Minutes of the Campus Curricula Committee Meeting
November 2, 2016
9:00 a.m., Room 216 Parker Hall


The following curriculum forms were discussed and approved:

Degree Change Forms:
File #153.39  File #242.7  File #243.13

Course Change Forms:
File #4337  File #1695.1  File #249.1  File #129.1  File #652.1
File #437.1  File #1800.1  File #4354  File #4359
File #4231.3  File #2562.1  File #4083.1  File #2573.4
File #2561.1  File #2342.1  File #133.1  File #4360
File #2432.1  File #4353  File #547.5  File #4081.1

Experimental Course Forms:
File #4346  File #4320  File #4334  File #4355
File #4340  File #3989  File #4348  File #4362
File #4341  File #4344  File #4348  File #4355
File #4336  File #4335  File #4356

File #104.9 NU ENG-BS: Nuclear Engineering BS was tabled pending further discussion of footnote 1.

The meeting adjourned at 9:50 a.m.

Ilene H. Morgan, Chair
Missouri S&T Campus Curricula Committee
Course Inventory Change Request

New Course Proposal

Date Submitted: 09/21/16 11:04 am

Viewing: AERO ENG 2790: Introduction to Spacecraft Design

File: 4337
Last edit: 11/02/16 4:01 pm
Changes proposed by: isaac

Programs referencing this course:

AE ENG-BS: Aerospace Engineering BS

Requested Effective Change Date
01/17/2017

Department Discipline Course Number
Mechanical & Aerospace Engineering Aerospace Engineering (AERO ENG) 2790

Title
Introduction to Spacecraft Design

Abbreviated Course Title
Intro Spacecraft Design

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. 09/21/16 11:45 am
James Drallmeier (drallmei):
Approved for RMECHENG Chair
2. 09/22/16 8:45 am
Shauntae Ellis (smetg6):
Intro. to basics of spacecraft design, including design requirements, subsystem
definition, and vehicle design synthesis. Lab work includes design and fabrication of
a small spacecraft payload that is flight tested on a high altitude balloon to 100,000
feet. Post-flight data reduction and analysis.

Prerequisites
A grade "C" or better in Aero Eng 2861.

Field Trip
Statement
Field trip will be required for balloon launch/retrieval.

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

Required for Majors: Yes
Elective for Majors: No

Justification for new course:
Aerospace Technical Committee voted on October 29, 2015, to make the course permanent and required for Aerospace majors.

Semesters previously offered as an experimental course:
Spring 2016, Spring 2015

Co-Listed Courses:

Course Reviewer Comments:

smetg6 (10/06/16 9:32 am): Added period to the prerequisites.

smetg6 (11/02/16 4:01 pm): Adjusted the Pre-Req box for a period to be removed after Aero Eng.
Course Inventory Change Request

Date Submitted: 08/30/16 3:20 pm

Viewing: **BIO SCI 1213 : Principles of Biology**

File: 437.1
Last edit: 10/05/16 10:10 am
Changes proposed by: shannonk

Programs
referencing this
course

- **BIO SC-BA: Biological Sciences BA**
- **BIO SC-BS: Biological Sciences BS**
- **COMP HEALTH-MI: Computational Health**
- **GEOL-MI: Geology Minor**
- **PRE-MED-MI: Pre-Medicine Minor**

Other Courses
referencing this
course

In The Prerequisites:

- **BIO SCI 1219 : General Biology Lab**
- **BIO SCI 2243 : Sleep: Function and Dysfunction**
- **BIO SCI 2252 : Vegetation of the Ozarks**
- **BIO SCI 2263 : Ecology**
- **BIO SCI 2333 : Nutrition**
- **BIO SCI 2372 : Issues in Public Health**
- **BIO SCI 2383 : Plant Biology**
- **BIO SCI 3333 : Human Anatomy and Physiology I**
- **BIO SCI 3343 : Human Anatomy and Physiology II**
- **BIO SCI 4333 : Exercise Physiology**
- **BIO SCI 5323 : Bioinformatics**
- **COMP SCI 5700 : Bioinformatics**

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. Ishelton
11. Peoplesoft

Approval Path
1. 08/30/16 3:22 pm
   Yue-Wern Huang (huangy):
   Approved for RBIOLSCI Chair
2. 08/31/16 1:30 pm
   Shauntae Ellis (smetag6):
   Approved for CCC Secretary

https://nextcatalog.mst.edu/courseleaf/approve/?role=CCC_Secretary
A comprehensive study of the general principles of the biology of plants, animals, and protists including population biology and regulation mechanisms. An in-depth study of the fundamental principles governing all living organisms from the molecular to the population level. Required for Biological Sciences majors. Cannot also receive credit for Bio Sci 1113.

Prerequisites

**Biological Science majors only.** Entrance requirements.

Field Trip

Statement
Credit Hours  
Total: 3

Required for Majors  
Yes

Elective for Majors  
No

Justification for change:
Biological Sciences offers a non-majors course, General Biology BIO SCI 1113, which can fulfill science elective requirements for other majors. This course is filled to capacity, and when students from other departments register for Principles rather than General Biology it prevents our majors from enrolling in a course they need for the degree.

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer Comments
smetg6 (08/31/16 1:30 pm): Changed from Fall 2014 to Fall 2017
Course Inventory Change Request

Date Submitted: 10/04/16 12:39 pm

Viewing: **CER ENG 3110 : Introduction to Biomedical Engineering**

File: 4231.3
Last approved: 09/21/15 3:55 am
Last edit: 11/03/16 12:54 pm
Changes proposed by: smiller

Requested 01/17/2017 Spring 2016
Effective Change Date

Department Materials Science & Engineering
Discipline Ceramic Engineering (CER ENG)
Course Number 3110

Title
Introduction to Biomedical Engineering

Abbreviated Course Title
Intro to BioMed Engr

Catalog Description

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. Ishelfton
11. Peoplesoft

Approval Path
1. 10/06/16 8:54 am mjokeefe:
   Approved for RMATSENG Chair
2. 10/06/16 2:32 pm Shauntae Ellis (smetg6):
   Approved for CCC Secretary
This course will provide an introduction to the interdisciplinary field of biomedical engineering. The molecular, cellular, physiological and engineering principles that govern the field will be covered. Applications will include biomaterials, tissue engineering, biomechanics, bioimaging, bioinstrumentation, bio-nanotechnology and artificial organs.

Prerequisites
Junior standing or above.
Field Trip Statement

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<th>IND: 0</th>
<th>RSD: 0</th>
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<tbody>
<tr>
<td>Total:</td>
<td>3</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Required for Majors: No

Elective for Majors: Yes

Justification for change:
Co-List as Bio Sci 3110 and Chem Eng 3210

Semesters previously offered as an experimental course:
Not applicable

Co-Listed Courses:
**BIO SCI 3110 - Course Not Found**
**CHEM ENG 3210 - Course Not Found**

Course Reviewer Comments

smetg6 (10/06/16 2:56 pm): Changed start term to SP 17 from SP 16
imorgan (11/03/16 12:54 pm): I added the co-lists.
Course Inventory Change Request

Date Submitted: 09/08/16 9:50 pm

Viewing: **GEOLOGY 4010 : Seminar**

File: 2561.1
Last edit: 11/02/16 4:05 pm
Changes proposed by: liukh

Programs referencing this course

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

Other Courses referencing this course

- **In The Catalog Description:**
  - **GEO ENG 4010 : Current Topics and Professionalism**
  - **PET ENG 4010 : Ethics and Professionalism**

Requested Effective Change Date

- Fall **2017 2014**

Department

- Geosciences and Geological and Petroleum Engineering

Discipline

- Geology (GEOLOGY)

Course Number

- 4010

Title

- Seminar

Abbreviated Course Title

- Seminar

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. Ishelton
11. Peoplesoft

Approval Path

1. 09/10/16 11:57 pm
   Francisca Oboh-Ikuenobe (ikuenobe): Approved for RGEOSENG Chair
2. 09/13/16 3:45 pm
   Shauntae Ellis (smetg6):
Catalog Description

Discussion of current topics. Required for two semesters during senior year. (Course cannot be used for graduate credit).

Prerequisites
- Senior standing.

Field Trip

Statement

Approved for CCC Secretary
3. 10/05/16 10:11 am
Ilene Morgan (imorgan):
Approved for Sciences DSCC Chair
4. 10/06/16 9:46 am
Shauntae Ellis (smetg6):
Approved for Pending CCC Agenda post
5. 11/02/16 4:05 pm
Shauntae Ellis (smetg6):
Approved for CCC Meeting Agenda
6. 11/03/16 12:44 pm
Ilene Morgan (imorgan):
Approved for Campus Curricula Committee Chair

https://nextcatalog.mst.edu/courseleaf/approve/?role=CCC_Secretary
Credit Hours | LEC: 0 | LAB: 0 | IND: 0 | RSD: 0 | Total: 0-6
--- | --- | --- | --- | --- | ---

Required for
Majors
Yes No

Elective for
Majors
No

Justification for change:
The two courses have different requirements in terms of student participation and assignments.

Semesters previously offered as an experimental course

Co-Listed Courses:
- **GEO-ENG 4010** - Current Topics and Professionalism
- **PET-ENG 4010** - Ethics and Professionalism

Course Reviewer Comments
smetg6 (11/02/16 4:05 pm): Changed Start Term to Fall 2017
Course Inventory Change Request

Date Submitted: 09/15/16 10:01 pm

Viewing: **GEOPHYS 5096 4096**: Global Tectonics

File: 2432.1
Last edit: 10/06/16 1:58 pm
Changes proposed by: liukh

Programs referencing this course

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

Requested: **01/17/2017 Fall 2014**

Effective Change Date

- Department: Geosciences and Geological and Petroleum Engineering
- Discipline: Geophysics (GEOPHYS)
- Course Number: **5096 4096**

Title
- **Global Tectonics**

Abbreviated Course Title
- Global Tectonics

Catalog Description

Approval Path

1. 09/15/16 10:05 pm
   Francisca Oboh-Ikuenobe (ikuenobe): Approved for RGEOSENG Chair
2. 09/16/16 8:16 am
   Shauntae Ellis (smetag6):
Approved for CCC Secretary
3. 10/05/16 10:13 am
Ilene Morgan (imorgan):
Approved for Sciences DSCC Chair
4. 10/06/16 1:58 pm
Shauntae Ellis (sme tg6):
Rollback to Sciences DSCC Chair for Pending CCC Agenda post
5. 10/06/16 2:02 pm
Ilene Morgan (imorgan):
Approved for Sciences DSCC Chair
6. 10/06/16 2:27 pm
Shauntae Ellis (sme tg6):
Approved for Pending CCC Agenda post
7. 11/03/16 9:14 am
Shauntae Ellis (sme tg6):
Approved for CCC Meeting Agenda
8. 11/03/16 1:45 pm
Ilene Morgan (imorgan):
An integrated view of the Earth's structure and dynamics with an emphasis on information gained through geophysical methods. Topics include seismology, heat flow, gravity, rheological and compositional structure, plate motions and intermotions, and mantle driving mechanisms for plate tectonics.

Prerequisites
Geology 3310.

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 change:
Given the recent advancement in global tectonic theory and practice, as well as the recent campus emphasis on experiential learning, we would like to add a one-hour lab component (i.e., 2 hours of lecture and 1 hour lab).

A change of course number to 5096 is requested so that the course can be taken by both undergraduate and graduate students.

Semesters
previously
offered as an
experimental
course

Approved for
Campus Curricula
Committee Chair

https://nextcatalog.mst.edu/courseleaf/approve/?role=CCC_Secretary
Co-Listed
Courses:

Course Reviewer
Comments

ikuene (09/15/16 5:23 pm): Rollback: A DCC form is also required because this is a core course.

imorgan (10/04/16 9:41 am): It is too late to change lecture to lecture/lab for Spring 2017, so the department elected to make the course number change (non-affecting) effective Spring 2017 and will make their other change on another CC form.

sme6 (10/06/16 1:58 pm): Rollback: It is too late to change a lecture to lecture/lab for Spring 2017 at this time
Course Inventory Change Change Request

Date Submitted: 08/31/16 10:43 am

Viewing: MATH 1215 : Calculus For Engineers II

File: 1695.1
Last edit: 10/05/16 10:13 am
Changes proposed by: imorgan

Catalog Pages
referencing this
course

Freshman Engineering Program

Programs
referencing this
course

AE ENG-BS: Aerospace Engineering BS
AP MATH-BS: Applied Mathematics BS
ARC ENG-BS: Architectural Engineering BS
CH ENG-BS: Chemical Engineering BS
CMP SC-BS: Computer Science BS
CP ENG-BS: Computer Engineering BS
CR ENG-BS: Ceramic Engineering BS
CV ENG-BS: Civil Engineering BS
EL ENG-BS: Electrical Engineering BS
ENG MG-BS: Engineering Management BS
EV ENG-BS: Environmental Engineering BS
GE ENG-BS: Geological Engineering BS
GL&GPH-BS: Geology and Geophysics BS
MC ENG-BS: Mechanical Engineering BS
MI ENG-BS: Mining Engineering BS
MT ENG-BS: Metallurgical Engineering BS

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

Approval Path
1. 08/31/16 10:44 am
   sclark: Approved
   for RMATHEMA
   Chair
2. 08/31/16 1:32 pm
   Shauntae Ellis
   (smetg6):
NU ENG-BS: Nuclear Engineering BS
PE ENG-BS: Petroleum Engineering BS

Other Courses referencing this course

In The Prerequisites:
AERO ENG 3131: Aerodynamics I
CHEM ENG 2100: Chemical Engineering Material & Energy Balances
CIV ENG 2200: Statics
ECON 5337: Financial Mathematics
ELEC ENG 2100: Circuits I
MATH 2222: Calculus with Analytic Geometry III
MATH 3108: Linear Algebra I
MATH 3109: Foundations Of Mathematics
MATH 5737: Financial Mathematics
MECH ENG 2519: Thermodynamics
MECH ENG 2527: Thermal Analysis
MECH ENG 3313: Machine Dynamics
MECH ENG 3411: Modeling and Analysis of Dynamic Systems
NUC ENG 2105: Introduction To Nuclear Engineering
STAT 3113: Applied Engineering Statistics
STAT 3115: Engineering Statistics

Requested Effective Change Date
Fall 2017 2014

Department Mathematics & Statistics
Discipline Mathematics (MATH)
Course Number 1215
Title Calculus For Engineers II
Abbreviated Course Title Calc For Engrs II
Catalog
Description
Continuation of Math 1214. Transcendental functions, techniques of integration, sequences, series including power series, polar coordinates, polar and parametric equations. Applications in physical science and engineering. Credit will be given for only one of Math 1215 or Math 1221.

Prerequisites
Math 1160 and either Math 1208 or Math 1214 both with a grade of "C" or better; or by placement exam.

Field Trip
Statement

Credit Hours LEC: 3 LAB: 1 IND: 0 RSD: 0
Total: 4
Required for Majors Yes No
Elective for Majors No

Justification for change:
Correction of a typo in the description.

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer Comments
sme tg6 (08/31/16 1:32 pm): Changed from Fall 2014 to Fall 2017
Course Inventory Change Request

Date Submitted: 09/22/16 2:11 pm

Viewing: **MATH 6375 : Theory Of Partial Differential Equations**

File: 1800.1
Last edit: 09/22/16 2:11 pm
Changes proposed by: imorgan

Requested Fall **2017 2014**
Effective Change Date
Department Mathematics & Statistics
Discipline Mathematics (MATH)
Course Number 6375
Title Theory Of Partial Differential Equations
Abbreviated Theo Of Part Diff Equa
Course Title

Catalog Description

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

Approval Path
1. 09/22/16 2:12 pm
   sclark: Approved for RMATHEMA Chair
2. 09/22/16 2:25 pm
   Shauntae Ellis (smetg6): Approved for CCC Secretary

https://nextcatalog.mst.edu/courseleaf/approve/?role=CCC_Secretary
Sobolev spaces; existence, uniqueness, Classical wave, potential, and regularity of weak solutions to linear heat equations; classification into elliptic, parabolic, and hyperbolic PDEs; selected topics. types; existence and uniqueness proofs.

Prerequisites
Math 6417. 4209.

Field Trip
Statement
Credit Hours LEC: 3
Total: 3
LAB: 0
IND: 0
RSD: 0

Required for
Majors No

Elective for
Majors No

Justification for change:

The description of the course is being updated to reflect the current research
directions of the department. The new prerequisite is necessary for the updated
course material.

Semesters previously
offered as an experimental
course

Co-Listed Courses:

Course Reviewer

Comments

Key: 1800
Preview Bridge
Course Inventory Change Request

Date Submitted: 09/06/16 1:51 pm

Viewing: **PET ENG 4010 : Ethics and Professionalism Seminar**

File: 2562.1
Last edit: 11/02/16 4:07 pm
Changes proposed by: caolila

Programs referencing this course
- **PE ENG-BS: Petroleum Engineering BS**

Other Courses referencing this course
- In The Catalog Description:
  - **GEO ENG 4010 : Current Topics and Professionalism**
  - **GEOLOGY 4010 : Seminar**

Requested Effective Change Date
- Fall 2017 2014

Department Geosciences and Geological and Petroleum Engineering

Discipline Petroleum Engineering (PET ENG)

Course Number 4010

Title **Ethics and Professionalism Seminar**

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. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. Ishelfon
11. Peoplesoft

Approval Path
1. 09/07/16 11:39 am Francisca Oboh-Ikuenobe (ikuenobe): Approved for RGEOSENG Chair
2. 09/07/16 11:51 am Shauntae Ellis
**Ethics and Prof Seminar**

### Topics related to Ethics and Professionalism. Lifelong learning, teamwork and discussion of current events. Discussion of current topics. (Course cannot be used for graduate credit).

### Prerequisites
- Senior standing in Pet Eng.

### Field Trip

### Statement
Credit Hours | LEC: 1 | LAB: 0 | IND: 0 | RSD: 0
Total: 1

Required for Majors: Yes

Elective for Majors: No

Justification for change:
Despite being co-listed for years, Petroleum Engineering has always conducted a separate class time apart from the departmental Geology seminar, to cover topics which are assessed for ABET. The petroleum course needs to be recognized as fundamentally different from the speakers seminar offered by Geology. We are also having problems with students switching to Geology, to avoid the essays and other work required in the ABET-assessed course.

Semesters previously offered as an experimental course

This course is routinely offered in the Fall for petroleum students.

Co-Listed Courses:
- GEOLOGY 4010 - Seminar
- GEO-ENG 4010 - Current Topics and Professionalism

Course Reviewer
Comments
smetg6 (11/02/16 4:07 pm): Changed start term to FS 2017
# Course Inventory Change Request

Date Submitted: 10/02/16 4:45 pm

**Viewing:** **PSYCH 5010 : Seminar in Industrial / Organizational Psychology**

File: 2342.1  
Last edit: 10/06/16 10:25 am  
Changes proposed by: weidnern

<table>
<thead>
<tr>
<th>Programs referencing this course</th>
</tr>
</thead>
<tbody>
<tr>
<td>INORGPS-MS: Industrial Organizational Psychology MS</td>
</tr>
</tbody>
</table>

| Requested Effective Change Date |
|------|-----------|
| Fall 2017 2014 |

<table>
<thead>
<tr>
<th>Department</th>
<th>Discipline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological Science</td>
<td>Psychology (PSYCH)</td>
</tr>
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</table>

Course Number: 5010

Title: Seminar in Industrial / Organizational Psychology

Abbreviated Course Title: Seminar I/O Psychology

Catalog Description

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

Approval Path
1. 10/03/16 11:15 am  
murray: Approved for RPSYCHOL Chair
2. 10/03/16 11:16 am  
Shauntae Ellis (smegtg6):
Review of the most recent theoretical and applied research in advanced personnel and organizational psychology. Topics will include personnel selection, training and performance appraisal, job attitudes, motivation, work groups and teams, leadership, organizational culture, and organizational development.

Prerequisites

Graduate standing. Nine hours of psychology.
Field Trip
Statement

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Required for Majors  Yes  No

Elective for Majors  No

Justification for change:
This change is included as part of our Degree Change for the Industrial-Organizational Psychology MS degree. The change in prerequisite is because this will be the first course taken by our MS graduate students as they enter the program.

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer Comments
sметg6 (10/06/16 10:25 am): Added period to prerequisite box.
# Course Inventory Change Request

## New Course Proposal

**Date Submitted:** 10/03/16 11:36 am  
**Viewing:** **PSYCH 5012 : Ethics and Professional Responsibilities**

**File:** 4353  
**Last edit:** 11/07/16 12:54 pm  
**Changes proposed by:** weidnern

<table>
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<tbody>
<tr>
<td>INORGPS-MS: Industrial Organizational Psychology MS</td>
</tr>
</tbody>
</table>

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

**Department**  
**Discipline:** Psychological Science  
**Course Number:** 5012

**Title**  
**Ethics and Professional Responsibilities**

**Abbreviated Course Title**  
**Prof. Responsibility**

**Catalog Description**

## Approval Path

1. 10/04/16 11:34 am  
   murray: Approved for RPSYCHOL Chair

2. 10/04/16 11:37 am  
   Shauntae Ellis (smetg6):
Approved for CCC Secretary
3. 10/05/16 3:46 pm
Barry Flachbart (barryf):
Approved for Social Sciences
DSCC Chair
4. 10/06/16 10:24 am
Shauntae Ellis (smetg6):
Approved for Pending CCC Agenda post
5. 11/02/16 4:10 pm
Shauntae Ellis (smetg6):
Rollback to CCC Secretary for CCC Meeting Agenda
6. 11/07/16 12:54 pm
Shauntae Ellis (smetg6):
Approved for CCC Secretary
7. 11/07/16 12:56 pm
Shauntae Ellis (smetg6):
Approved for Social Sciences
DSCC Chair
8. 11/07/16 12:57 pm
Case studies examining the ethical practice of psychology in organizations will be discussed. This will include covering both the legal and ethical standards surrounding the consulting and practice of I-O psychology and personnel management in organizations.

Prerequisites
    Graduate standing.

Field Trip
Statement

<table>
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<th>Credit Hours</th>
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<th>LAB: 0</th>
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</table>

Required for Majors  Yes

Elective for Majors  No
Justification for new course:

This new course is included in the Degree Change Proposal for the Industrial-Organizational Psychology MS degree program. This is a content area which deserves its own seminar focusing specifically on practicing psychology in organizations and the important ethical responsibilities included in doing so.

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer Comments

**murray (10/03/16 11:15 am):** I changed the class from RSD to Lecture and made it required. - Susan Murray

**murray (10/03/16 11:15 am):** Rollback: see changes

**smetg6 (10/06/16 10:24 am):** Added a period to the prerequisite box & changed the order of the both to both the in the course description box

**smetg6 (11/02/16 4:10 pm):** Rollback: Approved just need new course number

**smetg6 (11/07/16 12:54 pm):** Changed course number from 5002 to 5012; from correspondence with Dr. Murray.
Course Inventory Change Request

Date Submitted: 10/02/16 4:41 pm

Viewing: **PSYCH 5201: Psychometrics**

File: 249.1

Last edit: 10/06/16 10:27 am

Changes proposed by: weidnern

Catalog Pages

referred to this course

- Psychology

Programs

referred to this course

- INORGPS-MS: Industrial Organizational Psychology MS
- PSYMETR-MI: Psychometrics Minor

Requested: Fall **2017 2014**

Effective Change Date

Department: Psychological Science

Discipline: Psychology (PSYCH)

Course Number: 5201

Title: Psychometrics

Abbreviated Title: Psychometrics

Course Title

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In Workflow

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

Approval Path

1. 10/03/16 11:15 am
   murray: Approved for RPSYCHOL Chair
2. 10/03/16 11:19 am
   Shauntae Ellis (smetg6):

https://nextcatalog.mst.edu/courseleaf/approve/?role=CCC_Secretary
An examination of statistical methods used to develop and refine measures of human performance, aptitudes, and personality. Topics include reliability and validity, data reduction, measuring inter-relationships among variables (e.g., factor analysis, multiple regression), and testing group differences.

Prerequisites
Psych 5202. 1101 and Psych 2200.
Field Trip Statement

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<table>
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<tr>
<th>Elective for Majors</th>
<th>No</th>
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Justification for change:

This change is included as part of our Degree Change for the Industrial-Organizational Psychology MS degree. The change in prerequisite is because this course will now directly follow a newly proposed Psych 5202 Applied Data Analysis course and the content will build upon that material.

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer Comments

smetg6 (10/06/16 10:27 am): Added period to prerequisite box.
Course Inventory Change Request

New Course Proposal

Date Submitted: 10/02/16 5:04 pm

Viewing: PSYCH 5202: Applied Psychological Data Analysis

File: 4354
Last edit: 11/07/16 12:44 pm
Changes proposed by: weidnern

Programs referencing this course:
- INORGPS-MS: Industrial Organizational Psychology MS

Requested: Fall 2017
Effective Change Date: Fall 2017
Department: Psychological Science
Discipline: Psychology (PSYCH)
Course Number: 5202
Title: Applied Psychological Data Analysis
Abbreviated Course Title: Appl Psych Data Analysis

Approval Path
1. 10/03/16 11:16 am
   murray: Approved for RPSYCHOL Chair
2. 10/03/16 11:20 am
   Shauntae Ellis (smetg6):

https://nextcatalog.mst.edu/courseleaf/approve/?role=CCC_Secretary
3. 10/05/16 3:46 pm
Barry Flachbart (barryf):
Approved for Social Sciences
DSCC Chair

4. 10/06/16 10:29 am
Shauntae Ellis (smetg6):
Approved for Pending CCC Agenda post

5. 11/02/16 4:08 pm
Shauntae Ellis (smetg6):
Rollback to CCC Secretary for CCC Meeting Agenda

6. 11/02/16 4:12 pm
Shauntae Ellis (smetg6):
Approved for CCC Secretary

7. 11/07/16 12:38 pm
Barry Flachbart (barryf):
Approved for Social Sciences
DSCC Chair

8. 11/07/16 12:40 pm
Shauntae Ellis
This course will focus on those statistical methods most useful for advanced research in psychology. We will learn to use R, a powerful, open-source statistical programming platform, and work through examples with psychological data sets including such techniques as correlation, ANOVAs, regression, and chi-squared.

Prerequisites
Graduate standing.

Field Trip
Statement

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Required for Majors: Yes
Elective for Majors: No
Justification for new course:

This new course is included as part of the Degree Change Proposal for the Industrial-Organizational Psychology MS degree program. I-O Psychologists need to be strong methodologically and the available course offerings at S&T have been insufficient to meet their needs. This has caused us to have numerous complaints from our students and we have had to take measures to supplement their education in this area. In particular, this course will focus on application of statistics to analyses human attitudes and behaviors using methods and techniques critical for I-O psychologists to understand.

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer Comments

sme tg6 (10/06/16 10:29 am): Added period to prerequisite box.

sme tg6 (11/02/16 4:08 pm): Rollback: Approved just pending new number

sme tg6 (11/02/16 4:12 pm): Please disregard above rollback. Changed name per CCC Meeting and wanting the SS DSCC Chair to approve name before sending to Dr. Morgan.
Course Inventory Change Request

Date Submitted: 10/02/16 4:00 pm
Viewing: PSYCH 5210 6210: Advanced Research Methods

File: 4083.1
Last approved: 09/29/14 4:09 am
Last edit: 10/02/16 4:00 pm
Changes proposed by: weidnern

Programs referencing this course
INORGPS-MS: Industrial Organizational Psychology MS

Requested Fall 2017 2014
Effective Change Date
Department Psychological Science
Discipline Psychology (PSYCH)
Course Number 5210 6210
Title Advanced Research Methods
Abbreviated Course Title Adv Research Methods
Catalog Description

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

Approval Path
1. 10/03/16 11:16 am
   murray: Approved for RPSYCHOL Chair
2. 10/03/16 11:20 am
   Shauntae Ellis (smetag6):
Research methods and techniques, with an emphasis on conducting psychological research in organizational settings. Topics discussed include: ethics, reliability and
validity in measurement and application, proper uses of experimental, quasi-experimental, and survey methodologies, as well as advanced methodologies IRT, SEM, HLM, and Meta-Analyses. Advanced techniques class, including advanced analysis of variance, multiple regression, multiple and partial correlation, analysis of covariance and the examination of some quasi-research designs.

Prerequisites
Graduate standing.

Field Trip
Statement

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Required for Majors
Yes

Elective for Majors
No

Justification for change:
This is a change included as part of our Degree Change for the Industrial-Organizational Psychology MS degree. The number and description of the course will now more accurately reflect the course requirements and objectives.

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer
Comments
Course Inventory Change Request

Date Submitted: 10/04/16 10:41 am

Viewing: PSYCH 5601: Small Advanced-Group Dynamics

File: 133.1
Last edit: 10/05/16 8:09 am
Changes proposed by: weidnern

Catalog Pages referencing this course

Psychology

Programs referencing this course

INORGPS-MS: Industrial Organizational Psychology MS

Requested
Fall 2017 2014
Effective Change Date
Department Psychological Science
Discipline Psychology (PSYCH)
Course Number 5601
Title Small Advanced-Group Dynamics
Abbreviated Course Title Small Advanced-Group Dynamics

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

Approval Path
1. 10/04/16 11:34 am
   murray: Approved for RPSYCHOL Chair
2. 10/04/16 11:37 am
   Shauntae Ellis (smetag6):

https://nextcatalog.mst.edu/courseleaf/approve/?role=CCC_Secretary
An in-depth review of the concepts and theories related to group dynamics. This course covers topics include group perception, identification, leadership, goals, communication within groups, group structure, conflict, cohesion, commitment, performance, norms, roles, influence, leadership, decision-making, controversy, conflict resolution, power, diversity issues, and decisions, and groups’ relations, networks, and work teams. Students consider both theory and applications to their lives and organizations through observational, research, team and applied assignments. Students will consider theoretical implications and
practical applications of topics in group dynamics in the form of independent reading, research proposals, and observational assignments.

Prerequisites
Psych 4601 or graduate standing.

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 change:
This change is included as part of our degree change for the Industrial-Organizational Psychology MS program. This name better reflects that this course will focus more on teams and smaller groups in organizations than the original name does.

Semesters
previously
offered as an
experimental
course

Co-Listed
Courses:

Course Reviewer
Comments
Course Inventory Change Request

Date Submitted: 10/02/16 4:14 pm

Viewing: **PSYCH 5602 : Organizational Development Processes: Research-and Practice**

File: 547.5
Last approved: 05/24/16 4:57 am
Last edit: 11/03/16 9:22 am
Changes proposed by: weidnern

Catalog Pages
referencing this course
  - [Engineering Management](#)
  - [Psychology](#)

Programs
referencing this course
  - [INORGPS-MS: Industrial Organizational Psychology MS](#)

Requested
Effective Change Date
Fall 2017 2015

Department
Psychological Science

Discipline
Psychology (PSYCH)

Course Number
5602

Title
Organizational Development Processes: Research and Practice

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

Approval Path
1. 10/03/16 10:48 am
   murray: Approved for RPSYCHOL Chair
2. 10/03/16 10:50 am
   Shauntae Ellis (smetg6):
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<td>Barry Flachbart (barryf):</td>
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<th>8. 11/03/16 12:50 pm</th>
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https://nextcatalog.mst.edu/courseleaf/approve/?role=CCC_Secretary
Examination of the field of organizational development theories and interventions. Organizational Psychology. An emphasis is placed on research methods and application of practices related to individual processes, group processes, and organizational structures and functions that impact change and development strategies and interventions. structure and function.

Prerequisites
Psych 4602 or graduate standing.

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 change:
This change is included as part of our Degree Change for the Industrial-Organizational Psychology MS degree. The change in name and description will better reflect the specialization of this course area. New courses are also proposed to pick up areas of content previously covered by this course.
Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer Comments

sme6g6 (11/03/16 9:22 am): Rollback: Roll back to CCC Secretary error
# Course Inventory Change Request

Date Submitted: 10/02/16 4:21 pm

Viewing: **PSYCH 5700 : Job Analysis and Performance Management Advanced Industrial Psychology**

File: 129.1  
Last edit: 11/02/16 4:16 pm  
Changes proposed by: weidnern

**Catalog Pages**  
referencing this course  
**Psychology**

**Programs**  
referencing this course  
**INORGPS-MS: Industrial Organizational Psychology MS**

**Requested**  
Fall 2017 2014

**Effective Change Date**

**Department**  
Psychological Science

**Discipline**  
Psychology (PSYCH)

**Course Number**  
5700

**Title**  
**Job Analysis and Performance Management Advanced Industrial Psychology**

---

**In Workflow**

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

**Approval Path**

1. 10/03/16 11:18 am  
murray: Approved for RPSYCHOL Chair  
2. 10/03/16 11:20 am  
Shauntae Ellis (smetg6):
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**Catalog Description**

A focus on the scientific measurement of job performance. An in-depth discussion examination of the science and methods field of appropriate job and task analysis will be discussed. Industrial psychology. Additionally, students will focus on current issues in performance management and appraisal including scientific findings related to both objective and subjective measures of performance. An emphasis is placed on research methods and application of practices related to Job Analysis; Recruitment, Selection, Training, and Performance Appraisal.

**Prerequisites**

https://nextcatalog.mst.edu/courseleaf/approve/?role=CCC_Secretary
Psych 4700 or graduate standing.

Field Trip
Statement

Credit Hours

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Total: 3

Required for Majors

Yes No

Elective for Majors

No

Justification for change:

This change is included as part of our Degree Change for the Industrial-Organizational Psychology MS degree. The change in name and description will better reflect the specialization of this course area. New courses are also being proposed to address areas of content previously covered in this course.

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer
Comments

smetg6 (11/02/16 4:16 pm): Changed the abbreviated course title.
Course Inventory Change Request

New Course Proposal

Date Submitted: 10/02/16 5:41 pm

Viewing: PSYCH 6602: Job Attitudes, Emotions, and Discretionary Behaviors

File: 4359

Last edit: 10/06/16 10:46 am

Changes proposed by: weidnern

Requested: Fall 2017

Effective Change Date: Fall 2017

Department: Psychological Science

Discipline: Psychology (PSYCH)

Course Number: 6602

Title: Job Attitudes, Emotions, and Discretionary Behaviors

Abbreviated Course Title: Emotions and Behavior

Catalog Description:

In Workflow

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

Approval Path

1. 10/03/16 11:24 am
   Murray: Approved for RPSYCHOL Chair
2. 10/03/16 11:25 am
   Shauntae Ellis (smetg6):

https://nextcatalog.mst.edu/courseleaf/approve/?role=CCC_Secretary
Theory and research surrounding employee attitudes, emotions, and behaviors with an emphasis on antecedents and outcomes of: job satisfaction, engagement, organizational justice, trait and state positive and negative affect, organizational citizenship, counterproductive work, and proactive behaviors and the Implications for both employees and organizations.

Prerequisites
Psych 5010.
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 new course:
This new course is included in the Degree Change Proposal for the Industrial-Organizational Psychology MS degree program. This content area builds more depth of topics previously crammed into Psych 5602. Offering it will allows us to better meet the needs and expectations for education in I-O Psychology.

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer Comments

smetg6 (10/06/16 10:46 am): Added period to prerequisite box.
# Course Inventory Change Request

Date Submitted: 10/02/16 4:25 pm

Viewing: **PSYCH 6610: Leadership, Motivation, and Culture** Advanced Leadership Theory & Practice

File: 2573.4

Last approved: 11/03/14 3:53 am

Last edit: 10/06/16 10:53 am

Changes proposed by: weidnern

Catalog Pages referencing this course

- Engineering Management
- Psychology

Programs referencing this course

- INORGPS-MS: Industrial Organizational Psychology MS

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**Approval Path**

1. 10/03/16 11:25 am
   murray: Approved for RPSYCHOL Chair
2. 10/03/16 11:27 am
   Shauntae Ellis (smetg6):

---

https://nextcatalog.mst.edu/courseleaf/approve/?role=CCC_Secretary
**Leadership, Motivation, and Culture**  
*Advanced Leadership Theory & Practice*

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<td>Course Title</td>
<td>Leadership Theory &amp; Pract</td>
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**Catalog Description**

Examination of research related to leadership, motivation, and surrounding the impact major theories of organizational culture on organizational performance will be discussed. leadership. The course will focus on the application of psychological

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**History**

1. Nov 3, 2014 by nstone (2573.1)
theories to enhance organizational functioning and to promote positive workplace behaviors. Topics include leadership measurement of traits and skills, major theories of leadership including LMX, Charismatic, Transformational, and Authentic Leadership Theories. An emphasis is given on researching leadership topics and applying findings of leadership research in organizations.

Prerequisites

**Psych 5010.** Psych 4610 or graduate standing.

Field Trip

Statement

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Required for Majors: Yes

Elective for Majors: No

Justification for change:

This change is included as part of our Degree Change for the Industrial-Organizational Psychology MS degree. The change in name and description better reflect the specialization of this course content. This course will now be addressing both different leadership styles as well as major impacts that leaders have upon organizations. The additional Prerequisite is because this course will now be treated as an advanced course in the program requiring previous experience in I-O Psychology graduate coursework.

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

Course Reviewer
Comments

sme tg6 (10/06/16 10:53 am): Added period to prerequisite box.
# Course Inventory Change Request

## New Course Proposal

Date Submitted: 10/02/16 5:45 pm

**Viewing:** PSYCH 6700 : Training and Development

File: 4360

Last edit: 10/06/16 10:55 am

Changes proposed by: weidnern

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<td>Discipline</td>
<td>Psychology (PSYCH)</td>
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<td>Course Number</td>
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### Catalog Description

In Workflow

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

Approval Path

1. 10/03/16 11:24 am
   - murray: Approved for RPSYCHOL Chair
2. 10/03/16 11:25 am
   - Shauntae Ellis (smetg6):
Psychological theories of learning will be covered. Students will learn how evaluate training needs in an organization as well as how to subsequently develop, implement, and validate a training program in an organizational context.

Prerequisites
Psych 5700.

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 new course:

This new course is included in the Degree Change Proposal for the Industrial-Organizational Psychology MS degree program. This course will address an important area of I-O psychology and allow us to expand on material only partially covered in Psych 5700 previously. This is another core area suggested in the Guidelines for education and training in I-O Psychology.

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer Comments

smetg6 (10/06/16 10:55 am): Added a period to the prerequisite box.
# Course Inventory Change Request

**Date Submitted:** 10/02/16 4:36 pm  
**Viewing:** **PSYCH 6702 : Personnel Selection**  
**File:** 4081.1  
**Last approved:** 06/30/14 3:55 am  
**Last edit:** 10/06/16 10:56 am  
**Changes proposed by:** weidnern

## Programs referencing this course

- INORGPS-MS: Industrial Organizational Psychology MS

## Requested Information

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</table>

**Title:** Personnel Selection  
**Abbreviated Course Title:** Personnel Selection

**Catalog Description**

In Workflow

1. RPSYCHOL Chair  
2. CCC Secretary  
3. Social Sciences DSCC Chair  
4. Pending CCC Agenda post  
5. CCC Meeting Agenda  
6. Campus Curricula Committee Chair  

**Approval Path**

1. 10/03/16 10:19 am  
   murray: Approved for RPSYCHOL Chair  
2. 10/03/16 10:28 am  
   Shauntae Ellis (smetg6):
Current trends and methods in personnel recruitment and selection including classification, and promotion will be examined. An emphasis will be placed on
legal and methodological considerations that can impact proper testing and assessment procedures. Cognitive abilities, personality, physical abilities, and other non-cognitive assessments will be discussed. Developing and using assessment tools for personnel selection, classification, and promotion; measuring the impact of cultural variables on test performance; early identification of managerial potential; and emphasis on alternatives to cognitive abilities testing, including physical fitness and personality assessment.

Prerequisites

**Psych 5700. Graduate-standing.**

Field Trip

Statement

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<th>RSD: 0</th>
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</thead>
<tbody>
<tr>
<td>Total:</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Required for
Majors

Elective for
Majors

Justification for change:

This change is included as part of our Degree Change for the Industrial-Organizational Psychology MS degree. The description has been updated to better reflect the course content and the change in prerequisite is because this course will now be treated as an advanced course in the program requiring previous experience in I-O Psychology graduate coursework.

Semesters previously offered as an experimental course
Co-Listed

Courses:

Course Reviewer

Comments

smetg6 (10/06/16 10:56 am): Added a period to the prerequisite box.
Course Inventory Change Request

Date Submitted: 09/12/16 10:37 am

Viewing: STAT 5425: Introduction to Biostatistics

File: 652.1
Last edit: 09/12/16 10:37 am
Changes proposed by: imorgan

Programs referencing this course:
- BIO SC-BA: Biological Sciences BA
- BIO SC-BS: Biological Sciences BS
- BIOMED-MI: Biomedical Engineering Minor

Requested: Fall 2017 2014
Effective Change Date:
Department: Mathematics & Statistics
Discipline: Statistics (STAT)
Course Number: 5425
Title: Introduction to Biostatistics
Abbreviated Course Title: Introduction to Biostatistics

Approval Path:
1. 09/12/16 10:37 am
   sclark: Approved for RMATHEMA Chair
2. 09/13/16 3:45 pm
   Shauntae Ellis (smegt6):
Introduction to common biostatistical methods for designing research studies, collecting and analyzing data, with application to problems originating from the biological, environmental, and health sciences. Topics include randomization, means comparisons, ANOVA, regression, and analysis of count data.

Prerequisites

A grade of "C" or better in Math 1120, Math 1140, Math 1208, Math 1212, or Math 1214. 1140 or equivalent.
Field Trip Statement

Credit Hours
Total: 4

LEC: 3  LAB: 1  IND: 0  RSD: 0

Required for Majors No

Elective for Majors Yes No

Justification for change:
We want to strengthen the grade requirement for college algebra, but we also want students with calculus credit (which indicates satisfactory algebra skills) to pass the PERC check without having to give them special permission.

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer Comments

Key: 652 Preview Bridge
Program Change Request

Date Submitted: 04/27/16 5:24 pm

Viewing: **CP ENG-BS : Computer Engineering BS**

File: 153.39

Last approved: 04/25/16 2:11 pm

Last edit: 11/03/16 1:04 pm

Changes proposed by: stanleyj

Catalog Pages

Using this Program

**Computer Engineering**

Start Term: Fall **2017 2016**

Program Code: CP ENG-BS

Department: Electrical and Computer Engineering

Title

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. kristyg

Approval Path

1. 09/20/16 4:43 pm
   Daryl Beetner (daryl): Approved for RELECENG Chair
2. 09/22/16 8:45 am
   Shauntae Ellis (smetg6): Approved for CCC Secretary
3. 09/30/16 9:02 am
   sraper: Approved for Engineering DSCC Chair
4. 10/06/16 9:43 am
   Shauntae Ellis (smetg6): Approved for Pending CCC Agenda post
5. 11/03/16 9:30 am
   Shauntae Ellis (smetg6): Approved for CCC Meeting Agenda
6. 11/03/16 1:06 pm
Bachelor of Science Computer Engineering

Entering freshmen desiring to study Computer Engineering will be admitted to the Freshman Engineering Program. They will be permitted to state a Computer 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 Computer Engineering a minimum of 128 credit hours is required. These requirements are in addition to credit received for algebra, trigonometry, and basic ROTC courses. An average of at least two grade points per credit hour must be attained. At least two grade points per credit hour must also be attained in all courses taken in Computer 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 . The history course is to be selected from HISTORY 1200, HISTORY 1300, HISTORY 1310, or POL SCI 1200, POL SCI 1200. The economics course may be either ECON 1100 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 2000 level or above and must be selected from the approved list. This course must have as a prerequisite one of the humanities or social sciences courses already taken. Foreign language courses numbered 1180 will be considered to satisfy this requirement. Students may receive humanities credit for foreign language courses in their native tongue only if the course is at the 4000 level. 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 Computer Engineering program at Missouri S&T is characterized by its focus on the scientific basics of engineering and its innovative application; indeed, the underlying theme of this educational program is the application of the scientific basics to engineering practice through attention to problems and needs of the public. The necessary interrelations among the various topics, the engineering disciplines, and the other professions as they naturally come together in the solution of real world problems are emphasized as research, analysis, synthesis, and design. These interrelations are presented and discussed through classroom and laboratory instruction.

**Free Electives Footnote:**

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

<table>
<thead>
<tr>
<th>Freshman Year</th>
<th>Credits</th>
<th>Second Semester</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Semester</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FR ENG 1100&lt;sup&gt;2&lt;/sup&gt;</td>
<td>1</td>
<td>MECH ENG 1720</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1214&lt;sup&gt;3&lt;/sup&gt;</td>
<td>4</td>
<td>MATH 1215&lt;sup&gt;3&lt;/sup&gt;</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 1310</td>
<td>4</td>
<td>PHYSICS 1135&lt;sup&gt;3,4&lt;/sup&gt;</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 1319</td>
<td>1</td>
<td>ECON 1100 or 1200</td>
<td>3</td>
</tr>
<tr>
<td>HISTORY 1200, or 1300, or 1310, or POL SCI 1200</td>
<td>3</td>
<td>Elective-Hum or Soc (any level)&lt;sup&gt;5&lt;/sup&gt;</td>
<td>3</td>
</tr>
<tr>
<td>ENGLISH 1120</td>
<td>3</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>16</td>
<td></td>
<td>17</td>
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<tr>
<td><strong>Sophomore Year</strong></td>
<td></td>
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<tr>
<td><strong>First Semester</strong></td>
<td>Credits</td>
<td>Second Semester</td>
<td>Credits</td>
</tr>
<tr>
<td>ELEC ENG 2100&lt;sup&gt;3,6,7&lt;/sup&gt;</td>
<td>3</td>
<td>COMP ENG 2210&lt;sup&gt;3,6,8&lt;/sup&gt;</td>
<td>3</td>
</tr>
<tr>
<td>ELEC ENG 2101&lt;sup&gt;3,6&lt;/sup&gt;</td>
<td>1</td>
<td>COMP ENG 2211&lt;sup&gt;3,6&lt;/sup&gt;</td>
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</tr>
<tr>
<td>MATH 2222&lt;sup&gt;3&lt;/sup&gt;</td>
<td>4</td>
<td>ELEC ENG 2120&lt;sup&gt;3,7,9&lt;/sup&gt;</td>
<td>3</td>
</tr>
<tr>
<td>COMP SCI 1570&lt;sup&gt;3&lt;/sup&gt;</td>
<td>3</td>
<td>MATH 3304&lt;sup&gt;3&lt;/sup&gt;</td>
<td>3</td>
</tr>
<tr>
<td>COMP SCI 1580&lt;sup&gt;3&lt;/sup&gt;</td>
<td>1</td>
<td>COMP SCI 1510&lt;sup&gt;3&lt;/sup&gt;</td>
<td>3</td>
</tr>
<tr>
<td>PHYSICS 2135&lt;sup&gt;3,4&lt;/sup&gt;</td>
<td>4</td>
<td>COMP SCI 1200&lt;sup&gt;3&lt;/sup&gt;</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td></td>
<td>16</td>
</tr>
<tr>
<td><strong>Junior Year</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>First Semester</strong></td>
<td>Credits</td>
<td>Second Semester</td>
<td>Credits</td>
</tr>
<tr>
<td>COMP ENG 3110</td>
<td>3</td>
<td>COMP ENG Elective A&lt;sup&gt;3,14&lt;/sup&gt;</td>
<td>3</td>
</tr>
<tr>
<td>COMP ENG 3150</td>
<td>3</td>
<td>ELEC ENG 3410&lt;sup&gt;3,6,9&lt;/sup&gt;</td>
<td>3</td>
</tr>
</tbody>
</table>
Notes: Student must satisfy the common engineering freshman year requirements and be admitted into the department.

1. The minimum number of hours required for a degree in Computer Engineering is 128.

2. Students that transfer to Missouri S&T after their freshman year are not required to enroll in Freshman Engineering Seminars.

3. A minimum grade of "C" must be attained in MATH 1214, MATH 1215, MATH 2222, and MATH 3304, PHYSICS 1135 and PHYSICS 2135 (or their equivalents), COMP SCI 1570, COMP SCI 1580, COMP SCI 1510, COMP SCI 1200, COMP SCI 2500 or COMP SCI 3800, COMP ENG 2210, COMP ENG 2211, COMP ENG 3150, COMP ENG 3551, COMP ENG 3110, COMP ENG 5410 or COMP SCI 5600, COMP ENG 4096, and ELEC ENG 2100, ELEC ENG 2101, ELEC ENG 2120, ELEC ENG 2200, ELEC ENG 2201, ELEC ENG 3410, and ELEC ENG 3411, and the COMP ENG electives A, B, C, D and E. Also, students may not enroll in other courses that use these courses as prerequisites until the minimum grade of "C" is attained.

4. Students may take PHYSICS 1111 and PHYSICS 1119 in place of PHYSICS 1135. Students may take PHYSICS 2111 and PHYSICS 2119 in place of PHYSICS 2135.

5. All electives must be approved by the student's advisor. Students must comply with the general education requirements with respect to selection and depth of study. These requirements are specified in the current catalog.

6. Students who drop a lecture course prior to the deadline to drop a class must also drop the corequisite lab course.

7. Students must earn a passing grade on the ELEC ENG Advancement Exam I (associated with ELEC ENG 2100) before they enroll in ELEC ENG 2120 or ELEC ENG 2200 and ELEC ENG 2201.

8. Students must earn a passing grade on the COMP ENG Advancement Exam (associated with COMP ENG 2210) before they enroll in any course with COMP ENG 2210 and COMP ENG 2211 as prerequisites.
Students must earn a passing grade on the ELEC ENG Advancement Exam II (associated with ELEC ENG 2120) before they enroll in ELEC ENG 3410 and ELEC ENG 3411.

Students must take one of the following courses: MATH 3103, MATH 3108, MATH 3109, MATH 5302, MATH 5603, MATH 5105, MATH 5106, MATH 5107, MATH 5108, MATH 4209, MATH 4211, MATH 5215, MATH 5222, MATH 5325, MATH 4530, MATH 5737, MATH 5351, MATH 5154, MATH 4096, MATH 5483, MATH 5585, STAT 5644, STAT 5346, STAT 5353.

Students must take MECH ENG 2340, MECH ENG 2519, MECH ENG 2527, PHYSICS 2311, PHYSICS 2401, CHEM 2210, BIO SCI 2213, or BIO SCI 2223. The following pairs of course are substitutions for any single course: CIV ENG 2200 and MECH ENG 2350, PHYSICS 2305 and PHYSICS 4311, PHYSICS 2305 and PHYSICS 2305 and CER ENG 4240, or PHYSICS 2305 and NUC ENG 3205.

Students may replace STAT 3117 with STAT 3115 or STAT 5643.

Students must take English 3560 or English 1160. Students may replace SpMS 1185 with the ROTC sequence of Mil Army 4250 and 4500 or Mil Air 4110 and 4120.

Comp Eng Elective A must be a 4000 or 5000-level Comp Eng, Elec Eng, or Comp Sci course with at least a 3-hour lecture component. This normally includes all Comp Eng and Elec Eng 4000 or 5000-level courses except Comp Eng or Elec Eng 4000, 4099, 4096, and 4097 or Comp Sci 5000, 4010, 5600, and 4099.

Comp Eng Electives C, D, and E must be 3000, 4000 or 5000-level courses from an approved list of science, mathematics, and engineering courses. In particular, this list includes all 3000, 4000 or 5000-level Comp Eng, Elec Eng and Comp Sci courses except required courses in Comp Eng, Elec Eng, and Comp Sci and except Comp Eng 4096 and 4097, Elec Eng 2800, 1002, 1003, 4096, and 4097, and Comp Sci 2002 and 4600/5600). Comp Eng Electives C, D, and E must include at least six hours of engineering or computer science courses.

COMP ENG Electives C, D, and E cannot include more than three hours of COMP ENG 4000, COMP ENG 4099, ELEC ENG 4000, or ELEC ENG 4099.

Students pursuing dual degrees in COMP ENG and ELEC ENG may take either COMP ENG 4096 or ELEC ENG 4096 and COMP ENG 4097 or ELEC ENG 4097. Students may not receive credit for both COMP ENG 4096 and ELEC ENG 4096 or COMP ENG 4097 and ELEC ENG 4097 in the same degree program.

Students are required to take at least three credit hours. Elec Eng 2800 level, ELEC ENG 4096, ELEC ENG 4097, COMP ENG 4096 and COMP ENG 4097 may not be used for free electives. No more than one credit hour of COMP ENG 3002 or ELEC ENG 3002 may be applied to the BS degree for free electives.

Comp Eng Elective B must be a 4000 or 5000 level COMP ENG course with at least a 3-hour lecture component, excluding COMP ENG 4096 and COMP ENG 4097.

### Emphasis Areas for Computer Engineering

**Note:** The following emphasis areas identify courses from which a student may opt to develop a specific emphasis. It is not required that students obtain an emphasis specialty within computer engineering.

#### Computational Intelligence

<table>
<thead>
<tr>
<th>Highly Recommended</th>
<th>Computational Intelligence</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP ENG 5310</td>
<td>3</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
</tr>
<tr>
<td>------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>ELEC ENG 5370</td>
<td>Introduction to Neural Networks and Applications</td>
</tr>
<tr>
<td>COMP ENG 6310</td>
<td>Markov Decision Processes</td>
</tr>
<tr>
<td>Suggested</td>
<td></td>
</tr>
<tr>
<td>ELEC ENG 5330</td>
<td>Fuzzy Logic Control</td>
</tr>
<tr>
<td>COMP ENG 5450</td>
<td>Digital Image Processing</td>
</tr>
<tr>
<td>COMP ENG 5460</td>
<td>Machine Vision</td>
</tr>
<tr>
<td><strong>Computer Architecture and Embedded Systems</strong></td>
<td><strong>Highly Recommended</strong></td>
</tr>
<tr>
<td>COMP ENG 5110</td>
<td>Principles of Computer Architecture</td>
</tr>
<tr>
<td>COMP ENG 5120</td>
<td>Digital Computer Design</td>
</tr>
<tr>
<td>COMP ENG 5151</td>
<td>Digital Systems Design Laboratory</td>
</tr>
<tr>
<td>COMP ENG 5160</td>
<td>Embedded Processor System Design</td>
</tr>
<tr>
<td>COMP ENG 5170</td>
<td>Real-Time Systems</td>
</tr>
<tr>
<td>Suggested</td>
<td></td>
</tr>
<tr>
<td>COMP ENG 5610</td>
<td>Real-Time Digital Signal Processing</td>
</tr>
<tr>
<td>COMP ENG 5130</td>
<td>Advanced Microcomputer System Design</td>
</tr>
<tr>
<td>ELEC ENG 3100</td>
<td>Electronics I</td>
</tr>
<tr>
<td>COMP SCI 3100</td>
<td>Software Engineering I</td>
</tr>
<tr>
<td><strong>Integrated Circuits and Logic Design</strong></td>
<td><strong>Highly Recommended</strong></td>
</tr>
<tr>
<td>COMP ENG 2210</td>
<td>Introduction to Digital Logic</td>
</tr>
<tr>
<td>COMP ENG 5210</td>
<td>Introduction To VLSI Design</td>
</tr>
<tr>
<td>COMP ENG 5220</td>
<td>Digital System Modeling</td>
</tr>
<tr>
<td>COMP ENG 6210</td>
<td>Digital Logic</td>
</tr>
<tr>
<td>Suggested</td>
<td></td>
</tr>
<tr>
<td>ELEC ENG 3100</td>
<td>Electronics I</td>
</tr>
<tr>
<td>COMP ENG 5110</td>
<td>Principles of Computer Architecture</td>
</tr>
<tr>
<td>COMP ENG 5151</td>
<td>Digital Systems Design Laboratory</td>
</tr>
<tr>
<td>COMP ENG 5120</td>
<td>Digital Computer Design</td>
</tr>
<tr>
<td>COMP ENG 5130</td>
<td>Advanced Microcomputer System Design</td>
</tr>
<tr>
<td>COMP ENG 5510</td>
<td>Fault-Tolerant Digital Systems</td>
</tr>
<tr>
<td><strong>Networking, Security, and Dependability</strong></td>
<td><strong>Highly Recommended</strong></td>
</tr>
<tr>
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</tr>
</tbody>
</table>
Justification for request

Undergraduate students can pursue breath and depth of knowledge in hardware and/or software oriented emphasis areas in their Comp Eng BS degree programs. Updating the current requirement of "Comp Sci 3800-Operating Systems" with "Comp Sci 3800-Operating Systems or Comp Sci 2500-Algorithms" enhances this flexibility and provides fundamental knowledge for Computer Engineering undergraduate students in the respective hardware and software areas. Since none of the Computer Engineering core undergraduate courses requires Comp Sci 3800 as a prerequisite, the proposed requirement change does not impact the ability of Computer Engineering undergraduate students to take required courses. This change was approved by the Computer Engineering faculty on April 19, 2016.

Supporting Documents

Course Reviewer Comments

s Kết6 (09/23/16 8:55 am): In the junior year, second semester removed the word Algorithms from Comp Sci 2500 per S. Raper's request.

sraper (09/23/16 12:33 pm): Put Comp Sci 2500 into footnote 3 via email approval from Joe Stanley.

s Kết6 (10/06/16 9:42 am): Changed Start Term to Fall 2017

s Kết6 (11/03/16 9:29 am): In footnote 3 updated Comp Sci 2500 to a hyperlinked box

imorgan (11/03/16 1:04 pm): I inserted "or" between Comp Sci 2500 and Comp Sci 3800 in Footnote 3. I don't know why Comp Sci 1510 is showing "Course Not Found".
Program Change Request

Date Submitted: 09/20/16 4:05 pm

Viewing: HISTORY-BS : Bachelor of Science in History

File: 242.7
Last approved: 07/27/16 9:41 am
Last edit: 11/04/16 11:30 am
Changes proposed by: dewittp

Catalog Pages
Using this Program
History

<table>
<thead>
<tr>
<th>Start Term</th>
<th>Fall 2017 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Code</td>
<td>HISTORY-BS</td>
</tr>
<tr>
<td>Department</td>
<td>History and Political Science</td>
</tr>
<tr>
<td>Title</td>
<td></td>
</tr>
</tbody>
</table>

In Workflow
1. RHISTORY Chair
2. CCC Secretary
3. Arts & Humanities DSCC Chair
4. Pending CCC Agenda post
5. CCC Meeting Agenda
6. Campus Curricula Committee Chair
7. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. krisyg

Approval Path
1. 09/20/16 4:59 pm sfogg: Approved for RHISTORY Chair
2. 09/22/16 8:46 am Shaunte Ellis (smetg6): Approved for CCC Secretary
3. 09/22/16 10:48 am Petra Dewitt (dewittp): Approved for Arts & Humanities DSCC Chair
4. 10/06/16 9:59 am Shaunte Ellis (smetg6): Approved for Pending CCC Agenda post
5. 11/02/16 12:53 pm Shaunte Ellis (smetg6): Rollback

Bachelor of Science in History

Program Requirements and Description
Bachelor of Science
History

Students must take a minimum of 120 hours for a Bachelor of Science degree in history, and obtain a grade point average of 2.0. These requirements for the B.S. are in addition to credit received for basic ROTC.

The B.S. in history requires the following:

1. ENGLISH 1120 (entering students will normally take ENGLISH 1120 within their first year of study) and one other writing intensive course outside their major, which may include ENGLISH 1160, ENGLISH 1170, or ENGLISH 3560. (6 hours)

2. Math and Sciences. The general requirements for a B.S. call for at least 18 hours in biological, physical (chemistry, geology, physics), and mathematical (mathematics, statistics, computer science, and information science and technology) sciences. The B.S. in history requires at least one course from each of the biological and physical sciences, one lab, and at least one math course at the level of college algebra or higher. In addition to these requirements, students may count STAT 1115, up to 3 hours from psychology classes (PSYCH 2200 preferred), and up to 3 hours from history of science and technology classes (HISTORY 2510, HISTORY 3510, or HISTORY 2530), but may not use them to satisfy another requirement. (18 hours)

3. Humanities. Students must take 12 hours in humanities other than history with at least one course from literature, philosophy, and fine arts (Art, Music, or Theater Appreciation). Students may take courses in language and humanities other than history to meet the 12 hours requirement. (12 hours)

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

5. History. Students must take 37 hours in required history courses, including HISTORY 1790, HISTORY 1100, HISTORY 1200, HISTORY 1300, HISTORY 1310, HISTORY 2790, and HISTORY 2790 (16 hours) and at least 21 hours in history electives, including at least 6 hours in American history and at least 6 hours in European history. Nine of these 21 18-hours of history electives must be at or above the 3000 level. The student must earn a grade of C or better in these required courses. (37 hours)

6. History Electives. Students must take at least 18 hours in history electives, including at least 6 hours in American history and at least 6 hours in European history. Nine of these 18 hours of history electives must be at or above the 3000 level. (18 hours)

7. Electives Credit. Each student will elect sufficient additional courses to complete a minimum of 120 credit hours, which may include up to 12 hours in engineering courses at the discretion of the major adviser. At least 9 hours of these electives must be at the 3000 or above level, although substitutions may be permitted at the discretion of the major adviser. All electives must accumulate to at least a 2.0 grade point average.

Justification for request
History 4097, or Senior Project, is no longer a required course, but remains an optional course encouraged for students who go on to graduate school. CC form was approved fall 2016 before new BS degree achieved approval.

Supporting Documents

Course Reviewer Comments

smetag6 (11/02/16 12:53 pm): Rollback: Per CCC Meeting Rollback for Dr. Morgan to fix

imorgan (11/04/16 11:11 am): Edited for clarity based on CCC discussion.
imorgan (11/04/16 11:30 am): Changed to Fall 2017 based on CCC discussion.
Program Change Request

Date Submitted: 10/02/16 3:43 pm

Viewing: INORGPS-MS : Industrial Organizational Psychology MS

File: 234.13

Last approved: 07/24/15 5:33 pm

Last edit: 11/08/16 11:01 am

Changes proposed by: weidnern

Catalog Pages
Using this Program
  Psychology

Start Term               Fall 2017 2045
Program Code            INORGPS-MS
Department              Psychological Science

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

Approval Path
1. 10/03/16 11:26 am murray: Approved for RPSYCHOL Chair
2. 10/03/16 11:29 am Shauntae Ellis (smetg6): Approved for CCC Secretary
3. 10/05/16 3:46 pm Barry Flachbart (barryf): Approved for Social Sciences DSCC Chair
4. 10/06/16 10:00 am Shauntae Ellis (smetg6): Approved for Pending CCC Agenda post
5. 11/02/16 4:22 pm Shauntae Ellis (smetg6): Approved
for CCC Meeting
Agenda
6. 11/09/16 9:27 am
Ilene Morgan
(imorgan): Approved for Campus Curricula Committee Chair

---

**History**

1. Apr 17, 2014 by Lahne Black (lahne)
2. Apr 17, 2014 by Lahne Black (lahne)
3. Apr 24, 2014 by Lahne Black (lahne)
4. Apr 24, 2014 by Lahne Black (lahne)
5. Apr 24, 2014 by Lahne Black (lahne)
6. May 7, 2014 by Lahne Black (lahne)
7. Jul 8, 2014 by pantaleoa
8. Jul 29, 2014 by pantaleoa
9. Jun 19, 2015 by nstone
10. Jun 23, 2015 by pantaleoa
11. Jul 24, 2015 by pantaleoa
12. Jul 24, 2015 by pantaleoa

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**Program Requirements and Description**

**Master of Science in Industrial-Organizational Psychology**

**Admission Requirements**
Students interested in the M.S. in I-O psychology program should review the admissions requirements listed on our website [http://psych.mst.edu/graduate/indorgpsych/](http://psych.mst.edu/graduate/indorgpsych/).

**Program Requirements**

The M.S. in industrial-organizational psychology requires **40** credit hours which includes a minimum of **36** credit hours and allows students to select one of three non-thesis tracks (leadership in technological organizations, human factors, or psychometrics) or the thesis or non-thesis option. Students will complete **24** credit hours of core courses, **10** hours of methods courses, and **either 6** or **9** hours of elective credits specialization courses within the track or **6 hours of thesis credits**. Applied internship experiences are suggested, but not required as part of option requirements, and **3 hours of electives from within any of the program**. The program will take at least 2 years to complete and classes are offered both on-campus and via distance. three specialization emphasis (track) areas.

### Core Courses (24 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYCH 5010</td>
<td>Seminar in Industrial / Organizational Psychology</td>
</tr>
<tr>
<td>PSYCH 5601</td>
<td>Small Group Dynamics</td>
</tr>
<tr>
<td>PSYCH 5602</td>
<td>Organizational Development</td>
</tr>
<tr>
<td>PSYCH 5700</td>
<td>Job Analysis and Performance Management</td>
</tr>
<tr>
<td>PSYCH 6610</td>
<td>Leadership, Motivation, and Culture</td>
</tr>
<tr>
<td>PSYCH 6702</td>
<td>Personnel Selection</td>
</tr>
</tbody>
</table>

### Methods Courses (10 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYCH 5201</td>
<td>Psychometrics</td>
</tr>
<tr>
<td>PSYCH 6210</td>
<td>Course PSYCH 6210 Not Found</td>
</tr>
<tr>
<td>or STAT 6344</td>
<td>Design And Analysis Of Experiments</td>
</tr>
<tr>
<td>STAT 5353</td>
<td>Statistical Data Analysis</td>
</tr>
<tr>
<td>PSYCH 5210</td>
<td>Advanced Research Methods</td>
</tr>
<tr>
<td>PSYCH 5012</td>
<td>Ethics and Professional Responsibilities</td>
</tr>
<tr>
<td>PSYCH 5202</td>
<td>Applied Psychological Data Analysis</td>
</tr>
<tr>
<td></td>
<td><strong>5000-level or 6000-level PSYCH, ENG MGT, IS&amp;T, or STAT course pertaining to thesis topic (to be approved by student's academic advisor)</strong></td>
</tr>
<tr>
<td>PSYCH 6085</td>
<td>Internship</td>
</tr>
</tbody>
</table>

### Electives or Thesis (6 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYCH 6085</td>
<td>Internship</td>
</tr>
<tr>
<td></td>
<td><strong>Human Factors (non-thesis)</strong></td>
</tr>
<tr>
<td>PSYCH 5710</td>
<td>Advanced Human Factors</td>
</tr>
<tr>
<td>PSYCH 5720</td>
<td>Advanced Human-Computer-Interaction</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
</tr>
<tr>
<td>-------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>PSYCH 5730</td>
<td>Environmental Psychology: Research and Practice</td>
</tr>
<tr>
<td>PSYCH 6085</td>
<td>Internship</td>
</tr>
<tr>
<td>PSYCH 6099</td>
<td>Research</td>
</tr>
<tr>
<td>ENG MGT 6316</td>
<td>Safety Engineering Management</td>
</tr>
<tr>
<td>ENG MGT 6310</td>
<td>Human Systems Integration</td>
</tr>
<tr>
<td>ENG MGT 6113</td>
<td>Advanced Personnel Management</td>
</tr>
<tr>
<td>ERP 5410</td>
<td>Enterprise Resource Planning Systems Design and Implementation</td>
</tr>
<tr>
<td>ERP 5340</td>
<td>Supply Chain Management Systems in an ERP Environment</td>
</tr>
<tr>
<td>ERP 5210</td>
<td>Performance Dashboard, Scorecard and Data Visualization</td>
</tr>
<tr>
<td>IS&amp;T 5865</td>
<td>Human-Computer Interaction</td>
</tr>
<tr>
<td>IS&amp;T 5886</td>
<td>Prototyping Human-Computer Interactions</td>
</tr>
<tr>
<td>IS&amp;T 5887</td>
<td>Human-Computer Interaction-Evaluation</td>
</tr>
<tr>
<td>IS&amp;T 6690</td>
<td>Advanced Web and New Media Studies</td>
</tr>
<tr>
<td>IS&amp;T 6887</td>
<td>Research Methods in Business and IS&amp;T</td>
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</table>

**Leadership in Technical Organizations emphasis (non-thesis):**

<table>
<thead>
<tr>
<th>Course Code</th>
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</thead>
<tbody>
<tr>
<td>PSYCH 4992</td>
<td>Cross-Cultural Psychology</td>
</tr>
<tr>
<td>PSYCH 5600</td>
<td>Advanced Social Psychology</td>
</tr>
<tr>
<td>PSYCH 5603</td>
<td>Advanced Social Influence</td>
</tr>
<tr>
<td>PSYCH 6611</td>
<td>Leadership for Engineers</td>
</tr>
<tr>
<td>PSYCH 6085</td>
<td>Internship</td>
</tr>
<tr>
<td>PSYCH 6099</td>
<td>Research</td>
</tr>
<tr>
<td>ENG MGT 5110</td>
<td>Managerial Decision Making</td>
</tr>
<tr>
<td>ENG MGT 5542</td>
<td>Legal Environment</td>
</tr>
<tr>
<td>ENG MGT 6610</td>
<td>Technological Innovation Management</td>
</tr>
<tr>
<td>ENG MGT 6113</td>
<td>Advanced Personnel Management</td>
</tr>
<tr>
<td>IS&amp;T 5251</td>
<td>Technological Innovation Management and Leadership</td>
</tr>
<tr>
<td>IS&amp;T 5168</td>
<td>Law and Ethics in E-Commerce</td>
</tr>
</tbody>
</table>

**Psychometrics emphasis (non-thesis)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYCH 5200</td>
<td>Theories and Practice of Psychological Measurement</td>
</tr>
<tr>
<td>PSYCH 6085</td>
<td>Internship</td>
</tr>
<tr>
<td>PSYCH 6099</td>
<td>Research</td>
</tr>
<tr>
<td>STAT 5643</td>
<td>Probability And Statistics</td>
</tr>
<tr>
<td>STAT 5644</td>
<td>Mathematical Statistics</td>
</tr>
<tr>
<td>STAT 5346</td>
<td>Regression Analysis</td>
</tr>
</tbody>
</table>
Justification for request

The new proposed curriculum will allow us to properly address the recently approved (April, 2016) Guidelines for Education and Training in Industrial-Organizational Psychology (attached) which sets the standards for education in this field. The new curriculum moves from a 36 credit hour program to a 40 credit hour program in order to be more competitive with other similar programs which are often 42-47 credit hours. The new courses and course changes included in the curriculum allow for additional specialization needed to keep pace with expectations in the field of I-O. See the attached "I-O MS Curriculum for DC form" for additional details, justifications, and an overview of the feasibility of the new curriculum.

Supporting Documents

Course Reviewer Comments
sметg6 (10/03/16 11:28 am): Changed to FS 2017
sметg6 (11/03/16 9:37 am): In Methods Changed Psych 6210 to 5210
sметg6 (11/08/16 10:57 am): Removed 5400 and replaced with 5001.001 removed 5740 and replaced with 5001.002 per Dr. Morgan
sметg6 (11/08/16 11:01 am): Changed 5002 to 5012 and replaced 5202 with 5202 with a new course title
Course Inventory Change Request

New Experimental Course Proposal

Date Submitted: 09/29/16 3:33 pm

Viewing: **ART 3001.003 : Great Directors**

File: 4346

Last edit: 11/02/16 4:23 pm

Changes proposed by: amt253

- **Requested** 01/17/2017
- **Effective Change Date**
- **Department** Arts, Languages, & Philosophy
- **Discipline** Art (ART)
- **Course Number** 3001
- **Topic ID** 003
- **Experimental Title** Great Directors
- **Experimental Abbreviated Course Title** Great Directors
- **Instructors** Andrew Tohline
- **Experimental Catalog Description**

In Workflow

1. **RPHILOSOS 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. 09/29/16 4:19 pm Audra Merfeld-Langston (audram): Approved for RPHILOSOS Chair
2. 09/30/16 9:18 am Shauntae Ellis (smetg6): Approved for CCC Secretary
3. 09/30/16 9:41 am Petra Dewitt (dewittp): Approved for Arts

https://nextcatalog.mst.edu/courseleaf/approve/?role=Arts_%26_Humanities_DSCC_Chair
This course will examine the personal style and thematic visions of 7 great directors from across film history. We will select from such artists as Altman, Bergman, Bunuel, Chaplin, Eisenstein, Fellini, Ford, Godard, Hawks, Hitchcock, Keaton, Kiarostami, Kubrick, Kurosawa, Lang, Lee, Marker, Ray, Scorsese, Tarkovsky, Tarantino, Varda, Welles, or others.

Prerequisites
Art 1185.

Field Trip
Statement

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

Justification for new course:
Developing new courses for a film minor.

Semester(s)
previously taught
Edited effective date

Co-Listed
Courses:

Course Reviewer
Comments

sme tg6 (09/30/16 9:18 am): Edited topic ID
sme tg6 (11/02/16 4:23 pm): Removed instructors approval from prereq box.
### Course Inventory Change Request

**New Experimental Course Proposal**

Date Submitted: 10/05/16 3:39 pm

Viewing: **ECON 4001.003 : Introduction to Health Economics**

<table>
<thead>
<tr>
<th>File: 4340</th>
</tr>
</thead>
<tbody>
<tr>
<td>Last edit: 11/02/16 4:25 pm</td>
</tr>
<tr>
<td>Changes proposed by: marcys</td>
</tr>
</tbody>
</table>

- **Requested Effective Change Date**: 01/17/2017
- **Department**: Economics
- **Discipline**: Economics (ECON)
- **Course Number**: 4001
- **Topic ID**: 003
- **Experimental Title**: Introduction to Health Economics
- **Experimental Abbreviated Course Title**: Intro to Health Econ
- **Instructors**: Dr. Bonnie Bachman

**Approval Path**

1. 10/06/16 2:31 pm
   - Gregory Gelles (gelles): Approved for RECONOMI Chair

2. 10/06/16 2:34 pm
   - Shauntae Ellis (smetg6): Approved for CCC Secretary

3. 10/07/16 8:25 am
   - Kristy Giacomelli (kristyg): Approved for Social Sciences DSCC Chair
Explains the health care market in the U.S. and globally by addressing economic principles, concepts and theories used in the supply and demand of health and medical services. Examines the role of insurance, government, financing and production in the health industry.

Prerequisites
ECON 1100 or ECON 1200.

Field Trip

Statement
n/a

Credit Hours

<table>
<thead>
<tr>
<th>LEC</th>
<th>LAB</th>
<th>IND</th>
<th>RSD</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Total: 3

Justification for new course:
This course covers a very important and timely topic. Presently, there is considerable public debate on the justification for affordable care and other healthcare options.
This course will be designed to provide students with a solid economic basis for discussing this important public topic.

Semester(s)
previously taught

Co-Listed
Courses:

Course Reviewer
Comments

sme6g (10/05/16 3:36 pm): Rollback: Had to correct the Econ Chair
sme6g (10/06/16 2:34 pm): added period to prerequisite box.
sme6g (10/06/16 2:34 pm): Added Topic ID number
sme6g (11/02/16 4:25 pm): Removed course titles from prereq box.
# Course Inventory Change Request

## New Experimental Course Proposal

Date Submitted: 10/05/16 3:40 pm

Viewing: **ECON 6001.001 : Health Economics**

File: 4341

Last edit: 10/06/16 2:35 pm

Changes proposed by: marcys

<table>
<thead>
<tr>
<th>Requested</th>
<th>01/17/2017</th>
</tr>
</thead>
</table>

**Department** Economics  
**Discipline** Economics (ECON)  
**Course Number** 6001  
**Topic ID** 001  

**Experimental Title** Health Economics  
**Experimental Abbreviated Course Title** Health Economics  
**Instructors** Dr. Bonnie Bachman

---

### In Workflow

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

### Approval Path

1. 10/06/16 2:31 pm  
   Gregory Gelles (gelles): Approved for RECONOMI Chair

2. 10/06/16 2:35 pm  
   Shauntae Ellis (smetg6): Approved for CCC Secretary

3. 10/07/16 8:25 am  
   Kristy Giacomelli (kristyg): Approved for Social Sciences DSCC Chair
Explores the health care market in the U.S. and globally by addressing economic principles, concepts and theories used in the supply and demand of health and medical services. Examines the role of insurance, government, financing and production in the health industry. Research project or written case study required.

Prerequisites
Graduate standing.

Field Trip
Statement
n/a

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

Justification for new course:
This course covers a very important and timely topic. Presently, there is considerable public debate on the justification for affordable care and other healthcare options.
This course will be designed to provide students with a solid economic basis for discussing this important public topic.

Semester(s)
previously taught

Co-Listed
Courses:

Course Reviewer
Comments
smetg6 (10/05/16 3:36 pm): Rollback: Had to fix the Econ Chair within the system
smetg6 (10/06/16 2:35 pm): added period to prerequisite box
Course Inventory Change Request

New Experimental Course Proposal

Date Submitted: 09/20/16 10:29 am

Viewing: ELEC ENG 5001.004 : Introduction to Nanotechnology

File: 4336
Last edit: 11/03/16 9:43 am
Changes proposed by: martins

Requested 01/17/2017
Effective Change Date

Department Electrical and Computer Engineering
Discipline Electrical Engineering (ELEC ENG)
Course Number 5001
Topic ID 004
Experimental Title
Introduction to Nanotechnology

Experimental Title
Intro Nanotechnology

Experimental Abbrivated Course Title

Instructors Dr. Ian Ferguson

Experimental Catalog
Description

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. Registrar

Approval Path
1. 09/21/16 9:56 am
Daryl Beetner (daryl): Approved for RELECENG Chair
2. 09/22/16 8:47 am
Shauntae Ellis (smetg6):
Approved for CCC Secretary
3. 09/30/16 9:02 am
sraper: Approved for Engineering DSCC Chair
4. 10/06/16 9:44 am
Shauntae Ellis
General introduction to the field of nanotechnology with some emphasis on energy devices and renewable energy applications. Review of historical development from an engineering perspective. Cover topics from fundamental properties of nanomaterials and their processing, and fabrication techniques for nano-devices and systems along with recent advances.

Prerequisites
Elec Eng 2200 or equivalent or graduate standing.

Field Trip
Statement
N/A

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

Justification for new course:
Nanotechnology revolution was initiated by reduction in device size in silicon (Moore's Law) & sense that smaller could lead to increasing functionality. A similar revolution has also occurred in the development of optoelectronic devices such as LEDs and lasers enabled applications in lighting, optical communication, etc. This
revolution has continue & this course will cover topics that range from the science of nanostructures to their engineering applications. This course will take a phenomenological and/or qualitative approach focusing on an understanding of the technology rather than that of a detailed understanding of the underlying quantum mechanics. Concepts discussed will be nanomaterials scale effect, process-structure-property relationships, charge transport mechanisms & the characterization of nanostructures. Advanced materials/device fabrications topics will also be considered including different materials processing methods from gas, vapor & solid phases including the scalability to nano-manufacturing techniques. Nanomaterials properties, processing methods & devices will be discussed with regards to specific applications with a particular focus on energy related applications. There is not a similar course at Missouri S&T.

Semester(s)
previously taught
  None

Co-Listed
Courses:

Course Reviewer
Comments
  smetag6 (10/06/16 9:44 am): Added a period to the prerequisites
  smetag6 (11/03/16 9:43 am): Removed ": From atoms to systems-materials, devices and applications" from title
Course Inventory Change Request

New Experimental Course Proposal

Date Submitted: 09/26/16 9:15 am

Viewing: ENV ENG 5001.001 : STEAM Diplomacy

File: 4320

Last edit: 11/03/16 1:42 pm

Changes proposed by: oertherd

Requested 01/17/2017

Effective Change Date

Department Civil, Architectural, and Environmental Engineering

Discipline Environmental Engineering (ENV ENG)

Course Number 5001

Topic ID 001

Experimental Title STEAM Diplomacy

Experimental Abbreviated Title STEAM Diplomacy

Course Title

Instructors Daniel B. Oerther

Experimental Catalog Description

Approval Path

1. 09/26/16 3:31 pm
   Joel Burk (burken):
   Approved for RCIVILEN Chair

2. 09/29/16 4:05 pm
   Shauntae Ellis (smetg6):
   Approved for CCC Secretary

3. 10/12/16 10:49 am
   spraper: Approved for Engineering DSCC Chair
Aims to excite science, technology, engineering, art (design), and math students to consider diplomatic craft and foreign policy to further professional business interests as well as to contribute to creating a more secure, democratic, and prosperous world for the benefit of the American people and the international community.

Prerequisites
Junior or Senior standing.

Field Trip
Statement
None

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

Justification for new course:

The Renaissance was known as an integrative period of unified knowledge where individuals such as Michelangelo seamlessly merged the fields of art and design
through advances in mathematics, science, technology, and engineering. The Renaissance also witnessed the birth of diplomacy where state appointed actors conducted negotiations to keep peace, facilitate trade, and promote economics, culture, human rights, and the shared environment. In the early 21st century, environmental challenges - including climate change, water rights, environmental health, food and nutrition security, and sustainable energy - represent simultaneously the greatest threats as well as the greatest opportunities for personal, professional, and national gain. Recently, the U.S. National Research Council released, "Diplomacy for the 21st Century: Embedding a Culture of Science and Technology Throughout the Department of State." This manifesto calls for increased capacity among scientists, technologists, mathematicians, and engineers to engage in diplomatic craft and foreign policy, and it calls for professional diplomats to improve their understanding of STEM. Leveraging the recent experience of Professor Daniel Oerther as a Jefferson Science Fellow at the US Department of State, this experimental course will utilize a case study approach to illuminate the modern history of science diplomacy, the US Foreign Service, and the United Nations system by examining relevant environmental engineering projects including: the expansion of the Panama Canal; the Antarctic Treaty System, the Montreal Protocol on Ozone Depleting Substances, and the Port State Measures Agreement. The US Science Envoys systems, the Center for Science Diplomacy of the AAAS, and the White House Office of Science and Technology Policy will be additional topics covered as part of the course. While demand for such a course exists, we currently offer no similar courses at S&T.

Semester(s) previously taught
  None

Co-Listed Courses:
  CIV ENG 5001 - Special Topics
  POL SCI 4001 - Special Topics

Course Reviewer

Comments
  burken (09/15/16 4:38 pm): Rollback: Jr or Senior Status. Not in Arch E. Thanks and sorry this takes too long.
smetg6 (09/29/16 4:05 pm): Updated Course Number.

sraper (10/12/16 10:49 am): It should be noted that two committee members had strong reservations about this EC/Course. However, by the process rules for this committee, if I receive no comments after one week, the assumption is other committee members approve. Therefore I will approve, but will bring the expressed written comments to the CCC meeting where this is discussed so that other members are aware of the concerns.

imorgan (11/03/16 1:42 pm): Added period to prerequisite.
Course Inventory Change Request

New Experimental Course Proposal

Date Submitted: 09/26/16 2:09 pm

Viewing: HISTORY 3001.001 : History of Las Vegas, Nevada

File: 3989
Last edit: 10/06/16 9:53 am
Changes proposed by: dewittp

Requested 01/17/2017
Effective Change Date

Department History and Political Science
Discipline History (HISTORY)
Course Number 3001
Topic ID 001

Experimental Title
History of Las Vegas, Nevada

Experimental Abbreviated Title
History of Vegas

Instructors Larry Gragg

Approval Path
1. 09/26/16 2:16 pm sfogg: Approved for RHISTORY Chair
2. 09/29/16 4:06 pm Shauntae Ellis (smetg6): Approved for CCC Secretary
3. 09/29/16 5:32 pm Petra Dewitt (dewittp): Approved for Arts & Humanities DSCC Chair
The course will use the history of Las Vegas to explore urbanization, Americans’ leisure time activities, entertainment and popular culture, compulsive gambling, government support for economic development, civic promotion, and organized crime in the twentieth century.

Prerequisites

Field Trip

Statement

<table>
<thead>
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<th>Credit Hours</th>
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<th>LAB: 0.0</th>
<th>IND: 0.0</th>
<th>RSD: 0.0</th>
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<tbody>
<tr>
<td>Total: 3.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Justification for new course:

Department requested.
In order to be taught a second time the course requires a course number update from the old three digit to the new four digit system.

Semester(s)
previously taught
Spring 2014

Co-Listed
Courses:

Course Reviewer
Comments
smetg6 (09/29/16 4:06 pm): Updated Topic ID
smetg6 (10/06/16 9:53 am): Corrected the spelling for gambling and government in the catalog description box

Key: 3989
Preview Bridge
Course Inventory Change Request

New Experimental Course Proposal
Date Submitted: 09/26/16 2:43 pm

Viewing: HISTORY 3001.002: History of Science in Latin America

File: 4344
Last edit: 10/06/16 9:56 am
Changes proposed by: sheppardka

Requested 01/17/2017
Effective Change Date
Department History and Political Science
Discipline History (HISTORY)
Course Number 3001
Topic ID 002

Experimental Title
History of Science in Latin America

Experimental Abbreviated Course Title
Hist. Lat. Am. Science

Instructors Kathleen Sheppard

Approval Path
1. 09/26/16 2:47 pm
   sfogg: Approved for R HISTORY Chair
2. 09/29/16 4:06 pm
   Shauntae Ellis (s metg6):
   Approved for CCC Secretary
3. 09/29/16 5:46 pm
   Petra Dewitt (dewittp):
   Approved for Arts & Humanities DSCC Chair

https://nextcatalog.mst.edu/courseleaf/approve/?role=Arts_%26_Humanities_DSCC_Chair
Introductory survey course in the history of science in what we now call Latin America. Throughout the semester, students will focus on the search for knowledge about the natural world, from the ancient world to present in Central and South America.

Prerequisites
HIST 1100 or HIST 1200 or HIST 1300 or HIST 1310.

Field Trip
Statement

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

Justification for new course:
Experimental course as part of a new minor project: Latin American Studies with Technical Applications.
Semester(s)
previously taught
None

Co-Listed
Courses:

Course Reviewer
Comments
smetg6 (09/29/16 4:06 pm): Edited Topic ID
dewittp (09/29/16 5:46 pm): updated catalogue description
smetg6 (10/06/16 9:56 am): Added period to prerequisite box
Course Inventory Change Request

New Experimental Course Proposal

Date Submitted: 09/12/16 10:06 am


File: 4335
Last edit: 11/03/16 1:43 pm
Changes proposed by: nisbett

Requested Effective Change Date
01/17/2017

Department Mechanical & Aerospace Engineering

Discipline Mechanical Engineering (MECH ENG)

Course Number 5001

Topic ID 002

Experimental Title
Modeling of Energy Materials

Experimental Abbreviated Course Title
Modeling Energy Material

Instructors Dr. Jonghyun Park

Experimental Catalog Description

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. Registrar

Approval Path
1. 09/12/16 12:28 pm
   James Drallmeier (drallmei):
   Approved for RMECHENG Chair
2. 09/13/16 3:47 pm
   Shauntae Ellis (smetg6):
   Approved for CCC Secretary
3. 09/30/16 9:02 am
   sraper: Approved for Engineering DSCC Chair

https://nextcatalog.mst.edu/courseleaf/approve/?role=Arts__26_Humanities_DSCC_Chair
This course introduces the basic principles of energy materials by focusing on their modeling and simulations. Modeling of the key fundamental physics on those systems including transport process, structural change, and phase transition will be studied, along with different length scale simulation tools including continuum and sub-continuum approaches.

Prerequisites
   Civ Eng 2210 or Mech Eng 2519 or graduate standing.

Field Trip
Statement

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

Justification for
new course:
This is an important and developing area of study complementary to current research on campus.

Semester(s) previously taught
None

Co-Listed Courses:

Course Reviewer Comments

sme tg6 (09/13/16 3:47 pm): Added Topic ID #

sme tg6 (10/06/16 10:04 am): Added a period to the prerequisite box.

sme tg6 (11/03/16 9:47 am): In the prereq box I removed "or consent of instructor for majors that do not require either of these courses;" and added an "or" in between the first two prereqs
Course Inventory Change Request

New Experimental Course Proposal

Date Submitted: 09/14/16 9:14 am

Viewing: MUSIC 3001.001 : Wartime Music and Musicians in Europe

File: 4334
Last edit: 09/20/16 8:31 am
Changes proposed by: lorf

Requested: Summer 2017
Effective Change Date: 
Department: Arts, Languages, & Philosophy
 Discipline: Music (MUSIC)
Course Number: 3001
Topic ID: 001

Experimental Title: Wartime Music and Musicians in Europe
Experimental Abbreviated Course Title: Wartime Music in Europe
Instructors: Lorie L. Francis

In Workflow
1. RPHILOSOS 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. 09/19/16 11:24 am
   Audra Merfeld-Langston (audram):
   Approved for RPHILOSOS Chair
2. 09/20/16 8:31 am
   Shauntae Ellis (smetg6):
   Approved for CCC Secretary
3. 09/20/16 12:16 pm
   Petra Dewitt

https://nextcatalog.mst.edu/courseleaf/approve/?role=Arts_%26_Humanities_DSCC_Chair
Emphasizing the period of WWII, this course will explore the banned and forgotten musicians and composers of Europe. After on-campus coursework and orientation, students are required to travel to Europe to visit sites that are relevant to the music and musicians of wartime Europe.

Prerequisites
None

Field Trip
Statement
Course includes mandatory trip to Germany and Austria. Students are responsible for all associated trip costs.

Credit Hours

LEC: 3  LAB: 0  IND: 0  RSD: 0
Total: 3
Justification for new course:

Expand music and performing arts curriculum at S&T; provide departmental experiential learning opportunities for students.

Semester(s) previously taught
None

Co-Listed Courses:

Course Reviewer Comments

Key: 4334
Preview Bridge
Course Inventory Change Request

New Experimental Course Proposal

Date Submitted: 09/30/16 12:31 pm

Viewing: PET ENG 6001.002: Reactive Transport Modeling

File: 4348
Last edit: 11/03/16 9:49 am
Changes proposed by: reflori

Requested 01/17/2017
Effective Change Date
Department Geosciences and Geological and Petroleum Engineering
Discipline Petroleum Engineering (PET ENG)
Course Number 6001
Topic ID 002
Experimental Title Reactive Transport Modeling
Experimental Abbreviated Course Title Reactive Trans Modeling
Instructors Peyman Heidari

Approval Path
1. 09/30/16 2:32 pm Francisca Oboh-Ikuenobe (ikuenobe): Approved for RGEOSENG Chair
2. 10/03/16 8:22 am Shauntae Ellis (smetg6): Approved for CCC Secretary
3. 10/12/16 10:53 am sraper: Approved for Engineering DSCC Chair

https://nextcatalog.mst.edu/courseleaf/approve/?role=Arts%26_Humanities_DSCC_Chair
Basic principles of reactive transport modeling for subsurface systems, including important reactive systems in various applications, formulation of reactive transport equations, and numerical methods used to solve them. The class will also discuss open research questions in reactive transport systems. Students will also learn CrunchFlow software.

Prerequisites
Pet Eng 3520.

Field Trip
Statement

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

Justification for new course:
Understanding the interactions between flow, transport, and reaction processes is important for many applications, including, for example, geological CO2 sequestration, water-flooding, chemical weathering, enhanced oil recovery, and environmental remediation. This course will provide the students with knowledge and skills to model experimental data and evaluate their field observations.

Semester(s)
previously taught
None, this is a new course.

Co-Listed
Courses:

Course Reviewer

Comments

smetg6 (10/03/16 8:22 am): Added Topic ID Num
smetg6 (11/03/16 9:49 am): Removed "Preceded by" from the prereq box.

Key: 4348
Preview Bridge
Course Inventory Change Request

New Experimental Course Proposal

Date Submitted: 09/26/16 9:14 am

Viewing: **POL SCI 4001.002 : STEAM Diplomacy**

File: 4343

Last edit: 10/06/16 10:19 am

Changes proposed by: oertherd

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<th>01/17/2017</th>
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Department | History and Political Science

Discipline | Political Science (POL SCI)

Course Number | 4001

Topic ID | 002

Experimental Title

STEAM Diplomacy

Experimental Abbreviated Course Title

STEAM Diplomacy

Instructors | Daniel B. Oerther

Experimental Catalog Description

https://nextcatalog.mst.edu/courseleaf/approve/?role=Arts_%26_Humanities_DSCC_Chair
Aims to excite science, technology, engineering, art (design), and math students to consider diplomatic craft and foreign policy to further professional business interests as well as to contribute to creating a more secure, democratic, and prosperous world for the benefit of the American people and the international community.

Prerequisites
Junior or Senior standing.

Field Trip
Statement
None

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

Justification for new course:
The Renaissance was known as an integrative period of unified knowledge where individuals such as Michelangelo seamlessly merged the fields of art and design
through advances in mathematics, science, technology, and engineering. The Renaissance also witnessed the birth of diplomacy where state appointed actors conducted negotiations to keep peace, facilitate trade, and promote economics, culture, human rights, and the shared environment. In the early 21st century, environmental challenges - including climate change, water rights, environmental health, food and nutrition security, and sustainable energy - represent simultaneously the greatest threats as well as the greatest opportunities for personal, professional, and national gain. Recently, the U.S. National Research Council released, "Diplomacy for the 21st Century: Embedding a Culture of Science and Technology Throughout the Department of State." This manifesto calls for increased capacity among scientists, technologists, mathematicians, and engineers to engage in diplomatic craft and foreign policy, and it calls for professional diplomats to improve their understanding of STEM. Leveraging the recent experience of Professor Daniel Oerther as a Jefferson Science Fellow at the US Department of State, this experimental course will utilize a case study approach to illuminate the modern history of science diplomacy, the US Foreign Service, and the United Nations system by examining relevant environmental engineering projects including: the expansion of the Panama Canal; the Antarctic Treaty System, the Montreal Protocol on Ozone Depleting Substances, and the Port State Measures Agreement. The US Science Envoys systems, the Center for Science Diplomacy of the AAAS, and the White House Office of Science and Technology Policy will be additional topics covered as part of the course. While demand for such a course exists, we currently offer no similar courses at S&T.

Semester(s) previously taught
None

Co-Listed Courses:

Course Reviewer
Comments
sme tg6 (09/29/16 4:08 pm): Edited Topic ID
sme tg6 (10/06/16 10:19 am): Added a period to the prerequisite box.
Course Inventory Change Request

New Experimental Course Proposal

Date Submitted: 10/02/16 5:09 pm

Viewing: PSYCH 5001.001 : Advanced Cognitive Psychology

File: 4355
Last edit: 11/08/16 10:43 am
Changes proposed by: weidnern

Programs referencing this course
INORGPS-MS: Industrial Organizational Psychology MS

Requested Date
Fall 2017

Effective Change Date

Department
Psychological Science

Discipline
Psychology (PSYCH)

Course Number
5001

Topic ID
001

Experimental Title
Advanced Cognitive Psychology

Experimental Abbreviated Course Title

Instructors
Devin Burns

Approval Path
1. 10/03/16 10:20 am
murray: Approved for RPSYCHOL Chair
2. 10/03/16 10:27 am
Shauntae Ellis (smetg6):
Experimental
Catalog
Description

Approved for CCC Secretary
3. 10/05/16 3:46 pm
   Barry Flachbart (barryf):
   Approved for Social Sciences
   DSCC Chair

4. 10/06/16 10:31 am
   Shauntae Ellis (smetg6):
   Approved for Pending CCC Agenda post

5. 11/02/16 12:55 pm
   Shauntae Ellis (smetg6):
   Rollback to Pending CCC Agenda post for CCC Meeting Agenda

6. 11/02/16 4:02 pm
   Shauntae Ellis (smetg6):
   Approved for Pending CCC Agenda post

7. 11/03/16 9:20 am
   Shauntae Ellis (smetg6):
   Approved for CCC Meeting Agenda
This course covers cognitive processes and their application to various practical situations. Theory and research are presented on attention, perception, memory, problem solving, decision making and language. An emphasis is placed on understanding how these processes impact daily life.

Prerequisites
Prerequisite: Psych 4400 or graduate standing.

Field Trip
Statement

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<th>Credit Hours</th>
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<th>LAB: 0</th>
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</table>
Justification for new course:

This new course is included in the Degree Change Proposal for the Industrial-Organizational Psychology MS degree program. This is a content area which will be offered as an elective. It will be a useful elective for any I-O Psychology practitioner to have taken and will cover information which is complementary to several other courses and topic areas included in the program of study.

Semester(s) previously taught

Co-Listed Courses:

Course Reviewer
Comments

smetg6 (11/02/16 12:55 pm): Rollback: Per CCC Meeting

smetg6 (11/03/16 9:20 am): Approved but pending changes to be made by Dr. Morgan

imorgan (11/03/16 12:49 pm): This CC does not need to be changed, but I will edit the degree program to reflect that this is required (but that a thesis may be substituted).

smetg6 (11/03/16 2:31 pm): Rollback: Per Dr. Morgan's request.

smetg6 (11/08/16 10:43 am): Converted to an EC changed course number from 5400 to 5001.001 per Dr. Morgand and added instructor as Devin Burns per Dr. Murray
Course Inventory Change Request

**New Experimental Course Proposal**

Date Submitted: 10/02/16 5:16 pm

Viewing: **PSYCH 5001.002 : Occupational Health and Safety**

File: 4356  
Last edit: 11/08/16 10:44 am  
Changes proposed by: weidnern

Programs referencing this course

**INORGPS-MS: Industrial Organizational Psychology MS**

**Requested**  
Fall 2017

**Effective Change Date**

**Department**  
Psychological Science

**Discipline**  
Psychology (PSYCH)

**Course Number**  
5001

**Topic ID**  
002

**Experimental Title**

Occupational Health and Safety

**Experimental Abbreviated Course Title**

Occ. Health and Safety

**Instructors**

Susan Murray

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Approval Path

1. 10/03/16 11:18 am  
murray: Approved for RPSYCHOL Chair
2. 10/03/16 11:21 am  
Shauntae Ellis (smetag6):

https://nextcatalog.mst.edu/courseleaf/approve?role=CCC_Secretary
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<th>Time</th>
<th>Author</th>
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<tr>
<td>3.</td>
<td>10/05/16</td>
<td>3:46 pm</td>
<td>Barry Flachbart</td>
<td>Approved for Social Sciences DSCC Chair</td>
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<td>4.</td>
<td>10/06/16</td>
<td>10:37 am</td>
<td>Shauntae Ellis</td>
<td>Approved for Pending CCC Agenda post</td>
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<td>5.</td>
<td>11/02/16</td>
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<td>Shauntae Ellis</td>
<td>Rollback to Pending CCC Agenda post for CCC Meeting Agenda</td>
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<td>6.</td>
<td>11/02/16</td>
<td>4:02 pm</td>
<td>Shauntae Ellis</td>
<td>Approved for Pending CCC Agenda post</td>
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<td>7.</td>
<td>11/03/16</td>
<td>9:23 am</td>
<td>Shauntae Ellis</td>
<td>Approved for CCC Meeting Agenda</td>
</tr>
</tbody>
</table>
This course will cover the ethical, legislative, technical, behavioral, and management aspects of health and safety practice in human resources. Topics include workplace safety, ergonomics, accident investigation, occupational stress, government regulatory agencies, employee assistance programs, wellness programs, and behavioral based safety.

Prerequisites
Graduate standing.

Field Trip
Statement

Credit Hours LEC: 3 LAB: 0 IND: 0 RSD: 0
Total: 3
Justification for new course:
This new course is included in the Degree Change Proposal for the Industrial-Organizational Psychology MS degree program. This course will be offered as an elective and is specifically noted as an important competency in the Guidelines for Education and Training In I-O Psych on which the curriculum revision is being based.

Semester(s) previously taught

Co-Listed Courses:

Course Reviewer Comments

smetg6 (10/06/16 10:36 am): added period to prerequisite box
smetg6 (11/02/16 12:55 pm): Rollback: Per CCC meeting
imorgan (11/03/16 12:58 pm): I will edit the DC form to reflect that this course is required but that a thesis may be substituted.
smetg6 (11/03/16 2:31 pm): Rollback: Per Dr. Morgan's request
smetg6 (11/08/16 10:44 am): Converted to an EC changed course number from 5740 to 5001.002 per Dr. Morgan and added instructor as Susan Murray per Dr. Murray
Course Inventory Change Request

New Experimental Course Proposal

Date Submitted: 10/06/16 8:19 pm

Viewing: SPANISH 2001.001 : Contemporary Latin America

File: 4362
Last edit: 10/07/16 9:30 am

Changes proposed by: porcelj

Requested 01/17/2017
Effective Change Date

Department Arts, Languages, & Philosophy
Discipline Spanish (SPANISH)
Course Number 2001
Topic ID 001

Experimental Title
Contemporary Latin America

Experimental Catalog Description
Contemp Latin America

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. Registrar

Approval Path
1. 10/06/16 9:42 pm Audra Merfeld-Langston (audram):
   Approved for RPHILOSO Chair
2. 10/07/16 8:16 am Shauntae Ellis (smetg6):
   Approved for CCC Secretary
3. 10/07/16 9:30 am Petra Dewitt (dewittp):
   Approved for Arts
This course aims to engage students in the understanding of the diverse cultures of contemporary Latin America while reflecting upon key socioeconomic, political, and intellectual trends that characterized Modern and Postmodern Latin America from the beginning of the 20th century to the present.

Prerequisites
Spanish 1180.

Field Trip
Statement

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

Justification for new course:
Expanding course options in Spanish, for Spanish minor and for a new minor in Latin American Studies for Technical Applications that is under development.

Semester(s) previously taught

Never

Co-Listed Courses:

Course Reviewer Comments

sme tg6 (10/07/16 8:16 am): Added topic ID and a period to the prerequisite box
dewittp (10/07/16 9:30 am): Updated description language