016

Co-Listed
Courses:

Course Reviewer **daryl (04/19/16 6:19 pm):** Rollback: Sandy, the current course description doesn't
Comments seem to fit into the word limit. Is it possible to shorten?

Key: 4314

[Preview Bridge](#)

Course Inventory Change Request

Date Submitted: 02/26/16 11:48 am

Viewing: **EXP ENG 6464 6001: Advanced Blast Vibration Analysis and Prediction-Special Topics**

File: 399.1

Last edit: 05/17/16 12:08 pm

Changes proposed by: pworsey

Requested Fall **2016** ~~2014~~

Effective Change

Date

Department Mining & Nuclear Engineering

Discipline Explosives Engineering (EXP ENG)

Course Number **6464** ~~6001~~

Title **Advanced Blast Vibration Analysis and Prediction-Special Topics**

Abbreviated **Adv. Vibration Analysis**

Course Title **Special Topics**

Catalog

Description

Advanced Blast Vibration prediction methodologies. Includes typical methods including scaled distance, linear regression, signature hole analysis, and modern improved signature hole analysis. Structural response and damage criteria for blast vibrations including considerations for frequency spectra and amplitude. This course is designed to give the department an opportunity to test a new course. Variable title.

Prerequisites

Exp Eng 5612.

Field Trip

Statement

Credit Hours LEC: **3-0** LAB: 0 IND: 0 RSD: 0 Total: **3-0-6**

Required for Majors No

Elective for Majors No

In Workflow

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

Approval Path

1. 05/17/16 12:01 pm
reflori: Approved for RMINNUCL Chair
2. 05/17/16 12:08 pm
Kaylon Buckner (kleb6b): Approved for CCC Secretary
3. 06/07/16 9:47 am
srapeer: Approved for Engineering DSCC Chair

Justification for change: Requesting permanent number after two successful offerings.

Semesters previously offered as an experimental course

Spring 2014
Fall 2015

Co-Listed Courses:

Course Reviewer Comments

Key: 399

[Preview Bridge](#)

Course Inventory Change Request

Date Submitted: 04/07/16 3:21 pm

Viewing: **GEO ENG 5556 : Renewable Energy Systems**

File: 363.1

Last edit: 04/08/16 6:47 am

Changes proposed by: patty

Programs referencing this course	<u>GE ENG-BS: Geological Engineering BS</u>
Requested Effective Change Date	Fall 2014 2016
Department	Geosciences and Geological and Petroleum Engineering
Discipline	Geological Engineering (GEO ENG)
Course Number	5556
Title	Renewable Energy Systems
Abbreviated Course Title	Renewable Energy Systems

Catalog Description

Introduction to the theory and performance prediction of typical renewable energy systems such as, but not limited to, those based on energy from the sun, wind and water, and geothermal. The use of environmental data, including stochastic modeling, for renewable energy system (including wind turbine, photovoltaic, and geothermal) design is addressed.

Prerequisites

Math 3304, Physics 2135, and preceded or accompanied by **Geo Eng 4115** ~~Stat 3117~~ or **any Probability and Statistics class. Geo-Eng-4115-** Junior or senior **standing** ~~status~~ is required.

Field Trip Statement

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

In Workflow

- 1. RGEOSENG Chair**
- 2. CCC Secretary**
- 3. Engineering DSCC Chair**
- 4. Pending CCC Agenda post**
- CCC Meeting Agenda
- Campus Curricula Committee Chair
- FS Meeting Agenda
- Faculty Senate Chair
- Registrar
- Ishelton
- Peoplesoft

Approval Path

- 04/07/16 3:53 pm
ikuenobe:
Approved for
RGEOSENG Chair
- 04/08/16 6:47 am
Kaylon Buckner
(kleb6b):
Approved for CCC
Secretary
- 04/27/16 4:25 pm
srafer: Approved
for Engineering
DSCC Chair

Majors

Elective for
Majors

No

Justification for
change:

Several probability and statistics classes are offered. By making this change it will allow students more flexibility in their class selections.

Semesters
previously
offered as an
experimental
course

Co-Listed
Courses:Course Reviewer
Comments

Key: 363

[Preview Bridge](#)

Course Inventory Change Request

New Course Proposal

Date Submitted: 04/06/16 3:42 pm

Viewing: **MECH ENG 6481 : Advanced Topics in Decision and Control**

File: 4309

Last edit: 07/14/16 9:39 am

Changes proposed by: nisbett

Requested Fall 2016

Effective Change

Date

Department Mechanical & Aerospace Engineering

Discipline Mechanical Engineering (MECH ENG)

Course Number 6481

Title Advanced Topics in Decision and Control

Abbreviated Decision and Control

Course Title

Catalog

Description

This course will deal with latest topics in the areas of decision and control. Course may be repeated if topics vary.

Prerequisites

Aero Eng 5481 or Mech Eng 5481 or equivalent.

Field Trip

Statement

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

Required for Majors No

Elective for Majors Yes

Justification for new course: The field of Decision and Control is continually adapting, and this course is to provide an avenue to cover current topics as they emerge.

In Workflow

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

Approval Path

1. 04/06/16 5:30 pm
drallmei:
Approved for
RMECHENG Chair
2. 04/07/16 8:09 am
Kaylon Buckner
(kleb6b):
Approved for CCC
Secretary
3. 04/27/16 4:25 pm
srafer: Approved
for Engineering
DSCC Chair

Semesters	Spring 2010 (15 enrolled)
previously	Fall 2011 (12 enrolled)
offered as an	Fall 2013 (15 enrolled)
experimental	
course	
Co-Listed	Aero Eng 6481 - Course Not Found
Courses:	

Course Reviewer
Comments

Key: 4309
[Preview Bridge](#)

Course Inventory Change Request

New Course Proposal

Date Submitted: 06/27/16 3:10 pm

Viewing: **MET ENG 3410 : Applied Metal Forming**

File: 4321

Last edit: 06/28/16 8:12 am

Changes proposed by: smiller

Requested Spring 2017

Effective Change

Date

Department Materials Science & Engineering

Discipline Metallurgical Engineering (MET ENG)

Course Number 3410

Title Applied Metal Forming

Abbreviated Applied Metal Forming

Course Title

Catalog

Description

Introduction to the art and science of blacksmithing. Students to use forges to heat steel for shaping it. Techniques for shaping, cutting, chiseling, twisting, etc.

Knowledge of hand and power tools and their use. Safety in the shop will be emphasized. History of blacksmithing will also be covered. Includes a lab portion which will work on projects.

Prerequisites

Chem 1100.

Field Trip

Statement

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

Required for No

Majors

Elective for No

Majors

Justification for Course has been successfully taught to full classes for two semesters and has full

In Workflow

1. **RMATSENG Chair**

2. **CCC Secretary**

3. **Engineering DSCC Chair**

4. **Pending CCC Agenda post**

5. CCC Meeting Agenda

6. Campus Curricula Committee Chair

7. FS Meeting Agenda

8. Faculty Senate Chair

9. Registrar

10. Ishelton

11. Peoplesoft

Approval Path

1. 06/28/16 7:30 am mjokeefe:

Approved for RMATSENG Chair

2. 06/28/16 8:12 am Kaylon Buckner

(kleb6b): Approved for CCC Secretary

3. 06/28/16 11:19 am

sraeper: Approved for Engineering DSCC Chair

new course: enrollment for this Fall semester. In addition, course is an excellent experience for all students and has been highly endorsed by industry.

Semesters FS15, Sp16, scheduled for FS16
previously
offered as an
experimental
course

Co-Listed
Courses:

Course Reviewer
Comments

Key: 4321
[Preview Bridge](#)

Course Inventory Change Request

Date Submitted: 05/17/16 8:50 am

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

File: 1596.1

Last edit: 05/17/16 8:50 am

Changes proposed by: smiller

Requested	Fall 2017 2014
Effective Change Date	
Department	Materials Science & Engineering
Discipline	Metallurgical Engineering (MET ENG)
Course Number	5150
Title	Advanced Introduction to Particulate Materials
Abbreviated Course Title	Adv. Intro to Particulate Mat.

Catalog

Description

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

Prerequisites

Met Eng 2110.

Field Trip

Statement

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

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

In Workflow

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

Approval Path

1. 05/17/16 8:53 am
mjokeefe:
Approved for
RMATSENG Chair
2. 05/17/16 10:10 am
Kaylon Buckner (kleb6b):
Approved for CCC Secretary
3. 06/07/16 9:47 am
srafer: Approved for Engineering DSCC Chair

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

Course Reviewer	kristyg (05/16/16 3:56 pm): Rollback: Change the effective date term to Fall 2017
Comments	per Dr. Miller.

Key: 1596
[Preview Bridge](#)

Course Inventory Change Request

New Course Proposal

Date Submitted: 05/16/16 4:41 pm

Viewing: **MIN ENG 6712 : Managing Social and Environmental Risks in Mining (Intro to Responsible Mining)**

File: 4317

Last edit: 07/14/16 10:54 am

Changes proposed by: jrussell

Requested Fall 2016

Effective Change

Date

Department Mining & Nuclear Engineering

Discipline Mining Engineering (MIN ENG)

Course Number 6712

Title Managing Social and Environmental Risks in Mining (Intro to Responsible Mining)

Abbreviated Soc & Enviro Risk Mining

Course Title

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 4742 or Min Eng 5742.

Field Trip

Statement

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

Required for No

Majors

Elective for No

Majors

In Workflow

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

Approval Path

1. 05/17/16 12:02 pm
reflori: Approved for RMINNUCL Chair
2. 05/17/16 12:09 pm
Kaylon Buckner (kleb6b): Approved for CCC Secretary
3. 06/07/16 9:47 am
sraaper: Approved for Engineering DSCC Chair
4. 07/14/16 9:53 am
Kaylon Buckner (kleb6b):

Justification for
new course:

Requested by Mining Department

Approved for
Pending CCC
Agenda post

Semesters
previously
offered as an
experimental
course

This course has been successfully taught FS 2014 and FS 2015

Co-Listed
Courses:

Course Reviewer
Comments

Key: 4317
[Preview Bridge](#)

Course Inventory Change Request

New Course Proposal

Date Submitted: 05/16/16 2:32 pm

Viewing: **MIN ENG 6912 : Simulation of Mining Systems**

File: 4315

Last edit: 05/16/16 2:32 pm

Changes proposed by: kabp3

Requested Fall 2016

Effective Change

Date

Department Mining & Nuclear Engineering

Discipline Mining Engineering (MIN ENG)

Course Number 6912

Title Simulation of Mining Systems

Abbreviated Sim Mining Sys

Course Title

Catalog

Description

Overview of stochastic simulation. Model formulation using general purpose process simulation software. Model verification and validation. Simulation experimentation.

Prerequisites

Graduate standing or Stat 5643.

Field Trip

Statement

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

Required for No

Majors

Elective for No

Majors

Justification for

new course:

Converting experimental course to a class with a unique number.

Semesters FS2011, FS2013

In Workflow

1. RMINNUCL Chair

2. CCC Secretary

3. Engineering DSCC
Chair

4. Pending CCC
Agenda post

5. CCC Meeting
Agenda

6. Campus Curricula
Committee Chair

7. FS Meeting
Agenda

8. Faculty Senate
Chair

9. Registrar

10. Ishelton

11. Peoplesoft

Approval Path

1. 05/17/16 12:02
pm

reflori: Approved
for RMINNUCL
Chair

2. 05/17/16 12:09
pm

Kaylon Buckner
(kleb6b):

Approved for CCC
Secretary

3. 06/07/16 9:47 am

sraprer: Approved
for Engineering
DSCC Chair

previously
offered as an
experimental
course

Co-Listed
Courses:

Course Reviewer
Comments

Key: 4315
[Preview Bridge](#)

Course Inventory Change Request

New Course Proposal

Date Submitted: 05/16/16 2:42 pm

Viewing: **MIN ENG 6923 : Geostatistics**

File: 4316

Last edit: 05/16/16 2:42 pm

Changes proposed by: kabp3

Requested Fall 2016

Effective Change

Date

Department Mining & Nuclear Engineering

Discipline Mining Engineering (MIN ENG)

Course Number 6923

Title Geostatistics

Abbreviated Geostatistics

Course Title

Catalog

Description

Definition of geostatistical data; theory of random fields; autocorrelation and measures of spatial variability including semivariograms, variograms and covariance functions; and spatial prediction and validation. Case studies in mineral resource estimation and environmental pollutant prediction will be presented.

Prerequisites

Graduate standing or consent of instructor.

Field Trip

Statement

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

Required for No

Majors

Elective for No

Majors

Justification for new course: Assigning permanent number to experimental course.

In Workflow

1. RMINNUCL Chair

2. CCC Secretary

3. Engineering DSCC Chair

4. Pending CCC Agenda post

5. CCC Meeting

Agenda

6. Campus Curricula Committee Chair

7. FS Meeting Agenda

8. Faculty Senate Chair

9. Registrar

10. Ishelton

11. Peoplesoft

Approval Path

1. 05/17/16 12:03 pm

reflori: Approved for RMINNUCL Chair

2. 05/17/16 12:09 pm

Kaylon Buckner (kleb6b): Approved for CCC Secretary

3. 06/07/16 9:47 am

sraprer: Approved for Engineering DSCC Chair

Semesters SP2012, SP2014
previously
offered as an
experimental
course

Co-Listed
Courses:

Course Reviewer
Comments

Key: 4316
[Preview Bridge](#)

Course Inventory Change Request

A deleted record cannot be edited

Course Deactivation Proposal

Date Submitted: 04/15/16 2:04 pm

Viewing: **MUSIC 4010 : Symphonic Bands**

File: 215.1

Last edit: 04/15/16 2:04 pm

Changes proposed by: denises

Requested Fall **2016** ~~2014~~

Effective Change
Date

Department Arts, Languages, & Philosophy

Discipline Music (MUSIC)

Course Number 4010

Title Symphonic Bands

Abbreviated Symphonic Bands
Course Title

Catalog

Description

An auditioned ensemble. Students perform music for wind ensemble and large bands. Music from 1400-present is performed in a concert setting.

Prerequisites

Consent of instructor - audition only.

Field Trip

Statement

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

Elective for Majors	No
------------------------	----

Justification for
change:

It has not been used as an option for our music minor degree.

In Workflow

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

Approval Path

1. 04/25/16 8:55 pm
audram:
Approved for
RPHILOSO Chair
2. 04/27/16 7:02 am
Kaylon Buckner
(kleb6b):
Approved for CCC
Secretary
3. 04/27/16 8:09 am
dewittp:
Approved for Arts
& Humanities
DSCC Chair

Semesters
previously
offered as an
experimental
course

Co-Listed
Courses:

Course Reviewer
Comments

Key: 215

[Preview Bridge](#)

Course Inventory Change Request

Date Submitted: 04/06/16 11:16 am

Viewing: **PET ENG 4311 : Reservoir Characterization**

File: 1671.1

Last edit: 07/14/16 9:58 am

Changes proposed by: pattyr

Programs referencing this course	<u>GEOL-MI: Geology Minor</u> <u>PE ENG-BS: Petroleum Engineering BS</u>
Requested Effective Change Date	Fall 2016 2014
Department	Geosciences and Geological and Petroleum Engineering
Discipline	Petroleum Engineering (PET ENG)
Course Number	4311
Title	Reservoir Characterization
Abbreviated Course Title	Reservoir Characteriz

Catalog Description
The integration and extrapolation of Geologic, Geophysical, and Petroleum Engineering data for flow model construction.

Prerequisites
Pet Eng **3520 and 3520**, Pet Eng **3310. 3310**; ~~Geology 4611 or Geology 4511.~~

Field Trip Statement

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

In Workflow

- 1. RGEOENG Chair**
- 2. CCC Secretary**
- 3. Engineering DSCC Chair**
- 4. Pending CCC Agenda post**
- CCC Meeting Agenda
- Campus Curricula Committee Chair
- FS Meeting Agenda
- Faculty Senate Chair
- Registrar
- Ishelton
- Peoplesoft

Approval Path

- 04/06/16 12:21 pm
ikuenobe:
Approved for RGEOENG Chair
- 04/07/16 8:09 am
Kaylon Buckner (kleb6b):
Approved for CCC Secretary
- 04/27/16 4:25 pm
sraeper: Approved for Engineering DSCC Chair

Justification for
change:

Removing the Geology prerequisites since they are not required for our Petroleum Engineering students.

Semesters
previously
offered as an
experimental
course

Co-Listed
Courses:

Course Reviewer
Comments

Key: 1671
[Preview Bridge](#)

Course Inventory Change Request

Date Submitted: 04/25/16 3:07 pm

Viewing: **PHILOS 3223 : Bioethics**

File: 2544.1

Last edit: 04/27/16 8:11 am

Changes proposed by: dittmerj

Programs
referencing this
course

[ETHICS-MI: Ethics Minor](#)
[HUM ENG-MI: Humanitarian Engineering and Science Minor](#)
[PHILTCH-MI: Philosophy of Technology Minor](#)
[SCTCPL-MI: Science, Tech,& Politics Minor](#)

Requested
Effective Change
Date

Spring 2017 ~~Fall 2014~~

Department Arts, Languages, & Philosophy

Discipline Philosophy (PHILOS)

Course Number 3223

Title Bioethics

Abbreviated Bioethics

Course Title

Catalog

Description

This course covers several areas of ethical interest in biotechnology, medicine, and medical care. Topics may include stem-cell research, cloning, genetic engineering, reproductive issues, pharmaceutical ethics, privacy, physician-assisted suicide, patient rights, human and animal experimentation, and resource allocation.

Prerequisites

Sophomore standing or above. ~~Introductory level (below 2000) Philosophy course.~~

Field Trip

Statement

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

Required for
Majors No

Elective for No

In Workflow

1. **RPHILOS Chair**

2. **CCC Secretary**

3. **Arts &
Humanities DSCC
Chair**

4. **Pending CCC
Agenda post**

5. CCC Meeting
Agenda

6. Campus Curricula
Committee Chair

7. FS Meeting
Agenda

8. Faculty Senate
Chair

9. Registrar

10. Ishelton

11. Peoplesoft

Approval Path

1. 04/25/16 8:57 pm
audram:

Approved for
RPHILOS Chair

2. 04/27/16 7:02 am
Kaylon Buckner
(kleb6b):

Approved for CCC
Secretary

3. 04/27/16 8:11 am
dewittp:

Approved for Arts
& Humanities
DSCC Chair

Majors

Justification for
change:

Maintains rigor of course but streamlines process of enrollment.

Semesters
previously
offered as an
experimental
course

Co-Listed
Courses:

Course Reviewer
Comments

dewittp (04/27/16 8:11 am): Changed Fall 2016 to Spring 2017.

Key: 2544

[Preview Bridge](#)

Course Inventory Change Request

Date Submitted: 04/25/16 3:08 pm

Viewing: **PHILOS 3225 : Engineering Ethics**

File: 1772.1

Last edit: 04/27/16 8:12 am

Changes proposed by: dittmerj

Programs referencing this course	CMP SC-BS: Computer Science BS ECON-BS: Economics BS ETHICS-MI: Ethics Minor HUM ENG-MI: Humanitarian Engineering and Science Minor SCTCPL-MI: Science, Tech,& Politics Minor
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Requested Effective Change Date	Spring 2017 Fall 2014
Department	Arts, Languages, & Philosophy
Discipline	Philosophy (PHILOS)
Course Number	3225
Title	Engineering Ethics
Abbreviated Course Title	Engineering Ethics

Catalog Description
Engineering ethics, examines major ethical issues facing engineers in the practice of their profession: the problem of professionalism and a code of ethics; the process of ethical decision-making in different working environments; the rights, duties, and conflicting responsibilities of engineers.

Prerequisites
Sophomore standing or above. ~~An introductory (below 2000) level philosophy course.~~

**Field Trip
Statement**

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

In Workflow

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

Approval Path

1. 04/25/16 8:57 pm audram:
Approved for RPHILOS Chair
2. 04/27/16 7:03 am Kaylon Buckner (kleb6b):
Approved for CCC Secretary
3. 04/27/16 8:12 am dewittp:
Approved for Arts & Humanities DSCC Chair

Majors

Elective for
Majors

No

Justification for
change:

Maintains rigor of course but streamlines process of enrollment.

Semesters
previously
offered as an
experimental
course

Co-Listed
Courses:

Course Reviewer
Comments

dewittp (04/27/16 8:12 am): Changed Fall 2016 to Spring 2017

Key: 1772
[Preview Bridge](#)

Course Inventory Change Request

Date Submitted: 04/25/16 3:08 pm

Viewing: **PHILOS 3235 : Business Ethics**

File: 2281.1

Last edit: 04/27/16 8:13 am

Changes proposed by: dittmerj

Programs
referencing this
course

[CMP SC-BS: Computer Science BS](#)
[ECON-BS: Economics BS](#)
[ETHICS-MI: Ethics Minor](#)
[HUM ENG-MI: Humanitarian Engineering and Science Minor](#)
[PRE LAW-MI: Pre Law Minor](#)

Requested
Effective Change
Date

Spring 2017 ~~Fall 2014~~

Department

Arts, Languages, & Philosophy

Discipline

Philosophy (PHILOS)

Course Number

3235

Title

Business Ethics

Abbreviated
Course Title

Business Ethics

Catalog

Description

Develop ethical concepts relevant to deciding the moral issues that arise in business.
Topics include: Economic systems, government regulations, relations to external groups and environment, advertising, product safety and liability, worker safety and rights, rights and responsibilities of business professionals.

Prerequisites

Sophomore standing or above. ~~An introductory (below 2000) level philosophy course.~~

Field Trip

Statement

Credit Hours

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

Required for

No

In Workflow

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

Approval Path

1. 04/25/16 8:57 pm
audram:
Approved for
RPHILOS Chair
2. 04/27/16 7:03 am
Kaylon Buckner
(kleb6b):
Approved for CCC
Secretary
3. 04/27/16 8:13 am
dewittp:
Approved for Arts
& Humanities
DSCC Chair

Majors

Elective for
Majors

No

Justification for
change:

Maintains rigor of course but streamlines process of enrollment.

Semesters
previously
offered as an
experimental
course

Co-Listed
Courses:

Course Reviewer
Comments

dewittp (04/27/16 8:13 am): Changed Fall 2016 to Spring 2017

Key: 2281
[Preview Bridge](#)

Program Change Request

Date Submitted: 07/08/16 5:09 pm

Viewing: **BIO SC-BA : Biological Sciences BA**

File: 146.12

Last approved: 07/14/15 2:44 pm

Last edit: 07/26/16 11:20 am

Changes proposed by: shannonk

Catalog Pages

Using this

Program

[Biological Sciences](#)

Start Term Fall **2016** ~~2015~~

Program Code BIO SC-BA

Department Biological Sciences

Title

Biological Sciences BA

Program Requirements and Description

Bachelor of Arts Biological Sciences Degree Requirements

Specific requirements for the B.A. degree in biological sciences include a minimum of 120 semester hours of credit, including 30 hours of biology core courses. **A "C" or better is required for all Biological Science courses.**

In Workflow

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

Approval Path

1. 07/08/16 6:39 pm
huangy: Approved for RBIOLSCI Chair
2. 07/12/16 1:14 pm
Kaylon Buckner (kleb6b): Approved for CCC Secretary
3. 07/26/16 11:45 pm
imorgan: Approved for Sciences DSCC Chair
4. 07/28/16 10:59 am
Shauntae Ellis (smetg6): Approved for Pending CCC Agenda post

History

1. Aug 1, 2014 by shannonk
2. Jul 14, 2015 by pantaleoa

Core Courses

BIO SCI 1201	Introduction To Biological Science	1
BIO SCI 1113	General Biology	3

or BIO SCI 1213	Principles of Biology	
BIO SCI 1219	General Biology Lab	2
BIO SCI 1223	Biodiversity	3
BIO SCI 1229	Biodiversity Lab	1
BIO SCI 2213	Cell Biology	3
BIO SCI 2219	Cell Biology Laboratory	1
BIO SCI 2223	General Genetics	3
BIO SCI 2233	Evolution	3
BIO SCI 2263	Ecology	3
BIO SCI 4010	Seminar	1
Advanced courses, 2000 level or higher (at least one with laboratory and one 3000 or 4000 level)		9
Chemistry		
CHEM 1310 & CHEM 1319 & CHEM 1320 & CHEM 1100	General Chemistry I and General Chemistry Laboratory and General Chemistry II and Introduction To Laboratory Safety & Hazardous Materials	9
CHEM 2210 & CHEM 2220	Organic Chemistry I and Organic Chemistry II	8
Mathematics & Physical Science		
Various courses in mathematics, physics, and/or geology chosen in consultation with academic advisor. (Note: Proficiency in College Algebra must be demonstrated by a grade of "C" or better in a College Algebra course or by examination)		9
Computer Science/Statistics (Select one of the following:)		3-4
COMP SCI 1570 & COMP SCI 1580	Introduction To Programming and Introduction To Programming Laboratory	
or COMP SCI 1971 & COMP SCI 1981	Introduction To Programming Methodology and Programming Methodology Laboratory	
STAT 3111	Statistical Tools For Decision Making	
STAT 5425	Introduction to Biostatistics	
General Requirements for BA		
English Composition		6
ENGLISH 1120	Exposition And Argumentation	
One additional composition course		
Western Civilizations		6
HISTORY 1100	Early Western Civilization	
HISTORY 1200	Modern Western Civilization	
Foreign Language (three semesters of a foreign language)		12
Humanities (including one class in each of literature, philosophy, and fine arts)		12
Social Sciences (including classes in two of the following three subjects: economics, political science, psychology)		12

Elective credits: In consultation with his or her advisor, each student will elect sufficient additional courses to complete a minimum of 120 credit hours.

Bachelor of Arts Biological Sciences Pre-Medicine Emphasis Area Degree Requirements

The student will fulfill the requirements for a bachelor of arts in biological sciences as outlined above. The following classes are also required:

<u>CHEM 2219</u> & <u>CHEM 2229</u>	Organic Chemistry I Lab and Organic Chemistry II Lab	2
2 semesters of Physics and labs:		8-10
<u>PHYSICS 1145</u> & <u>PHYSICS 1119</u>	College Physics I and General Physics Laboratory	
or <u>PHYSICS 1111</u> & <u>PHYSICS 1119</u>	General Physics I and General Physics Laboratory	
<u>PHYSICS 2145</u> & <u>PHYSICS 2119</u>	College Physics II and General Physics Laboratory	
or <u>PHYSICS 2111</u> & <u>PHYSICS 2119</u>	General Physics II and General Physics Laboratory	

The following classes are highly recommended:

<u>BIO SCI 3333</u>	Human Anatomy and Physiology I	3
<u>BIO SCI 3339</u>	Human Anatomy Physiology I Lab	1
<u>BIO SCI 3343</u>	Human Anatomy and Physiology II	3
<u>BIO SCI 3349</u>	Human Anatomy and Physiology II Laboratory	1
<u>CHEM 4610</u>	General Biochemistry	3

Bachelor of Arts Biological Sciences Secondary Education Emphasis Area Degree Requirements

You may earn a B.A. degree in biological sciences from Missouri S&T and certification to teach at the secondary level in the schools of Missouri with this emphasis area. This program can be completed in four academic years, and student teaching is arranged with public schools within 30 miles of the Rolla campus.

Students interested in this emphasis area should consult with the advisor for biological sciences education majors in the biological sciences department.

In order to successfully complete this emphasis area, students must have at least a 22 ACT, maintain a cumulative GPA of at least 2.5, and attain at least a 2.5 GPA average for all biology courses. Current Missouri S&T or transfer students who wish to pursue this emphasis area must meet both these GPA requirements to be accepted into the program. Students must also meet all requirements listed under the teacher education program in this catalog. Students who do not meet all the teacher certification requirements will not be eligible for the secondary education emphasis area, even if they have completed all required course work.

A degree in this emphasis area requires 131 credit hours. The required courses are provided below. A minimum grade of "C" is required by the department in all biological sciences courses counted toward this degree.

Humanities: 18 semester hours		
<u>ENGLISH 1120</u>	Exposition And Argumentation	3
<u>ENGLISH 1160</u>	Writing And Research	3
or <u>ENGLISH 3560</u>	Technical Writing	
<u>SP&M S 1185</u>	Principles Of Speech	3
At least one course in each of the following: Literature, Philosophy and Fine Arts		9
Social Sciences: 15 semester hours		
<u>HISTORY 3530</u>	History of Science	3
<u>HISTORY 1100</u>	Early Western Civilization	3
<u>HISTORY 1200</u>	Modern Western Civilization	3
<u>HISTORY 2530</u>	Course HISTORY 2530 Not Found	3
<u>POL SCI 1200</u>	American Government	3
<u>PSYCH 1101</u>	General Psychology	3
Mathematics/Physical Science: 9 semester hours		
<u>MATH 1103</u>	Fundamentals Of Algebra	3
<u>PHYSICS 1145</u>	College Physics I	3
<u>GEOLOGY 1110</u>	Physical And Environmental Geology	3
Computer Science/Statistics: 3 semester hours		
3 semester hours of Computer Science or Statistics		3
Chemistry: 17 semester hours		
<u>CHEM 1310</u> & <u>CHEM 1319</u> & <u>CHEM 1320</u> & <u>CHEM 1100</u>	General Chemistry I and General Chemistry Laboratory and General Chemistry II and Introduction To Laboratory Safety & Hazardous Materials	9
<u>CHEM 2210</u> & <u>CHEM 2220</u>	Organic Chemistry I and Organic Chemistry II	8
Biological Sciences: 27 semester hours		
<u>BIO SCI 1201</u>	Introduction To Biological Science	1
<u>BIO SCI 1213</u> & <u>BIO SCI 1219</u>	Principles of Biology and General Biology Lab	5
<u>BIO SCI 1223</u> & <u>BIO SCI 1229</u>	Biodiversity and Biodiversity Lab	4
<u>BIO SCI 1173</u>	Introduction to Environmental Sciences	3
<u>BIO SCI 2213</u> & <u>BIO SCI 2219</u>	Cell Biology and Cell Biology Laboratory	4
<u>BIO SCI 2223</u>	General Genetics	3
<u>BIO SCI 2233</u>	Evolution	3
<u>BIO SCI 2263</u>	Ecology	3
<u>BIO SCI 4010</u>	Seminar	1
Education: 42 semester hours		
<u>EDUC 1040</u>	Perspectives In Education	2

EDUC 1104	Teacher Field Experience	2
EDUC 1164	Aiding Elementary, Middle And Secondary Schools	2
EDUC 1174	School Organization & Adm For Elementary & Secondary Teachers	2
EDUC 2216	Teaching Reading In Content Area	3
EDUC 2251	Historical Foundation Of American Education	3
EDUC 3280	Teaching Methods And Skills In The Content Areas	6
EDUC 4298	Student Teaching Seminar	1
EDUC 4299	Student Teaching	12
ENGLISH 3170	Teaching And Supervising Reading and Writing	3
PSYCH 2300	Educational Psychology	3
PSYCH 3311	Psychological & Educational Development Of The Adolescent	3
PSYCH 4310	Psychology Of The Exceptional Child	3

Justification for
request

Evolution is a requirement for our other degrees, and by oversight had not been added as a requirement for the BA.

History 2530 is no longer taught, and is replaced by History 3530 for the BA with Teacher Certification.

Supporting
Documents

Course Reviewer
Comments

kleb6b (07/12/16 1:14 pm): Minor revisions, updated effective term

imorgan (07/26/16 11:20 am): Based on DESE requirements, Educ 2251 has been replaced by English 3170.

Program Change Request

Date Submitted: 04/08/16 8:40 am

Viewing: **CH ENG-BS : Chemical Engineering BS**

File: 150.44

Last approved: 03/07/16 2:04 pm

Last edit: 07/11/16 3:02 pm

Changes proposed by: forcinit

Catalog Pages [Chemical & Biochemical Engineering](#)
Using this
Program

Start Term **Fall 2017-08/22/2016**
Program Code CH ENG-BS
Department Chemical and Biochemical Engineering
Title Chemical Engineering BS

Program Requirements and Description

Bachelor of Science Chemical Engineering

Entering freshmen desiring to study chemical engineering will be admitted to the Freshman Engineering Program. They will be permitted, if they wish, to state a chemical 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 chemical engineering a minimum of 129 credit hours is required. These requirements are in addition to credit received for algebra, trigonometry and basic ROTC courses. An average of at least two grade points per credit hour must be attained. At least two grade points per credit hour must also be attained in all courses taken in chemical engineering.

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

1. All students are required to take one American history course, one economics course, one humanities course, and [ENGLISH 1120](#). The history course is to be selected from [HISTORY 1200](#), [HISTORY 1300](#), [HISTORY 1310](#), or [POL SCI 1200](#). The economics course may be either [ECON 1100](#) or [ECON 1200](#). The humanities course must be selected from the approved lists for art, English, foreign languages, music, philosophy, speech and media studies, or theater.
2. Depth requirement. Three credit hours must be taken in humanities or social sciences at the 1000 level or above and must be selected from the approved list. This course must have as a prerequisite one of the humanities or social sciences courses already taken. Foreign language courses numbered 1180 will be considered to satisfy this requirement. Students may receive humanities credit for foreign language courses in their native tongue only if the course is at the 3000 level or above. All courses taken to satisfy the depth requirement must be taken after graduating from high school.
3. The remaining two courses are to be chosen from the list of approved humanities/social sciences courses and may include one communications course in addition to [ENGLISH 1120](#).
4. Any specific departmental requirements in the general studies area must be satisfied.
5. Special topics and special problems and honors seminars are allowed only by petition to and approval by the student's department chairman.

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

In Workflow

1. [RCHEMENG Chair](#)
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7. [FS Meeting Agenda](#)
8. [Faculty Senate Chair](#)
9. [Registrar](#)
10. [kristyg](#)

Approval Path

1. 04/08/16 2:13 pm
aldahhanm:
Approved for
RCHEMENG Chair
2. 04/08/16 2:18 pm
Kaylon Buckner
(kleb6b): Approved
for CCC Secretary
3. 04/27/16 4:24 pm
srafer: Approved
for Engineering
DSCC Chair

History

1. Mar 18, 2014 by
lahne
2. May 2, 2014 by
lahne
3. Jan 30, 2015 by
Kaylon Buckner
(kleb6b)
4. Jul 15, 2015 by
pantaleoa
5. Jul 15, 2015 by
pantaleoa
6. Nov 18, 2015 by
marlene
7. Mar 7, 2016 by
Daniel Forciniti
(forcinit)

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.

Freshman Year			
First Semester	Credits	Second Semester	Credits
FR ENG 1100	1	MECH ENG 1720	3
CHEM 1310	4	CHEM ENG 1100 , or COMP SCI 1972 and COMP SCI 1982 , or COMP SCI 1971 and COMP SCI 1981	3
CHEM 1319	1	CHEM 1320	3
ENGLISH 1120	3	MATH 1215	4
HISTORY 1200 , or 1300 , or 1310 , or POL SCI 1200	3	PHYSICS 1135	4
MATH 1214	4		
CHEM 1100	1		
	17		17
Sophomore Year			
First Semester	Credits	Second Semester	Credits
CHEM ENG 2100 ¹	3	CHEM ENG 2310 ²	1
CHEM 2210	4	CHEM ENG 2110 ¹	3
MATH 2222	4	Humanities and Social Sciences Elective ⁴	3
PHYSICS 2135	4	Humanities and Social Sciences Elective ⁴	3
CHEM ENG 2300	3	MATH 3304	3
		Science Elective ⁵	4
	18		17
Junior Year			
First Semester	Credits	Second Semester	Credits
CHEM ENG 3120	3	CHEM ENG 3141	2
CHEM ENG 3101	4	CHEM ENG 3131	3
CHEM ENG 3111	3	CHEM ENG 3150	3
ECON 1100 or 1200	3	STAT 3113	3
Upper level Humanities or Social Science Elective ⁴	3	ENGLISH 1160 or 3560	3
	16		14
Senior Year ³			
First Semester	Credits	Second Semester	Credits
CHEM ENG 4110	3	CHEM ENG 4097 ²	3
CHEM ENG 5XXX-Chem Eng Elective ⁶	3	CHEM ENG 5XXX-Chem Eng Elective ⁶	3
CHEM ENG 4101 ²	3	CHEM ENG 4130 ²	3
CHEM ENG 4140	3	Chem Eng 5xxx --Chem Eng Elective ⁶	3
CHEM ENG 4091	3	Chem Eng 5xxx -Chem Eng Elective ⁶	3
	15		15
Total Credits: 129			

Note: The minimum number of hours required for a degree in chemical engineering is 129.

A cumulative grade point average of 2.50 or better and a "C" or better in Chem 1310, Chem 1319, Chem 1320, Math 1214, Math 1215 and Physics 1135 are required to be admitted into the chemical engineering major.

¹ A grade of "C" or better is required in Chem Eng 2100 & Chem Eng 2110 in order to enroll in Chem Eng 3120 .

² Communications emphasized course (See bachelor of science degree, general education communications requirement).

3	Chemical engineering majors are encouraged to take the fundamentals of engineering exam prior to graduation. It is the first step toward becoming a registered professional engineer.
4	From approved list published on the website of Undergraduate Studies. The prerequisites for the upper level course must be completed with a passing grade.
5	CHEM 2510 (Analytical Chemistry Lec 3 Lab 1) or CHEM 4610 (Biochem. Lec 3) and CHEM 4619 (Biochem Lab 2) or BIO SCI 2213 (Cell Biology Lec 3) and BIO SCI 2219 (Cell Biology Lab 1) or CHEM 2220 (Organic Chemistry II, Lect 4) and CHEM 2289 (Lab 1) or Bio Sci 3313 (Microbiology Lec 3) and Bio Sci 3319 (Microbiology Lab 2) or CHEM 3420 (Quantum Chemistry Lec 3) and CHEM 3459 (Physical Chem. Lab).
6	Any Chem Eng 5xxx and any class from the approved list published in the Chemical Engineering web site but only 3 cr. hr of Chem. Eng. 4000, Chem Eng 4099 or Chem Eng 4099. Students may have no more than three hours from approved, out-of-department elective.

Chemical Engineering Biochemical Engineering Emphasis

Freshman Year			
First Semester	Credits	Second Semester	Credits
FR ENG 1100	1	MECH ENG 1720	3
CHEM 1310	4	CHEM ENG 1100, or COMP SCI 1972 and COMP SCI 1982, or COMP SCI 1971 and COMP SCI 1981	3
CHEM 1319	1	CHEM 1320	3
ENGLISH 1120	3	MATH 1215	4
HISTORY 1200, or 1300, or 1310, or POL SCI 1200	3	PHYSICS 1135	4
MATH 1214	4		
CHEM 1100	1		
	17		17
Sophomore Year			
First Semester	Credits	Second Semester	Credits
CHEM ENG 2100 ¹	3	CHEM ENG 2110 ¹	3
CHEM 2210	4	STAT 3113	3
MATH 2222	4	CHEM ENG 2310 ²	1
PHYSICS 2135	4	Science Elective ⁵	4
CHEM ENG 2300	3	MATH 3304	3
	18		14
Junior Year			
First Semester	Credits	Second Semester	Credits
CHEM ENG 3120	3	ECON 1100 or 1200	3
CHEM ENG 3101	4	Science Elective ⁵	4
Humanities or Social Sciences Elective ⁴	3	CHEM ENG 3141	2
Science Elective ⁵	4	CHEM ENG 3131	3
CHEM ENG 3111	3	ENGLISH 1160 (or English 3560)	3
		CHEM ENG 3150	3
	17		18
Senior Year ³			
First Semester	Credits	Second Semester	Credits
CHEM ENG 4110	3	CHEM ENG 4210	3
Upper Level Humanities or Social Sciences Elective ⁴	3	CHEM ENG 4097 ²	3
CHEM ENG 4091	3	Humanities or Social Science Elective ⁴	3
CHEM ENG 4220 ²	3	CHEM ENG 4201 ²	3
CHEM ENG 5250	3	CHEM ENG 4241	3

15	15
Total Credits: 131	

Note: The minimum number of hours required for a degree in chemical engineering with an emphasis in biochemical engineering is 131.

A cumulative grade point average of 2.50 or better and a "C" or better in Chem 1310, Chem 1319, Chem 1320, Math 1214, Math 1215 and Physics 1135 are required to be admitted into the chemical engineering major.

1	A grade of "C" or better is required in Chem Eng 2100 & Chem Eng 2110 in order to enroll in Chem Eng 3120.
2	Communications emphasized course (See bachelor of science degree, general education communications requirement).
3	Chemical engineering majors are encouraged to take the fundamentals of engineering exam prior to graduation. It is the first step toward becoming a registered professional engineer.
4	From approved list published on the website of Undergraduate Studies. The prerequisites for the upper level course must be completed with a passing grade.
5	A minimum of 12 credit hours in Science Electives are required. Select three courses from Chem 2220 (Organic Chemistry 2 Lec 4) , Chem 4610 (General Biochemistry Lec 3), Chem 4620 (Metabolism Lec 3), BioSci 2213 (Cell Biology Lec 3), BioSci 3313 (Microbiology Lec 3), and BioSci 4323 (Molecular Genetics Lec 3); and a minimum of two laboratory courses from Chem 2229 (Organic Chemistry 2 Lab 1) or Chem 2289 (Organic Chemistry Lab 1), Chem 4619 (General Biochemistry Lab 2), BioSci 2219 (Cell Biology Lab 1), BioSci 3319 (Microbiology Lab 2), and BioSci 4329 (Molecular Genetics Lab 2).

Justification for request

Computer Science 1972/1982 are a better match for our students' needs than Computer Science 1970/1980
The Chem. Eng. Faculty decided not to require our students to take the FE exam anymore.
Chemistry 3459 is a better match for our students' needs than Chem 3419.
The names of the classes in footnote 5 (emphasis program) for completeness.

Supporting Documents

[new-curriculum-justification.docx](#)

Course Reviewer Comments

kleb6b (04/08/16 6:45 am): Update effective term
kleb6b (04/08/16 8:12 am): Rollback: Rollback
kleb6b (07/11/16 3:02 pm): Update Effective Term

Program Change Request

Date Submitted: 04/08/16 8:55 am

Viewing: **CH ENG-MS : Chemical Engineering MS**

File: 14.3

Last approved: 08/04/14 12:00 pm

Last edit: 07/11/16 3:03 pm

Changes proposed by: forcinit

Catalog Pages [Chemical & Biochemical Engineering](#)
Using this
Program

Start Term Fall **2017** ~~2014~~
Program Code CH ENG-MS
Department Chemical and Biochemical Engineering
Title Chemical Engineering MS

Program Requirements and Description

All students, except for those in their first semester and in their last semester for PhD candidates, need to register for 1 credit hour of [CHEM ENG 6015 Lecture Series](#). Lecture Series can be used for a total of 3 hours towards the students 6000 level requirement.

The master of science thesis program consists of a minimum of 30 semester hours, including 18-24 hours of coursework, in which [CHEM ENG 5100](#), [CHEM ENG 5110](#), [CHEM ENG 6120](#), [CHEM ENG 6140](#), and [CHEM ENG 6100](#) are required. In addition, a thesis from research that is equivalent to 6-12 credit hours in the major area must be prepared and defended.

A master of science non-thesis program consists of 30 semester hours of coursework, including [CHEM ENG 5100](#), [CHEM ENG 5150](#), [CHEM ENG 5110](#), [CHEM ENG 5220](#) and [CHEM ENG 5110](#), [CHEM ENG 6120](#), [CHEM ENG 6110](#), and [CHEM ENG 6100](#) and a minimum of **24** ~~18~~ hours of coursework within the department. **The program of study must include nine credit hours of 6000 level courses.**

Justification for request We deleted Chem Eng 6120 & Chem Eng 6110 because they are not core course requirements for an MS degree.
We added Chem Eng 5100, 5150, 5110 and 5220 because they are required courses for an MS degree without thesis. A separate CC form for 5220 has been submitted.

Supporting
Documents

Course Reviewer Comments **pantaleoa (04/07/16 2:57 pm)**: Updated effective term added the first sentence to be included in CIM that was not previously included.
pantaleoa (04/07/16 3:01 pm): Modified first sentence to reflect change submitted by department that was not previously part of the CIM form.
kristyg (04/07/16 4:15 pm): Rollback: One more small change needs to be made to the MS program.
kleb6b (04/08/16 8:06 am): Rollback: Rollback

In Workflow

1. [RCHEMENG Chair](#)
2. [CCC Secretary](#)
3. [Engineering DSCC Chair](#)
4. [Pending CCC Agenda post](#)
5. [CCC Meeting Agenda](#)
6. [Campus Curricula Committee Chair](#)
7. [FS Meeting Agenda](#)
8. [Faculty Senate Chair](#)
9. [Registrar](#)
10. [kristyg](#)

Approval Path

1. 04/08/16 2:14 pm
aldahhanm:
Approved for
RCHEMENG Chair
2. 04/08/16 2:18 pm
Kaylon Buckner
(kleb6b): Approved
for CCC Secretary
3. 04/27/16 4:24 pm
sraper: Approved
for Engineering
DSCC Chair

History

1. Aug 4, 2014 by
pantaleoa

kleb6b (04/08/16 8:13 am): Rollback: Rollback

kleb6b (07/11/16 3:03 pm): Update Effective Term

Key: 14

[Preview Bridge](#)

Course Inventory Change Request

New Experimental Course Proposal

Date Submitted: 06/03/16 1:41 pm

Viewing: **EDUC 2001.001 : Introduction to STEM Education**

File: 4318

Last edit: 06/06/16 9:19 am

Changes proposed by: welchms

Requested Spring 2017

Effective Change
Date

Department History and Political Science

Discipline Education (EDUC)

Course Number 2001

Topic ID 001

Experimental Introduction to STEM Education
Title

Experimental Intro to STEM Ed
Abbreviated
Course Title

Instructors TBD

Experimental
Catalog
Description

Provides an overview of attributes found in a STEM learning environment.
Participants will learn specific instructional strategies used to deliver integrative
STEM education in the elementary school classroom.

Prerequisites

Field Trip
Statement

Credit Hours	LEC: 3	LAB: 0	IND: 0	RSD: 0	Total: 3
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Justification for
new course: This course is not required for the BA in Multidisciplinary Studies, however students seeking elementary certification will identify this as their degree program. Elementary Education and STEM will serve as their focus areas within the BAMS

In Workflow

1. RHISTORY Chair
2. CCC Secretary
3. Arts & Humanities DSCC Chair
4. Pending CCC Agenda post
5. CCC Meeting Agenda
6. Campus Curricula Committee Chair
7. Registrar

Approval Path

1. 06/04/16 10:48 am
sfogg: Approved for RHISTORY Chair
2. 06/06/16 8:11 am
Kaylon Buckner (kleb6b):
Approved for CCC Secretary
3. 06/06/16 9:19 am
dewitt:
Approved for Arts & Humanities DSCC Chair

degree.

*This course is required by DESE for elementary certification.

*Education courses are housed within the History and Political Science department.

Future inquiries re: this course should be directed to Dr. Jana Neiss.

Semester(s)

previously taught

Co-Listed

Courses:

Course Reviewer **dewittp (06/06/16 9:19 am):** Updated Abbreviation
Comments

Key: 4318
[Preview Bridge](#)

Course Inventory Change Request

New Experimental Course Proposal

Date Submitted: 07/14/16 4:08 pm

Viewing: **ENGLISH 2001.001 : Graphic Novel**

File: 4322

Last edit: 07/15/16 8:14 am

Changes proposed by: kswenson

Requested	Spring 2017
Effective Change	
Date	
Department	English and Technical Communication
Discipline	English (ENGLISH)
Course Number	2001
Topic ID	001
Experimental	
Title	Graphic Novel
Experimental	Graphic Novel
Abbreviated	
Course Title	
Instructors	Rachel Schneider

Experimental	
Catalog	
Description	

In Workflow

- 1. **RENLISH Chair**
- 2. **CCC Secretary**
- 3. **Arts & Humanities DSCC Chair**
- 4. **Pending CCC Agenda post**
- 5. **CCC Meeting Agenda**
- 6. Campus Curricula Committee Chair
- 7. Registrar

Approval Path

- 1. 07/14/16 4:09 pm
kswenson:
Approved for
RENLISH Chair
- 2. 07/15/16 8:14 am
Kaylon Buckner (kleb6b):
Approved for CCC Secretary
- 3. 07/15/16 9:39 am
dewittp:
Approved for Arts & Humanities DSCC Chair
- 4. 07/28/16 10:59

am
Shauntae Ellis
(smetg6):
Approved for
Pending CCC
Agenda post

The graphic novel is not only a distinct narrative form, but also an important cultural object which engages complex questions of identity and culture. This class studies the graphic novel as literature and as a popular art form.

Prerequisites

English 1120 and one semester of college literature.

Field Trip

Statement

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

Justification for

new course:

Graphic novel are becoming an increasingly standard genre of contemporary fiction and popular culture--even as they're gaining respect and scholarly attention as "literary." This course has been requested by non-majors and majors alike and should be very popular.

Semester(s)

previously taught

N/A

Co-Listed

Courses:

Course Reviewer

Comments

Course Inventory Change Request

New Experimental Course Proposal

Date Submitted: 02/26/16 12:09 pm

Viewing: **EXP ENG 6001.002 : High Speed Imaging Methods in Explosives Engineering**

File: 4307

Last edit: 05/17/16 12:07 pm

Changes proposed by: pworsey

Requested Fall 2016

Effective Change

Date

Department Mining & Nuclear Engineering

Discipline Explosives Engineering (EXP ENG)

Course Number 6001

Topic ID 002

Experimental Title High Speed Imaging Methods in Explosives Engineering

Experimental High Speed Imaging

Abbreviated

Course Title

Instructors Dr. Vilem Petr

Experimental

Catalog

Description

A wide range of material will be covered including: detonation and shock wave physics, an introduction to high-speed imaging, lighting and selecting lenses for the best results, triggering strategies, and analysis of high-speed imagery.

Prerequisites Graduate standing. Exp Eng 5612 or equivalent. Successful background check.

Field Trip

Statement

Credit Hours

LEC: 2

LAB: 1

IND: 0

RSD: 0

Total: 3

Justification for new course:

Expansion of offerings for MS and Ph.D. students.

In Workflow

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

Approval Path

1. 05/17/16 12:00 pm
reflori: Approved for RMINNUCL Chair
2. 05/17/16 12:07 pm
Kaylon Buckner (kleb6b): Approved for CCC Secretary
3. 06/07/16 9:46 am
srafer: Approved for Engineering DSCC Chair

Semester(s)
previously taught

Co-Listed
Courses:

Course Reviewer
Comments

Key: 4307
[Preview Bridge](#)

Course Inventory Change Request

New Experimental Course Proposal

Date Submitted: 07/19/16 3:45 pm

Viewing: **PET ENG 4001.001 : Well Plugging and Abandonment**

File: 4323

Last edit: 07/20/16 3:19 pm

Changes proposed by: caolila

Requested	Fall 2016
Effective Change Date	
Department	Geosciences and Geological and Petroleum Engineering
Discipline	Petroleum Engineering (PET ENG)
Course Number	4001
Topic ID	001
Experimental Title	Well Plugging and Abandonment
Experimental Abbreviated Course Title	Well Plg & Abd
Instructors	Dr. Shari Dunn-Norman
Experimental Catalog Description	

In Workflow

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

Approval Path

- 1. 07/19/16 4:54 pm
ikuenobe:
Approved for
RGEOSENG Chair
- 2. 07/20/16 3:19 pm
Shauntae Ellis
(smetg6):
Approved for CCC
Secretary
- 3. 07/25/16 9:04 am
sraper: Approved
for Engineering
DSCC Chair
- 4. 07/28/16 10:59
am
Shauntae Ellis

(smetg6):
Approved for
Pending CCC
Agenda post

Plugging and abandonment procedures and methods applied to aging or uneconomic oil and gas wells for final well closure. Special considerations of temporary abandonment. Includes consideration of final well economics, regulatory framework and environmental considerations.

Prerequisites

Pre Req: PET ENG 3330, PET ENG 4410, PET ENG 4590, Civ Eng 2210, and Civ Eng 3330, and Pre Req or Co Req: PET ENG 4210

Field Trip

Statement

No field trip requirement.

Credit Hours

LEC: 3

LAB: 0

IND: 0

RSD: 0

Total: 3

Justification for

new course:

Thousands of wells are abandoned each year and graduating petroleum engineers will encounter this activity in their careers. However, few if any petroleum engineering programs have historically offered courses aimed at well abandonment. Through a novel course exchange mechanism with LSU, prompted by the Chevron Mechanical Earth Modeling initiative, materials related to well plugging and abandonment will be made available for a course on this subject.

Semester(s)

previously taught

Co-Listed

Courses:

Course Reviewer

Comments

