Minutes of the Campus Curricula Committee Meeting
October 31, 2017
8:30am, 106 Parker Hall
(For Faculty Senate Meeting of November 9, 2017)

Attendees: Steve Raper, Barry Flachsbart, Petra Dewitt, Katie Shannon, Paul Worsey, Geariod MacSithigh, Kristy Giacomelli and Brittany Parnell

The following curriculum forms were discussed and approved:

Course Change Forms:
File: 2327.1  BUS 5115: Introduction to Individual and Group Dynamics in Business
File: 4470   BUS 5730: Machine Learning and Artificial Intelligence for Business
File: 2160.7 CER ENG 3220: Phase Equilibria
File: 1195.1 CER ENG 3325: Ceramic Processing Lab II
File: 1659.1 CER ENG 4250: Thermal Properties Of Ceramics
File: 716.3  COMP ENG 5170: Real-Time Systems
File: 4375   COMP SCI 5602: Introduction to Cryptography
File: 912.1  FCON 4300: Research Methods and Applications in Economics and Business
File: 565.1  ERP 5410: Use of Business Intelligence
File: 2561.4 GEOLOGY 4010: Seminar
File: 779.1  GEOLOGY 5010: Seminar
File: 152.1  GEOLOGY 6511: Advanced Petroleum Geology
File: 1775.1 GEOPHYS 5010: Seminar
File: 791.1  GEOPHYS 6251: Geophysical Inverse Theory
File: 4478   IS&T 4444: Introduction to Data Warehouses
File: 4407.2 IS&T 5520: Data Science and Machine Learning with Python
File: 4471   IS&T 5535: Machine Learning Algorithms and Applications
File: 28.1   IS&T 6444: Essentials of Data Warehouses

Degree Change Forms:
File: 146.19 BIO SC-BA: Biological Sciences BA
File: 123.3  PRE-MED-MI: Pre-Medicine Minor
File: 253    PROPOSED: Minor in Artificial Intelligence and Machine Learning in Business

Experimental Course Forms:
File: 4485   GEOLOGY 5001.001: Petroleum Geochemistry
File: 4481   MS&E 5001.002: Molecular Engineering and Soft Nanomaterials
File: 4482   MS&E 6001.002: Advanced Molecular Engineering and Soft Nanomaterials
The following forms were tabled:

- File: 4480  SPANISH 3001.002: Spanish Translation for Technical Applications
- File: 942.1  ARCH ENG 4800: Principles of HVAC I
- File: 2069.5  ARCH ENG 4820: Building Lighting Systems
- File: 4219.5  ARCH ENG 4850: Building Electrical Systems
- File: 4440  CHEM ENG 4001.001: Introduction to Phase Equilibrium
- File: 249  PROPOSED: Master of Science in Explosives Technology

Implementation of potential graduate-level education courses through Project Lead The Way were discussed.

Statements regarding FE score releases for engineering degree program requirements were discussed.

The meeting adjourned at 9:20am.

Stephen A. Raper, Chair
Missouri S&T Campus Curricula Committee
Course Change Request

Date Submitted: 08/23/17 8:33 am

Viewing: **BUS 5115: Introduction to Individual and Group Dynamics in Business Settings**

File: 2327.1
Last edit: 08/23/17 8:33 am
Changes proposed by: barryf

Requested Effective Change Date
Spring 2018 Fall 2014

Department Business and Information Technology
Discipline Business (BUS)
Course Number 5115
Title

In Workflow
1. RBUSADMN Chair
2. CCC Secretary
3. Social Sciences DSCC Chair
4. Pending CCC Agenda post
5. CCC Meeting Agenda
6. Campus Curricula Committee Chair
7. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. CAT entry
11. Peoplesoft

Approval Path
1. 08/24/17 12:37 pm
   siauk: Approved for RBUSADMN Chair
2. 08/24/17 4:01 pm
   Brittany Parnell (ershenb):
Introduction to Individual \underline{Teambuilding} and Group Dynamics \underline{Leadership} in Business [Settings]

**Abbreviated Course Title**  
Indiv and Group Dynamics

**Course Title**  
Teambuilding in Business

**Catalog Description**  
This course will cover contemporary theories of business. It covers leadership styles, principles, models, issues, and group dynamics. Applications through analytical and intellectual examination.

Leadership theories, group
dysfunction/function, positive group interactions, change impacts, the importance of business ethics as well as the role of gender and culture on the group will be examined. Key components of teams are introduced, with opportunities to practice and develop both leadership and teambuilding skills. Case studies required.

Prerequisites

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:
Update course to use more current terminology and explicitly mention ethics as well as the role of gender and culture in description.

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer
Comments
Course Change Request

New Course Proposal

Date Submitted: 09/20/17 1:56 pm
Viewing: BUS 5730: Machine Learning and Artificial Intelligence for Business

File: 4470
Last edit: 09/20/17 1:56 pm
Changes proposed by: barryf

Requested Effective Change Date
Spring 2018

Department Business and Information Technology
Discipline Business (BUS)
Course Number 5730
Title

Approval Path
1. 09/21/17 5:27 pm
siauk: Approved for RBUSADMIN Chair
2. 09/22/17 10:14 am
Brittany Parnell (ershenb):
<table>
<thead>
<tr>
<th>Machine Learning and Artificial Intelligence for Business</th>
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<tbody>
<tr>
<td><strong>Abbreviated Course Title</strong></td>
</tr>
<tr>
<td><strong>Catalog Description</strong></td>
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</table>

https://nextcatalog.mst.edu/courseleaf/courseleaf.cgi?page=/courseadmin...
learning and artificial intelligence, such as neural networks and deep learning.

Prerequisites
IS&T 1552 or Comp Sci 1510; or Graduate Standing, understanding of management information systems, programming knowledge.

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:
Required for proposed new Graduate Certificate in AI, Machine Learning, and Automation in Business.
Also for proposed new Minor in Artificial Intelligence and Machine Learning in Business.

Semesters previously offered as an experimental course
None

Co-Listed Courses:

Course Reviewer Comments
# Course Change Request

**Date Submitted:** 09/08/17 3:00 pm

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

**File:** 2160.7

**Last approved:** 10/21/16 2:24 pm

**Last edit:** 10/31/17 9:53 am

**Changes proposed by:** smiller

<table>
<thead>
<tr>
<th>Programs referencing this course</th>
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<tbody>
<tr>
<td>CR ENG-BS: Ceramic Engineering BS</td>
</tr>
<tr>
<td>GL&amp;GPH-BS: Geology and Geophysics BS</td>
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<tr>
<th>Other Courses referencing this course</th>
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<tbody>
<tr>
<td>In The Prerequisites:</td>
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<tr>
<td>CER ENG 4410: Introduction to Integrated Computational Materials Engineering</td>
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<tr>
<td>Fall 2018 Spring 2017</td>
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<tbody>
<tr>
<td>Materials Science &amp; Engineering</td>
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<tr>
<th>Discipline</th>
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<tr>
<td>Ceramic Engineering (CER ENG)</td>
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<tr>
<th>Course Number</th>
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<td>3220</td>
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<th>Approval Path</th>
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<td>1. 09/08/17 9:32 pm</td>
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<tr>
<td>Greg Hilmas (ghilmas):</td>
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<tr>
<td>Approved for RMATSENG Chair</td>
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<tr>
<td>2. 09/11/17 10:02 am</td>
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<tr>
<td>Brittany Parnell (ershenb):</td>
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</table>
Approved for CCC Secretary
3. 09/20/17 8:48 am
sraper: Approved for Engineering DSCC Chair
4. 10/12/17 1:19 pm
Brittany Parnell (ershenb):
Approved for Pending CCC Agenda post
5. 10/31/17 9:53 am
Brittany Parnell (ershenb):
Rollback to Pending CCC Agenda post for CCC Meeting Agenda
6. 10/31/17 9:54 am
Brittany Parnell (ershenb):
Approved for Pending CCC Agenda post
7. 10/31/17 10:13 am
Brittany Parnell (ershenb):
Approved for CCC Meeting Agenda
8. 10/31/17 2:23 pm
sraper: Approved for Campus
Phase Equilibria

Abbreviated Course Title
Phases Equilibria

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

Prerequisites
A "C" or better grade of "C" or better in Cer Chem 1320 or Met Eng 3230.

Field Trip Statement

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

Required for Majors
Yes

Elective for Majors
No

Justification for change:
previous prerequisite (Met 1210) deactivated. Prefer thermodynamics (Cer 3230) as prerequisite knowledge.
offered as an experimental course

Co-Listed Courses:

Course Reviewer Comments

sraper (09/20/17 8:48 am): Changed Effective Date per S. Miller.
ershenb (10/31/17 9:53 am): Rollback: Courseleaf workflow test
Course Change Request

Date Submitted: 09/08/17 3:05 pm

Viewing: CER ENG 3325: Ceramic Processing Lab II

File: 1195.1
Last edit: 09/15/17 12:27 pm
Changes proposed by: smiller

Programs referencing this course

CR ENG-BS: Ceramic Engineering BS

Requested Effective Change Date
Fall 2018 2014

Department Materials Science & Engineering
Discipline Ceramic Engineering (CER ENG)
Course Number 3325
Title

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. CAT entry
11. Peoplesoft

Approval Path
1. 09/08/17 9:33 pm
   Greg Hilmas (ghilmas):
   Approved for RMATSENG Chair
2. 09/11/17 10:10 am
   Brittany Parnell (ershenb):
Ceramic Processing Lab II

Abbreviated Title: Ceramic Process Lab II

Catalog Description:
The second half of a two-semester sequence that gives students practical knowledge of the methods and techniques used in the fabrication of ceramics.

Prerequisites:
A "C" or better grade of "C" or better in Cer Eng 2325. 3315.
Field Trip

Statement

Credit Hours

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<th>RSD: 0</th>
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Total: 2

Required for Majors
Yes No

Elective for Majors
No

Justification for change:
Change to 1 hr LEC and 1 hr LAB allows for a common 50 minute lecture time at the beginning of each week, and then three sections of lab on T, W, and Th, due to limited space and equipment in the lab.

Change prerequisite to allow out of sequence students to proceed through the curriculum.

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer

Comments

kristyg (09/08/17 3:03 pm): Rollback: Rollback per Scott Miller.

sraper (09/13/17 4:04 pm): changed to required for majors.

sraper (09/15/17 12:27 pm): changed effective date to FS 2018
# Course Change Request

**Date Submitted:** 09/08/17 3:07 pm

**Viewing:** **CER ENG 4250 : Thermal Properties Of Ceramics**

**Ceramics**

File: 1659.1

Last edit: 09/15/17 12:27 pm

Changes proposed by: smiller

Programs referencing this course:

- CR ENG-BS: Ceramic Engineering BS

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<tr>
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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. CAT entry
11. Peoplesoft

**Approval Path**

1. 09/08/17 9:33 pm
   Greg Hilmas (ghilmas):
   Approved for RMATSENG Chair

2. 09/11/17 10:19 am
   Brittany Parnell (ershenb):
Thermal Properties Of Ceramics

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<tr>
<th>Abbreviated Course Title</th>
<th>Thermal Prop Of Cer</th>
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Catalog Description

This course will teach the crystal physics underlying heat capacity, internal energy, phonon and photon conduction, and thermal expansion. These properties will be used to rationalize the behavior of a wide variety of ceramic materials in severe thermal environments.

Prerequisites
A grade of "C" or better in Cer Eng 3220. **Senior Standing.**

Field Trip
Statement

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Required for Majors **Yes  No**

Elective for Majors **No**

Justification for change:
Revise prerequisite to assure that students have the knowledge to succeed in the course.

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer Comments

- sraper (09/13/17 4:07 pm): Changed to required for majors.
- sraper (09/15/17 12:27 pm): Changed effective date to FS 2018
# Course Change Request

**Date Submitted:** 09/14/17 12:12 pm

**Viewing:** **COMP ENG 5170 : Real-Time Systems**

File: 716.3  
Last approved: 06/30/14 3:55 am  
Last edit: 10/31/17 11:25 am  
Changes proposed by: stanleyj

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### In Workflow
1. **RELECENG Chair**
2. **CCC Secretary**
3. **RCOMPSCI Chair**
4. **Engineering DSCC Chair**
5. **Pending CCC Agenda post**

### Agenda
6. **CCC Meeting Agenda**
7. **Campus Curricula Committee Chair**
8. **FS Meeting Agenda**

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<th>Title</th>
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### Approval Path
1. 09/14/17 8:24 pm  
   Daryl Beetner (daryl): Approved for **RELECENG Chair**
2. 09/15/17 10:42 am
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<th>Date</th>
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<th>Message</th>
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<tbody>
<tr>
<td>09/15/17</td>
<td>11:17 am</td>
<td>George Markowsky (markowskyg)</td>
<td>Approved for RCOMPSCI Chair</td>
</tr>
<tr>
<td>09/20/17</td>
<td>08:46 am</td>
<td>sraper</td>
<td>Approved for Engineering DSCC Chair</td>
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<tr>
<td>10/12/17</td>
<td>14:12 pm</td>
<td>Brittany Parnell (ershenb)</td>
<td>Approved for Pending CCC Agenda post</td>
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<tr>
<td>10/31/17</td>
<td>11:25 am</td>
<td>Brittany Parnell (ershenb)</td>
<td>Rollback to Pending CCC Agenda post for CCC Meeting Agenda</td>
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<tr>
<td>10/31/17</td>
<td>11:25 am</td>
<td>Brittany Parnell</td>
<td>Rollback to Pending CCC Agenda post for CCC Meeting Agenda</td>
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</table>
Real-Time Systems
Abbreviated Real Time Systems
Course Title
Catalog Description
Introduction to real-time (R-T) systems and R-T kernels, also known as R-T operating systems, with an emphasis on scheduling algorithms. The course also includes specification, analysis, design and validation techniques for R-T systems. Course includes a team project to design an appropriate R-T operating system.
Prerequisites
COMP ENG 3150 or COMP SCI 3800.
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 change:

The material in the existing course Comp Eng 5170 is on the boundary between Computer Engineering and Computer Science. The ECE and CS departments would like to alternate their instructors teaching this course. The request to co-list Comp Eng 5170 with the new Comp Sci 5205 course will facilitate Computer Engineering and Computer Science students being able to count this course towards their degree programs. The request is to co-list the permanent course Comp Eng 5170 with a new course Comp Sci 5205.

Co-listed with Comp Sci 5205.

Semesters
previously
offered as an experimental course

Co-Listed Courses:

**COMP SCI 5205 - Course Not Found**

Course Reviewer Comments

ershenb (10/31/17 11:25 am): Rollback: Courseleaf workflow test
Course Change Request

New Course Proposal

Date Submitted: 09/13/17 4:46 pm

Viewing: **COMP SCI 5602 : Introduction to Cryptography**

File: 4375

Last edit: 10/12/17 2:13 pm

Changes proposed by: tauritzd

Requested Spring 2018

Effective Change Date

Department Computer Science

Discipline Computer Science (COMP SCI)

Course Number 5602

Title

In Workflow

1. RCOMPSCI 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. CAT entry
11. Peoplesoft

Approval Path

1. 09/14/17 9:38 am Brittany Parnell (ershenb): Approved for RCOMPSCI Chair
2. 09/14/17 9:39 am Brittany Parnell (ershenb): Rollback to
3. 09/14/17 9:59 am
George Markowsky (markowskyg): Approved for RCOMPSCI Chair

4. 09/14/17 10:14 am
Brittany Parnell (ershenb): Approved for CCC Secretary

5. 09/20/17 8:46 am
sraper: Approved for Engineering DSCC Chair

6. 10/12/17 2:14 pm
Brittany Parnell (ershenb): Approved for Pending CCC Meeting Agenda

7. 10/31/17 10:24 am
Brittany Parnell (ershenb): Approved for CCC Meeting Agenda

8. 10/31/17 2:23 pm
sraper: Approved for Campus Curricula Committee Chair

COMP SCI 5602: Introduction to Cryptography
https://nextcatalog.mst.edu/courseleaf/courseleaf.cgi?page=/courseadmin...
### Introduction to Cryptography

<table>
<thead>
<tr>
<th>Abbreviated Course Title</th>
<th>Intro to Cryptography</th>
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#### Catalog

**Description**

Introduces fundamentals of modern cryptography. Topics include basic number theory, public & private key encryption schemes, cryptographic hash functions, message authentication codes, elliptic curve cryptography, Diffie-Hellman key agreements, digital signatures, PUFs, quantum cryptography, and generation of prime numbers and pseudo-random sequences.

**Prerequisites**

A grade of "C" or better in COMP SCI 5200 or a grade of "B" or better in COMP SCI 2500.

#### Field Trip Statement

Credit Hours

<table>
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<tr>
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<td>Total: 3</td>
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Required for Majors

Yes

Elective for Majors

No

**Justification for new course:**

This course covers material which is critical to cyber security, one of the CS department's up and coming focus areas. It is also very popular with the students, evidenced by an enrollment of forty in FS2016, which is highly unusual for a 6000 level course in the CS department.

Based on the instructor's experience teaching this course and the recognition that cryptography needs to be a foundational course for graduate students specializing in cyber security, we are requesting a change to 5000-level (in its experimental form it
was offered at the 6000-level).

Semesters previously offered as an experimental course:
Offered as COMP SCI 6001 - Cryptography in FS2016 and as COMP SCI 401 - Cryptography in FS2013.

Co-Listed Courses:

Course Reviewer Comments:

ershenb (09/13/17 3:20 pm): Rollback: Rollback so Dr. Markowsky can access the form.

ershenb (09/14/17 9:39 am): Rollback: edited email address for user workflow and rolling back again so Dr. Markowsky can access the form.
Course Change Request

Date Submitted: 10/06/17 8:30 am

Viewing: **ECON 4300 2300**: Research Methods Economic and Business Applications in Economics and Business

File: 912.1

Last edit: 10/31/17 10:27 am

Changes proposed by: ershenb

**Requested** Spring 2018 Fall 2014

**Effective Change Date**

**Department** Economics

**Discipline** Economics (ECON)

**Course Number** 4300 2300

**Title**

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In Workflow

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

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Approval Path

1. 10/06/17 3:59 pm Gregory Gelles (gelles): Approved for RECONOMI Chair
2. 10/06/17 4:21 pm Brittany Parnell (ershenb): Approved for CCC
ECON 4300: Research Methods and Applications in Economics and Business

Abbreviated Title: Res Mth and Ecn Bus App
Course Title: Econ & Bus Applications

Catalog Description:
Introduction of basic econometric and statistical techniques with empirical illustrations that reference to solve real economic and business issues.
Students will be introduced to modern statistical software packages (STATA, R), but also work with productivity software (Excel, PowerPoint) to perform quantitative analysis and present their results. Practical, hands-on use of Excel and SPSS will be introduced in the course.

Prerequisites
Econ 1100 or Econ 1200; Math 1140 or higher; Stat 1115 or Stat 3111 or Stat 3113 or Stat 3115 or Stat 3117 or Stat 5643.

Field Trip
Statement

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

Required for Majors Yes No

Elective for Majors No

Justification for change:
This is an upper-level applied quantitative methods course and the number upgrade better reflects the course content. The current title is too vague given the course content (applied quantitative methods) and the proposed title conveys that content more accurately. The modified course description includes the more modern, dedicated statistical packages currently used in the class.

Semesters previously offered as an experimental course n/a

Co-Listed Courses:
Course Reviewer

Comments

ershenv (10/06/17 4:21 pm): The form had CourseLeaf technical issues so it is correctly going through the workflow approval cycle again.

ershenv (10/31/17 10:27 am): corrected abb. title with an "and" instead of "&."
Course Change Request

Date Submitted: 09/21/17 1:26 pm

Viewing: **ERP 5410: Use of Business Intelligence**

**File:** 565.1

**Last edit:** 10/31/17 10:41 am

Changes proposed by: barryf

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Catalog Pages referencing this course

- **Information Science and Technology**

Programs referencing this course

- **DSCMGMT-MI: Digital Supply Chain Mgt Minor**

Other Courses referencing this course

In The Prerequisites:

- **IS&T 6443: Information Retrieval and Analysis**

---

Requested: **Spring 2018 Fall 2014**

Effective Change Date

- Department: Business and Information Technology

- Discipline: Enterprise Resource Planning (ERP)

---

In Workflow

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

---

Approval Path

1. 09/21/17 5:27 pm siauk: Approved for RBUSADMN Chair
2. 09/22/17 10:27 am Brittany Parnell (ershengb):
<table>
<thead>
<tr>
<th>Course Number</th>
<th>5410</th>
</tr>
</thead>
</table>

### Use of Business Intelligence

<table>
<thead>
<tr>
<th>Abbreviated Course Title</th>
<th>Use of Business Intel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Title</td>
<td>Intelligence</td>
</tr>
</tbody>
</table>

**Catalog Description**

This course introduces data-oriented techniques for business intelligence. Topics include Business Intelligence architecture, Business Analytics, and Enterprise Reporting. SAP Business Information Warehouse, Business Objects, or similar tools.
will be used to access and present data, generate reports, and perform analysis.

Prerequisites

IS&T **1750 3423** or equivalent; ERP 2110 or preceded or accompanied by ERP 5110.

Field Trip
Statement

<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>LEC: 3</th>
<th>LAB: 0</th>
<th>IND: 0</th>
<th>RSD: 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total: 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Required for Majors: No

Elective for Majors: No

Justification for change:

Instructor plans to cover DBMS topics needed in the course, so the 3423 prereq is not needed; however, understanding of MIS is needed, so 1750 has been added (it was a prereq for 3423, hence not specified earlier).

Semesters previously offered as an experimental course:

Co-Listed Courses:

Course Reviewer Comments:

**ershenb (10/31/17 10:38 am)**: changed abb. title from "intelligence" to to "intel."
# Course Change Request

**Date Submitted:** 09/01/17 11:38 am

**Viewing:** GEOLOGY 4010 : Seminar

**File:** 2561.4

**Last approved:** 01/30/17 3:14 am

**Last edit:** 10/31/17 10:43 am

**Changes proposed by:** jhogan

## Programs referencing this course

- **GL&GPH-BS: Geology and Geophysics BS**

## Requested Effective Change Date

<table>
<thead>
<tr>
<th>Department</th>
<th>Geosciences and Geological and Petroleum Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discipline</td>
<td>Geology (GEOLOGY)</td>
</tr>
<tr>
<td>Course Number</td>
<td>4010</td>
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</tbody>
</table>

**Title**

**Requested Effective Change Date:** Fall 2018 2017

## In Workflow

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

## Approval Path

1. **09/14/17 1:24 pm**
   - David Borrok (borrokd):
   - Approved for RGEOSENG Chair

2. **09/14/17 2:00 pm**
   - Brittany Parnell (ershenb):
   - Approved for CCC
3. 09/27/17 9:34 am
Katie Shannon (shannonk):
Approved for Sciences DSCC Chair

4. 10/12/17 2:17 pm
Brittany Parnell (ershenb):
Approved for Pending CCC Agenda post

5. 10/31/17 10:43 am
Brittany Parnell (ershenb):
Approved for CCC Meeting Agenda

6. 10/31/17 2:23 pm
sraper: Approved for Campus Curricula Committee Chair

---

History
1. Jan 30, 2017 by liukh (2561.1)
Discussion of current topics. Required for two semesters during senior year. (Course cannot be used for graduate credit).

Prerequisites
Senior standing.

Field Trip
Statement

Credit Hours
LEC: 0.5
LAB: 0
IND: 0
RSD: 0

Total: 0.5

Required for Majors
Yes

Elective for Majors
No

Justification for change:
1) Not assigning a fixed number of credits was an oversight. Students have found this loop-hole and were signing up for extra credits as a "GPA" boost. This is a "one credit course" spread over two semesters. Assigning 0.5 credits per semester fixes this problem.

2) In addition, this will align the credit hours of the Geology and Geophysics seminar with similar courses in the department at the request of the new department Chair.

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer
Comments

ershenb (09/14/17 2:00 pm): updated effective change date to Spring 2018.
ershenb (10/31/17 10:43 am): updated effective date to "Fall 2018" and total hours to "0.5"
Course Change Request

Date Submitted: 09/14/17 2:01 pm

Viewing: GEOLOGY 5010 : Seminar

File: 779.1
Last edit: 10/31/17 10:44 am
Changes proposed by: jhogan

Requested: Fall 2018 2014

Effective Change Date

Department: Geosciences and Geological and Petroleum Engineering

Discipline: Geology (GEOLOGY)

Course Number: 5010

Title

In Workflow

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

Approval Path

1. 09/14/17 3:11 pm
   David Borrok (borrokd):
   Approved for RGEOSENG Chair

2. 09/15/17 9:32 am
   Brittany Parnell (ershenb):
   Approved for CCC
Secretary
3. 09/27/17 9:34 am
Katie Shannon (shannonk): Approved for Sciences DSCC Chair

4. 10/12/17 2:36 pm
Brittany Parnell (ershenb): Approved for Pending CCC Agenda post

5. 10/31/17 10:44 am
Brittany Parnell (ershenb): Approved for CCC Meeting Agenda

6. 10/31/17 2:24 pm
sraper: Approved for Campus Curricula Committee Chair

---

Seminar

<table>
<thead>
<tr>
<th>Abbreviated</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Seminar</td>
</tr>
</tbody>
</table>

Catalog
Description
Discussion of current topics.

Prerequisites
Field Trip

Statement

Credit Hours

<table>
<thead>
<tr>
<th></th>
<th>LEC: 0.5</th>
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<th>RSD: 0</th>
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<tr>
<td></td>
<td>0.5-6</td>
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</table>

Required for Majors
No

Elective for Majors
Yes

Justification for change:
The change in credit hours from 0-6 to 0.5 per semester, with the ability of students to sign up for more than one semester, is being made to bring this course in alignment with the work load. In the past students have somehow managed to sign-up for several credit hours in one semester for this course and we are closely this loop-hole.

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer

Comments

ershenb (10/31/17 10:44 am): updated effective date to "Fall 2018" and total hours to "0.5"
Course Change Request

Date Submitted: 09/12/17 10:40 am

Viewing: GEOLOGY 6511: Advanced Petroleum Geology

Geology

File: 152.1
Last edit: 10/31/17 10:47 am
Changes proposed by: johfb

Requested: Fall 2018 2014

Effective Change Date

Department: Geosciences and Geological and Petroleum Engineering

Discipline: Geology (GEOLOGY)

Course Number: 6511

Title

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

Approval Path
1. 09/12/17 11:07 am
   David Borrok (borrokd):
   Approved for RGEOSENG Chair
2. 09/12/17 11:18 am
   Brittany Parnell
Advanced Petroleum Geology

Abbreviated Course Title
Adv Petroleum Geology

Catalog Description
The principles of petroleum geology of various types of oil and gas accumulation are applied in solving hydrocarbon exploration and...
developmental problems. Various types of oil and gas accumulations are reviewed in detail. Study of criteria useful in evaluating the petroleum potential of undrilled areas. Special investigation assignment is required.

Prerequisites
Geology 3310, Geology 5513, Geology 5661 or Geology 6811. 4511.

Field Trip

Statement

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

Required for Majors No

Elective for Majors No

Justification for change:
4511 was renumbered to 5513 and other prerequisites are required so that students are better prepared for the class.

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer
Comments
ershenb (09/12/17 11:17 am): updated the effective change date to Spring 2018.
ershenb (10/31/17 10:47 am): updated effective date to "Fall 2018"
Course Change Request

Date Submitted: 09/14/17 2:03 pm

Viewing: **GEOPHYS 5010 : Seminar**

File: 1775.1

Last edit: 10/31/17 10:51 am

Changes proposed by: jhogan

- Requested: Fall **2018 2014**
- Effective Change Date
- Department: Geosciences and Geological and Petroleum Engineering
- Discipline: Geophysics (GEOPHYS)
- Course Number: 5010
- Title

In Workflow

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

Approval Path

1. 09/14/17 3:13 pm
   David Borrok (borrokd):
   Approved for RGEOSENG Chair
2. 09/15/17 9:34 am
   Brittany Parnell (ershenb):
   Approved for CCC
<table>
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<th>#</th>
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<tr>
<td>3</td>
<td>09/27/17</td>
<td>9:36 am</td>
<td>Katie Shannon</td>
<td>Secretary</td>
<td>Approved</td>
<td>Sciences DSCC Chair</td>
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<td>10/12/17</td>
<td>2:37 pm</td>
<td>Brittany Parnell</td>
<td>Secretary</td>
<td>Approved</td>
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<td>5</td>
<td>10/31/17</td>
<td>10:46 am</td>
<td>Brittany Parnell</td>
<td>Secretary</td>
<td>Approved</td>
<td>CCC Meeting Agenda</td>
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<td>6</td>
<td>10/31/17</td>
<td>2:24 pm</td>
<td>sraper</td>
<td>Secretary</td>
<td>Approved</td>
<td>Campus Curricula Committee Chair</td>
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**Seminar**

<table>
<thead>
<tr>
<th>Abbreviated Course Title</th>
<th>Seminar</th>
<th>Catalog</th>
<th>Description</th>
<th>Prerequisites</th>
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<tr>
<td>Seminar</td>
<td></td>
<td></td>
<td>Discussion of current topics.</td>
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</table>
Field Trip Statement

Credit Hours

<table>
<thead>
<tr>
<th>LEC</th>
<th>LAB</th>
<th>IND</th>
<th>RSD</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Total: 0.5 0-6

Required for Majors: No

Elective for Majors: No

Justification for change:
The change in credit hours from 0-6 to 0.5 per semester, with the ability of students to sign up for more than one semester, is being made to bring this course in alignment with the work load. In the past students have somehow managed to sign-up for several credit hours in one semester for this course and we are closing this loop-hole.

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer Comments

ershenb (10/31/17 10:51 am): updated effective date to "Fall 2018"
Course Change Request

Date Submitted: 09/15/17 2:26 pm

Viewing: GEOPHYS 6251: Geophysical Inverse Theory

File: 791.1
Last edit: 10/31/17 10:56 am
Changes proposed by: liukh

Requested Effective Change Date
Fall 2018 2014

Department Geosciences and Geological and Petroleum Engineering
Discipline Geophysics (GEOPHYS)
Course Number 6251
Title

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

Approval Path
1. 09/15/17 2:27 pm
   David Borrok (borrokd):
   Approved for RGEOSENG Chair
2. 09/15/17 2:43 pm
   Brittany Parnell (ershenb):
   Approved for CCC
Geophysical Inverse Theory

**Abbreviated Course Title**: Geophys Inv Geophysical

**Course Title**: Inverse Theo

**Catalog Description**: A study of inverse theory applied to geophysical data, focusing on the relationship between data and model spaces and ways to estimate model parameters via global and local optimization techniques.

**Prerequisites**: 

- GEOPHYS 6251: Geophysical Inverse Theory
  
https://nextcatalog.mst.edu/courseleaf/courseleaf.cgi?page=/courseadmin...
Geophys 3210 or Graduate Standing in GGPE. Geophys 286 or 384, Math 325, Stat 215.

Field Trip Statement

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

Required for Majors No

Elective for Majors Yes No

Justification for change:
The prerequisites were incorrect.
A lab hour is added so that the students can have some hands-on experiences on inversion theory.

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer Comments
ershenb (10/31/17 10:56 am): updated effective date to "fall 2018"
Course Change Request

New Course Proposal

Date Submitted: 09/21/17 1:27 pm

Viewing: IS&T 4444: Introduction to Data Warehouses

File: 4478
Last edit: 10/31/17 10:58 am
Changes proposed by: barryf

Requested: Spring 2018
Effective Change Date:
Department: Business and Information Technology
Discipline: Info Science & Technology (IS&T)
Course Number: 4444
Title:

In Workflow
1. RINFSCTE Chair
2. CCC Secretary
3. Social Sciences DSCC Chair
4. Pending CCC Agenda post
5. CCC Meeting Agenda
6. Campus Curricula Committee Chair
7. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. CAT entry
11. Peoplesoft

Approval Path
1. 09/21/17 5:28 pm
   siauk: Approved for RINFSCTE Chair
2. 09/22/17 10:34 am
   Brittany Parnell (ershenb):
   Approved for CCC
### Course: Introduction to Data Warehouses

<table>
<thead>
<tr>
<th>Abbreviated Course Title</th>
<th>Intro Data Warehouses</th>
</tr>
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</table>

**Catalog Description**

This course presents the topic of data warehouses and the value to the organization. It takes the student from the database platform to structuring a data warehouse environment. Focus is placed on simplicity and addressing the user community needs.
Prerequisites
IS&T 3423.

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:
Mirror course to IS&T 6444, for undergraduate students.

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer Comments
ershemb (10/31/17 10:58 am): Added a "." to the end of the prerequisite.
Course Change Request

Date Submitted: 10/03/17 3:43 pm

Viewing: **IS&T 5520**: Data Science and Machine Learning with Methodologies in Python

File: 4407.2
Last approved: 09/29/17 3:28 am
Last edit: 10/31/17 11:02 am
Changes proposed by: barryf

Programs referencing this course
- ANA&DTA-MI: Business Analytics and Data Science Minor

Requested Effective Change Date
- Spring 2018
- Fall 2017

Department
- Business and Information Technology

Discipline
- Info Science & Technology (IS&T)

Course Number
- 5520

Title
- IS&T 5520: Data Science and Machine Learning with Methodologies in Python

In Workflow
1. RINFSCTE Chair
2. CCC Secretary
3. Social Sciences DSCC Chair
4. Pending CCC Agenda post
5. CCC Meeting Agenda
6. Campus Curricula Committee Chair
7. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. CAT entry
11. Peoplesoft

Approval Path
1. 10/03/17 3:55 pm
   siauk: Approved for RINFSCTE Chair
2. 10/06/17 4:05 pm
   Brittany Parnell (ershenb):
   Approved for CCC Secretary
<table>
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<th>Message</th>
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<tr>
<td>10/06/17</td>
<td>10:08  pm</td>
<td>Barry Flachsbart (barryf)</td>
<td>Approved for Social Sciences DSCC Chair</td>
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<tr>
<td>10/12/17</td>
<td>1:23 pm</td>
<td>Brittany Parnell (ershenb)</td>
<td>Approved for Pending CCC Agenda post</td>
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<tr>
<td>10/31/17</td>
<td>11:03 am</td>
<td>Brittany Parnell (ershenb)</td>
<td>Approved for CCC Meeting Agenda</td>
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<tr>
<td>10/31/17</td>
<td>2:24 pm</td>
<td>sraper</td>
<td>Approved for Campus Curricula Committee Chair</td>
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</table>

**Data Science and Machine Learning with Methodologies in Python**

<table>
<thead>
<tr>
<th>Abbreviated</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Sci ML Methods-in</td>
<td>Python</td>
</tr>
</tbody>
</table>

**Catalog**

https://nextcatalog.mst.edu/courseleaf/courseleaf.cgi?page=/courseadmin...
Description

Examines data science methodologies for scraping, manipulating, transforming, cleaning, visualizing, summarizing, and modeling large-scale data as well as supervised and unsupervised machine learning algorithms applied in various business analytics and data science scenarios. Python libraries such as Pandas, NumPy, Matplotlib, and Scikit-learn are utilized. Python methodologies for manipulating, processing, cleaning, grouping, slicing, reshaping and summarizing information in data-intensive applications; managing files, scraping web pages, mining social media; describing, modeling, analyzing, and visualizing data. Tools include pandas, NumPy, SciPy, and Matplotlib libraries.

Prerequisites

One of Stat 3111, Stat 3113, Stat 3115, Stat 3117 and either IS&T 1552 or Comp Sci 1510; for Graduate Students: Graduate Standing and Knowledge of Calculus, Statistics, and Programming.

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 change:
Made title and description more precise.

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

Course Reviewer Comments

ershenv (10/31/17 11:02 am): updated abb. course title
Course Change Request

New Course Proposal

Date Submitted: 09/20/17 1:55 pm

Viewing: IS&T 5535 : Machine Learning Algorithms and Applications

File: 4471
Last edit: 09/20/17 1:55 pm
Changes proposed by: barryf

Requested: Spring 2018
Effective Change Date: 
Department: Business and Information Technology
Discipline: Info Science & Technology (IS&T)
Course Number: 5535
Title

In Workflow

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

Approval Path

1. 09/20/17 4:55 pm
   siauk: Approved for RINFSCTE Chair
2. 09/22/17 10:39 am
   Brittany Parnell (ershemb): Approved for CCC
Machine Learning Algorithms and Applications

<table>
<thead>
<tr>
<th>Abbreviated Course Title</th>
<th>ML Algs and Apps</th>
</tr>
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<tbody>
<tr>
<td>Catalog</td>
<td>Description</td>
</tr>
<tr>
<td></td>
<td>Introduces techniques of modern machine learning methods with applications in marketing, finance, and other business disciplines. Topics include regression, classification, resampling methods, model selection, regularization, decision trees, support vector machines, principal component analysis, and clustering. R</td>
</tr>
</tbody>
</table>
programming is required.

Prerequisites
One of Stat 3111, Stat 3113, Stat 3115, Stat 3117 and either IS&T 1552 or Comp Sci 1510; or Graduate Standing with knowledge of calculus, statistics, and programming.

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:
Required for proposed new Graduate Certificate in AI, Machine Learning, and Automation in Business.
Also for proposed new Minor in Artificial Intelligence and Machine Learning in Business.

Semesters previously offered as an experimental course
None

Co-Listed Courses:

Course Reviewer
Comments
Course Change Request

Date Submitted: 09/21/17 1:27 pm

Viewing: **IS&T 6444 : Essentials of Data Warehouses**

File: 28.1

Last edit: 09/21/17 1:27 pm

Changes proposed by: barryf

Catalog Pages

- referencing this course
  - Information Science and Technology

Other Courses

- referencing this course

  - In The Catalog Description:
    - **ERP 6444 : Essentials of Data Warehouses**

  - In The Prerequisites:
    - **ERP 6220 : Data Modeling & Visualization Prototyping for Enterprise Decision Dashboards**
    - **IS&T 6448 : Building the Data Warehouse**

Requested Effective Change Date

- **Spring 2018 Fall 2014**

Department

- Business and Information Technology

Discipline

- Info Science & Technology (IS&T)

Course Number

- 6444

In Workflow

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

Approval Path

1. 09/21/17 5:28 pm

   siauk: Approved for RINFSCTE Chair

2. 09/22/17 10:34 am

   Brittany Parnell (ershenb):
   Approved for CCC
Title

Essentials of Data Warehouses

Abbreviated Course Title

Data Warehouses

Catalog Description

This course presents the topic of data warehouses and the value to the organization. It takes the student from the database platform to structuring a data warehouse environment. Focus is placed on simplicity and addressing the user community needs. **Project required.**
Prerequisites
IS&T 5423 or equivalent relational database experience.

Field Trip

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

Required for Majors No

Elective for Majors No

Justification for change:
Update prerequisite.
Clarify need for project as we create a mirrored 4444 course.

Semesters previously offered as an experimental course

Co-Listed Courses:
ERP 6444 - Essentials of Data Warehouses

Course Reviewer Comments
Program Change Request

Date Submitted: 08/17/17 5:08 pm

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

File: 146.19

Last approved: 06/28/17 10:11 am

Last edit: 10/04/17 11:39 am

Changes proposed by: shannonk

Catalog Pages
Using this Program
**Biological Sciences**

<table>
<thead>
<tr>
<th>Start Term</th>
<th>Fall 2018 2017</th>
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<tbody>
<tr>
<td>Program Code</td>
<td>BIO SC-BA</td>
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<tr>
<td>Department</td>
<td>Biological Sciences</td>
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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. 10/04/17 11:24 am
   David Duvernell (duvernelld): Approved for RBIOLSCI Chair
2. 10/04/17 11:40 am
   Brittany Parnell (ershenb): Approved for CCC Secretary
3. 10/12/17 10:20 am
   Katie Shannon (shannonk): Approved for Sciences DSCC Chair
4. 10/12/17 1:16 pm
   Brittany Parnell (ershenb): Approved for Pending CCC Agenda post

History

1. Aug 1, 2014 by Katie Shannon
# 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.

<table>
<thead>
<tr>
<th>Core Courses</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO SCI 1201</td>
<td>Biological Sciences Freshman Seminar</td>
<td>1</td>
</tr>
<tr>
<td>BIO SCI 1113</td>
<td>General Biology</td>
<td>3</td>
</tr>
<tr>
<td>or BIO SCI 1213</td>
<td>Principles of Biology</td>
<td></td>
</tr>
<tr>
<td>BIO SCI 1219</td>
<td>General Biology Lab</td>
<td>2</td>
</tr>
<tr>
<td>BIO SCI 1223</td>
<td>Biodiversity</td>
<td>3</td>
</tr>
<tr>
<td>BIO SCI 1229</td>
<td>Biodiversity Lab</td>
<td>1</td>
</tr>
<tr>
<td>BIO SCI 2213</td>
<td>Cell Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIO SCI 2219</td>
<td>Cell Biology Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>BIO SCI 2223</td>
<td>General Genetics</td>
<td>3</td>
</tr>
<tr>
<td><strong>BIO SCI 2233</strong></td>
<td>Course BIO SCI 2233 Not Found</td>
<td>3</td>
</tr>
<tr>
<td>BIO SCI 2263</td>
<td>Ecology</td>
<td>3</td>
</tr>
<tr>
<td>BIO SCI 4010</td>
<td>Seminar</td>
<td>1</td>
</tr>
</tbody>
</table>

**Advanced courses, 2000 level or higher (at least one with laboratory and one 3000 or 4000 level)**: 9

### Chemistry

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1310</td>
<td>General Chemistry I</td>
</tr>
<tr>
<td>&amp; CHEM 1319</td>
<td>and General Chemistry Laboratory</td>
</tr>
<tr>
<td>&amp; CHEM 1320</td>
<td>and General Chemistry II</td>
</tr>
<tr>
<td>&amp; CHEM 1100</td>
<td>and Introduction To Laboratory Safety &amp; Hazardous Materials</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Name</td>
</tr>
<tr>
<td>------------</td>
<td>-------------------------------------------------</td>
</tr>
<tr>
<td>CHEM 2210</td>
<td>Organic Chemistry I</td>
</tr>
<tr>
<td>CHEM 2220</td>
<td>Organic Chemistry II</td>
</tr>
</tbody>
</table>

**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)

**Computer Science/Statistics (Select one of the following:)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP SCI 1570 &amp; COMP SCI 1580</td>
<td>Introduction To Programming and Introduction To Programming Laboratory</td>
<td>3-4</td>
</tr>
<tr>
<td>or COMP SCI 1971 &amp; COMP SCI 1981</td>
<td>Introduction To Programming Methodology and Programming Methodology Laboratory</td>
<td></td>
</tr>
<tr>
<td>STAT 3111</td>
<td>Statistical Tools For Decision Making</td>
<td></td>
</tr>
<tr>
<td>STAT 5425</td>
<td>Introduction to Biostatistics</td>
<td></td>
</tr>
</tbody>
</table>

**General Requirements for BA**

**English Composition**

ENGLISH 1120 | Exposition And Argumentation | 6 |

One additional composition course

**Western Civilizations**

HISTORY 1100 | Early Western Civilization | 6 |
| HISTORY 1200 | Modern Western Civilization | |

**Foreign Language (three semesters of a foreign language)**

**Humanities (including one class in each of literature, philosophy, and fine arts)**

**Social Sciences (including classes in two of the following three subjects: economics, political science, psychology)**

**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:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 2219</td>
<td>Organic Chemistry I Lab and Organic Chemistry II Lab</td>
<td>2</td>
</tr>
<tr>
<td>CHEM 2229</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2 semesters of Physics and labs:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYSICS 1145 &amp; PHYSICS 1119</td>
<td>College Physics I and General Physics Laboratory</td>
<td>8-10</td>
</tr>
<tr>
<td>or PHYSICS 1111 &amp; PHYSICS 1119</td>
<td>General Physics I and General Physics Laboratory</td>
<td></td>
</tr>
</tbody>
</table>
The following classes are highly recommended:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO SCI 3333</td>
<td>Human Anatomy and Physiology I</td>
<td>3</td>
</tr>
<tr>
<td>BIO SCI 3339</td>
<td>Human Anatomy Physiology I Lab</td>
<td>1</td>
</tr>
<tr>
<td>BIO SCI 3343</td>
<td>Human Anatomy and Physiology II</td>
<td>3</td>
</tr>
<tr>
<td>BIO SCI 3349</td>
<td>Human Anatomy and Physiology II Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 4610</td>
<td>General Biochemistry</td>
<td>3</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Humanities: 18 semester hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ENGLISH 1120</strong></td>
</tr>
<tr>
<td><strong>ENGLISH 1160</strong></td>
</tr>
<tr>
<td>or <strong>ENGLISH 3560</strong></td>
</tr>
<tr>
<td><strong>SP&amp;M S 1185</strong></td>
</tr>
<tr>
<td>At least one course in each of the following: Literature, Philosophy and Fine Arts</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Social Sciences: 15 semester hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HISTORY 3530</strong></td>
</tr>
<tr>
<td><strong>HISTORY 1100</strong></td>
</tr>
<tr>
<td><strong>HISTORY 1200</strong></td>
</tr>
<tr>
<td>Course Code</td>
</tr>
<tr>
<td>-------------</td>
</tr>
<tr>
<td>POL SCI 1200</td>
</tr>
<tr>
<td>PSYCH 1101</td>
</tr>
<tr>
<td>MATH 1103</td>
</tr>
<tr>
<td>PHYSICS 1145</td>
</tr>
<tr>
<td>or PHYSICS 1505</td>
</tr>
<tr>
<td>GEOLOGY 1110</td>
</tr>
<tr>
<td>PHYSICS 1145</td>
</tr>
<tr>
<td>or PHYSICS 1505</td>
</tr>
<tr>
<td>CHEM 1310</td>
</tr>
<tr>
<td>&amp; CHEM 1319</td>
</tr>
<tr>
<td>&amp; CHEM 1320</td>
</tr>
<tr>
<td>&amp; CHEM 1100</td>
</tr>
<tr>
<td>CHEM 2210</td>
</tr>
<tr>
<td>&amp; CHEM 2220</td>
</tr>
<tr>
<td>BIO SCI 1201</td>
</tr>
<tr>
<td>BIO SCI 1213</td>
</tr>
<tr>
<td>or BIO SCI 1113</td>
</tr>
<tr>
<td>BIO SCI 1219</td>
</tr>
<tr>
<td>BIO SCI 1223</td>
</tr>
<tr>
<td>&amp; BIO SCI 1229</td>
</tr>
<tr>
<td>BIO SCI 1173</td>
</tr>
<tr>
<td>BIO SCI 2213</td>
</tr>
<tr>
<td>&amp; BIO SCI 2219</td>
</tr>
<tr>
<td>BIO SCI 2223</td>
</tr>
<tr>
<td>BIO SCI 2233</td>
</tr>
<tr>
<td>BIO SCI 2263</td>
</tr>
<tr>
<td>BIO SCI 4010</td>
</tr>
<tr>
<td>EDUC 1040</td>
</tr>
<tr>
<td>EDUC 1104</td>
</tr>
<tr>
<td>EDUC 1164</td>
</tr>
<tr>
<td>EDUC 1174</td>
</tr>
<tr>
<td>EDUC 3216</td>
</tr>
<tr>
<td>EDUC 3280</td>
</tr>
<tr>
<td>EDUC 4298</td>
</tr>
</tbody>
</table>
### Justification for Request

DESE required changes to BS Educational emphasis degree

Choice of General Biology (BIO SCI 1113) in addition to Principles of Biology (BIO SCI 1213), Choice of Astronomy (PHYSICS 1505) in addition to College Physics I (PHYSICS 1145) and PSYCH 3310 replaces PSYCH 3311

### Supporting Documents

#### Course Reviewer Comments

**ershenv** *(10/04/17 11:39 am)*: updated Start Term to Fall 2018
**Program Requirements and Description**

**Premedicine Minor**

It is recommended that students seeking the Pre-Medicine minor declare their intentions as soon as possible. Students completing the Pre-Medicine minor curriculum in addition to their BA/BS curriculum will have completed all requirements for admission to most Medical, Dental, Veterinary or other health profession programs. However, it is important to consult with a member of the Pre-Health Professions Advisory Committee to ensure you are completing the necessary coursework for your desired profession. The Pre-Medicine minor is not intended for a student majoring in Chemistry, Biological Sciences or Chemical and Biochemical Engineering which already offer a Pre-Medicine approved curriculum. Required courses for the Pre-Medicine minor are:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO SCI 1213</td>
<td>Principles of Biology</td>
</tr>
<tr>
<td>Course</td>
<td>Description</td>
</tr>
<tr>
<td>--------</td>
<td>-------------</td>
</tr>
<tr>
<td><strong>BIO SCI 1219</strong></td>
<td>and General Biology Lab</td>
</tr>
<tr>
<td>or <strong>BIO SCI 1113</strong> &amp; <strong>BIO SCI 1219</strong></td>
<td>General Biology and General Biology Lab</td>
</tr>
<tr>
<td><strong>BIO SCI 2213</strong> &amp; <strong>BIO SCI 2219</strong></td>
<td>Cell Biology and Cell Biology Laboratory</td>
</tr>
<tr>
<td><strong>CHEM 1310</strong> &amp; <strong>CHEM 1319</strong> &amp; <strong>CHEM 1320</strong> &amp; <strong>CHEM 1100</strong></td>
<td>General Chemistry I and General Chemistry Laboratory and General Chemistry II and Introduction To Laboratory Safety &amp; Hazardous Materials</td>
</tr>
<tr>
<td><strong>CHEM 2210</strong> &amp; <strong>CHEM 2219</strong> &amp; <strong>CHEM 2220</strong> &amp; <strong>CHEM 2229</strong></td>
<td>Organic Chemistry I and Organic Chemistry I Lab and Organic Chemistry II and Organic Chemistry II Lab</td>
</tr>
<tr>
<td><strong>PHYSICS 1145</strong> &amp; <strong>PHYSICS 1119</strong></td>
<td>College Physics I and General Physics Laboratory</td>
</tr>
<tr>
<td>or <strong>PHYSICS 1111</strong> &amp; <strong>PHYSICS 1119</strong></td>
<td>General Physics I and General Physics Laboratory</td>
</tr>
<tr>
<td><strong>PHYSICS 2145</strong> &amp; <strong>PHYSICS 2119</strong></td>
<td>College Physics II and General Physics Laboratory</td>
</tr>
<tr>
<td>or <strong>PHYSICS 2111</strong> &amp; <strong>PHYSICS 2119</strong></td>
<td>General Physics II and General Physics Laboratory</td>
</tr>
</tbody>
</table>

Mathematics two semesters to include:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MATH 1208</strong></td>
<td>Calculus With Analytic Geometry I</td>
</tr>
<tr>
<td>or <strong>MATH 1212</strong></td>
<td>Business Calculus</td>
</tr>
<tr>
<td>or <strong>MATH 1214</strong></td>
<td>Calculus For Engineers I</td>
</tr>
</tbody>
</table>

One of the following courses (taking all four courses is strongly encouraged):

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BIO SCI 2223</strong></td>
<td>General Genetics</td>
</tr>
<tr>
<td><strong>BIO SCI 242</strong></td>
<td>Course BIO SCI 242 Not Found</td>
</tr>
<tr>
<td><strong>BIO SCI 3333</strong></td>
<td>Human Anatomy and Physiology I</td>
</tr>
<tr>
<td><strong>BIO SCI 3343</strong></td>
<td>Human Anatomy and Physiology II</td>
</tr>
<tr>
<td><strong>CHEM 4610</strong></td>
<td>General Biochemistry</td>
</tr>
</tbody>
</table>

Justification for request

Math 1212 (Business calculus) is now an approved course for all Biology majors so this change is added for consistency.

The comment was changed to reflect the fact that four courses are now listed rather than three)
Bio Sci 242 (Human Physiology) is no longer offered and has been replaced by the 2 course series Bio Sci 3333 and Bio Sci 3343 (Human Anatomy and Physiology I and II). Pre-medicine students are encouraged to take both of these courses along with general genetics and general biochemistry.

Supporting Documents

Course Reviewer

Comments

ershenb (06/21/17 12:30 pm): Rollback: Per Katie Shannon's email, rolling back to David Westenberg to have edits completed.

ershenb (10/03/17 10:40 am): updated start term to Fall 2018
Program Change Request

New Program Proposal

Date Submitted: 09/20/17 1:59 pm

Viewing: PROPOSED : Minor in Artificial Intelligence and Machine Learning in Business

File: 253

Last edit: 10/13/17 8:12 am

Changes proposed by: barryf

Start Term: Spring 2018
Program Code: PROPOSED
Department: Business and Information Technology
Title: Minor in Artificial Intelligence and Machine Learning in Business

Program Requirements and Description

In Workflow

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

Approval Path

1. 09/20/17 4:55 pm
   siauk: Approved for RINFSCTE Chair
2. 09/22/17 10:14 am
   Brittany Parnell (ershenb): Approved for CCC Secretary
3. 09/22/17 5:28 pm
   Barry Flachsbart (barryf): Approved for Social Sciences DSCC Chair
4. 10/12/17 2:43 pm
   Brittany Parnell (ershenb): Approved for Pending CCC Agenda post

PROPOSED: Minor in Artificial Intelligence and Machine Learning in B... https://nextcatalog.mst.edu/courseleaf/courseleaf.cgi?page=/programadm...
The Minor requires 15 credit hours, as follows:

BUS 5730-Machine Learning and Artificial Intelligence for Business
IS&T 5535-Machine Learning Algorithms and Applications
IS&T 3420-Intro to Data Science & Management

And two courses from the following list:

- STAT 3111-Statistics I
- IS&T 3333-Data Networks and Information Security
- IS&T 3343-Systems Analysis
- IS&T 4450-Intro to Information Visualization
- IS&T 5420-Business Analytics and Data Science
- IS&T 5520-Data Science and Machine Learning with Python
- ERP 5410-Use of Business Intelligence

Justification for request
Strong inputs from our Advisory Board, companies who hire our graduates, and our own research directions.

Supporting Documents
Course Reviewer Comments

ershenvb (10/13/17 8:12 am): .
Course Change Request

New Experimental Course Proposal

Date Submitted: 09/22/17 11:00 am

Viewing: GEOLOGY 5001.001 : Petroleum Geochemistry

File: 4485
Last edit: 10/13/17 8:36 am
Changes proposed by: borrokd

Requested Spring 2018
Effective Change Date

Department
Geosciences and Geological and Petroleum Engineering

Discipline
Geology (GEOLOGY)

Course Number 5001
Topic ID 001

Experimental Title

In Workflow
1. RGEOSENG Chair
2. CCC Secretary
3. Sciences DSCC Chair
4. Pending CCC Agenda post
5. CCC Meeting Agenda
6. Campus Curricula Committee Chair
7. CAT entry
8. Registrar

Approval Path
1. 09/22/17 12:37 pm
   David Borrok (borrokd):
   Approved for RGEOSENG Chair
2. 09/22/17 4:00 pm
   Brittany Parnell (ershenb):
   Approved for CCC Secretary
3. 10/12/17 10:20 am
Katie Shannon (shannonk):
Approved for Sciences DSCC Chair
4. 10/12/17 2:36 pm
Brittany Parnell (ershenb):
Approved for Pending CCC Agenda post
5. 10/31/17 11:18 am
Brittany Parnell (ershenb):
Approved for CCC Meeting Agenda
6. 10/31/17 2:24 pm
sraper: Approved for Campus Curricula Committee Chair
7. 10/31/17 3:03 pm
Marita Tibbetts (tibbettsmg):
Approved for CAT entry

Petroleum Geochemistry
Experimental
Abbreviated Course Title
Instructors
David Borrok
Experimental
Catalog
Description
The focus of this course will be the organic geochemistry of petroleum systems. Students will gain a basic understanding of organic molecules, the burial of organic matter, and its maturation and migration, as well as an understanding of petroleum source rock evaluation in terms of kerogen type and thermal maturity.
Prerequisites
Students must be enrolled in a graduate program in the GGPE Department.
Field Trip
Statement
NA
Credit Hours
LEC: 3    LAB: 0    IND: 0    RSD: 0
Total: 3
Justification for new course:
This topic has grown in importance to become critical with the advent of oil and gas production from unconventional (shale) reservoirs. We need to teach this course to provide GGPE students with the knowledge they need to be successful in an evolving industry. There is no course like this in our catalog.
Semester(s) previously taught
None
Co-Listed
Courses:
Course Reviewer
Comments
ershenb (10/12/17 8:29 am): updated course number to 5001
Course Change Request

New Experimental Course Proposal

Date Submitted: 09/15/17 3:05 pm

Viewing: **MS&E 5001.002 : Molecular Engineering and Soft Nanomaterials**

File: 4481
Last edit: 09/22/17 11:13 am
Changes proposed by: doganf

Requested: Spring 2018
Effective Change Date

Department:
Materials Science & Engineering

Discipline:
Materials Science & Eng (MS&E)

Course Number: 5001
Topic ID: 002

Experimental Title

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. CAT entry
8. Registrar

Approval Path
1. 09/15/17 4:55 pm Greg Hilmas (ghilmas):
   Approved for RMATSENG Chair
2. 09/18/17 8:11 am Brittany Parnell (ershenb):
   Approved for CCC Secretary
3. 09/20/17 8:46 am sraper: Approved
Molecular Engineering and Soft Nanomaterials
Experimental Molecular Engineering
Abbreviated Catalog
Course Title Description
Instructors Fatih Dogan and Hakan Usta (AGU, Turkey)
This course focuses on the fundamentals and applications of molecular engineering and soft nanomaterials. Topics include principles of carbon chemistry, rational molecular engineering, small molecules, polymers, macromolecules, nanoscience/nanotechnology, organic/printed optoelectronics, and metal(covalent) -organic frameworks.

Prerequisites
Senior standing.

Field Trip
Statement

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

Justification for new course:
The course will be offered online through participation of students at S&T and Abdullah Gul University (AGU) in Turkey. There is a signed Memorandum of Understanding (MOU) between the two institutions. The lead instructor will be Dr. Hakan Usta (Assoc. Prof.). Dr. Usta received his PhD in chemistry at Northwestern University (Advisor: Tobin Marks) in 2008 and has been a faculty member since 2013 at AGU in Department of Materials Science and Nanotechnology. http://people.agu.edu.tr/hakanusta/
The course will be co-taught by Dr. Dogan and Dr. Usta by utilizing a "Free for Teacher" Canvas account. The logistics of this online course are currently being coordinated by the staff of EdTech at S&T and AGU. The proposed course is a unique opportunity for students interested in molecular engineering of soft materials.

Semester(s) previously taught
None

Co-Listed
Courses:

Course Reviewer
Comments

**kristyg (09/15/17 2:58 pm):** Rollback: Rollback per email to get chair approval.
# Course Change Request

## New Experimental Course Proposal

Date Submitted: 09/15/17 3:05 pm

**Viewing:** MS&E 6001.002 : Advanced Molecular Engineering and Soft Nanomaterials

File: 4482
Last edit: 09/22/17 11:15 am
Changes proposed by: doganf

- **Requested:** Spring 2018
- **Effective Change Date:**

**Department**
- Materials Science & Engineering

**Discipline**
- Materials Science & Eng (MS&E)

**Course Number**
- 6001

**Topic ID**
- 002

**Experimental Title**

<table>
<thead>
<tr>
<th>In Workflow</th>
<th>Approval Path</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. RMATSENG Chair</td>
<td>1. 09/15/17 4:55 pm Greg Hilmas (ghilmas): Approved for RMATSENG Chair</td>
</tr>
<tr>
<td>2. CCC Secretary</td>
<td>2. 09/18/17 8:13 am Brittany Parnell (ershenb): Approved for CCC Secretary</td>
</tr>
<tr>
<td>3. Engineering DSCC Chair</td>
<td>3. 09/20/17 8:47 am sraper: Approved</td>
</tr>
<tr>
<td>4. Pending CCC Agenda post</td>
<td></td>
</tr>
<tr>
<td>5. CCC Meeting Agenda</td>
<td></td>
</tr>
<tr>
<td>6. Campus Curricula Committee Chair</td>
<td></td>
</tr>
<tr>
<td>7. CAT entry</td>
<td></td>
</tr>
<tr>
<td>8. Registrar</td>
<td></td>
</tr>
</tbody>
</table>
Advanced Molecular Engineering and Soft Nanomaterials
Experimental Molecular Engineering
Abbreviated
Course Title
Instructors Fatih Dogan and Hakan Usta (AGU, Turkey)
Experimental
Catalog
Description
This comprehensive course encompasses fundamentals and applications of advanced molecular engineering and soft nanomaterials. Topics include principles of carbon chemistry, rational molecular engineering, small molecules, polymers, macromolecules, nanoscience/nanotechnology, organic/printed optoelectronics, metal(covalent)-organic frameworks, air/water clean

Prerequisites
Graduate standing.

Field Trip
Statement

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

Justification for new course:
The course will be offered online through participation of students at S&T and Abdullah Gul University (AGU) in Turkey. There is a signed Memorandum of Understanding (MOU) between the two institutions.
The lead instructor will be Dr. Hakan Usta (Assoc. Prof.). Dr. Usta received his PhD in chemistry at Northwestern University (Advisor: Tobin Marks) in 2008 and has been a faculty member since 2013 at AGU in Department of Materials Science and Nanotechnology. http://people.agu.edu.tr/hakanusta/
The course will be co-taught by Dr. Dogan and Dr. Usta by utilizing a "Free for Teacher" Canvas account. The logistics of this online course are currently being coordinated by the staff of EdTech at S&T and AGU. The proposed course is a unique opportunity for students interested in molecular engineering of soft materials.

Semester(s) previously taught
None

Co-Listed
Courses:
Course Reviewer
Comments
kristyg (09/15/17 2:58 pm): Rollback: Rollback per email to get chair approval.

sraper (09/20/17 8:47 am): Revised catalog description provided by Faith Dogan.
Course Change Request

New Experimental Course Proposal

Date Submitted: 09/11/17 10:46 pm

Viewing: SPANISH 3001.002 : Spanish Translation for Technical Applications

File: 4480
Last edit: 09/26/17 9:16 am
Changes proposed by: porcelj

Requested: Spring 2018
Effective Change Date

Department: Arts, Languages, & Philosophy

Discipline: Spanish (SPANISH)

Course Number: 3001
Topic ID: 002

Experimental Title

In Workflow

1. RPHILOSO Chair
2. CCC Secretary
3. Arts & Humanities DSSC Chair
4. Pending CCC Agenda post
5. CCC Meeting Agenda
6. Campus Curricula Committee Chair
7. CAT entry
8. Registrar

Approval Path

1. 09/20/17 8:10 am
Audra Merfeld-Langston (audram):
Approved for RPHILOSO Chair

2. 09/22/17 10:56 am
Brittany Parnell (ershenb):
Approved for CCC Secretary
3. 09/22/17 11:58 am
   Petra Dewitt (dewittp):
   Approved for Arts & Humanities
   DSCC Chair
4. 10/12/17 2:43 pm
   Brittany Parnell (ershenb):
   Approved for Pending CCC Agenda post
5. 10/31/17 11:20 am
   Brittany Parnell (ershenb):
   Approved for CCC Meeting Agenda
6. 10/31/17 2:24 pm
   sraper: Approved for Campus Curricula Committee Chair
7. 10/31/17 2:33 pm
   Marita Tibbetts (tibbettsmg):
   Approved for CAT entry

Spanish Translation for Technical Applications
Spanish Translation
Experimental
Abbreviated
Course Title
Instructors PORCEL, J
Experimental
Catalog
Description
This course will introduce students to the art and skills of translation. It will provide students practical experience translating technical and scientific documents from Spanish to English and from English to Spanish.
Prerequisites
Spanish 1180.
Field Trip
Statement

Credit Hours LEC: 3 LAB: 0 IND: 0 RSD: 0
Total: 3
Justification for new course:
The demands of modern multicultural, multilingual societies usually require more than the traditional foreign language skills from new college graduates. In this context, the acquisition of technical and scientific linguistic skills for students in the STEM fields should be an essential component of their education. This course aims to enhance students' foreign language professional skills by introducing them to the fields of technical and scientific translation.
Semester(s) previously taught
No
Co-Listed
Courses:
Course Reviewer
Comments