



MISSOURI UNIVERSITY OF SCIENCE AND TECHNOLOGY
Formerly University of Missouri-Rolla

Agenda
Campus Curricula Committee Meeting
March 2, 2011
11 a.m. Room 117 Fulton Hall

Review of submitted DC forms:

DC 0377, Engineering Management, Bachelor of Science, effective Fall 2011. A proposal to remove the FE Assessment requirement and replace it with the Associate Engineering Manager Certification.

DC 0378, Psychology, Bachelor of Arts, Secondary Education Emphasis, effective Fall 2011. Psychology 10 is being added as a required course for the BA in Psychology Secondary Education Emphasis Area.

DC 0379, Psychology, Bachelor of Science, Secondary Education Emphasis, effective Fall 2011. Psychology 10 is being added as a required course for the BS in Psychology Secondary Education Emphasis Area.

DC 0380, Computer Science, Bachelor of Science, effective Fall 2011. A proposal to modify the current requirements that count toward the humanities elective.

Review of submitted CC forms:

CC 8099, Computer Engineering 439, Electrical Engineering 439, Computer Science 439, Statistics 439, Systems Engineering 439, Clustering Algorithms, effective Spring 2012.

CC 8102, Mining Engineering 408, Research Methods, effective Fall 2011.

CC 8103, Chemical Engineering 345, Introduction to Molecular Modeling and Simulation, effective Fall 2011.

CC 8105, Electrical Engineering 409, Advanced Electric-Drive Vehicles, effective Fall 2011.

CC 8106, Geological Engineering 484, Geophysics 484, Advanced Engineering and Environmental Geophysics, effective Fall 2011.

CC 8107, Biological Sciences 335, Cancer Cell Biology, effective Fall 2011.

CC 8108, Biological Sciences 435, Advanced Cancer Cell Biology, effective Fall 2011.



MISSOURI UNIVERSITY OF SCIENCE AND TECHNOLOGY

Formerly University of Missouri-Rolla

CC 8109, Geology 325, Advanced Physical Geology, effective Fall 2011.

CC 8110, Systems Engineering 435, Model Based Systems Engineering, effective Spring 2012.

CC 8112, Computer Science 388, Introduction to High performance Computer Architecture, effective Fall 2011.

CC 8113, ERP 348, Strategic Enterprise Management Systems, effective Fall 2011.

CC 8114, ERP 345, Use of Business Intelligence, effective Fall 2011.

CC 8115, ERP 448, Enterprise Performance Management System Prototyping, effective Fall 2011.

CC 8116, ERP 347, Supply Chain Management Systems, effective Fall 2011.

CC 8117, Business 426, Integration Using Enterprise Resource Planning, effective Fall 2011.

CC 8118, IST 443, Information Retrieval and Analysis, effective Fall 2011.

CC 8119, Business 315, Introduction to Teambuilding and Leadership, effective Fall 2011.

CC 8120, Business 415, Teambuilding and Leadership in Business Settings, effective Fall 2011.

Review of submitted EC forms:

EC 2310, Mining Engineering 401, Simulation of Mining systems, effective Spring 2011

EC 2317, Electrical Engineering 401, Principle & Applications of Nanophotonics, effective Fall 2011.

EC 2319, Chemistry 401, Synthesis and Bioapplications of Organofluorine Chemistry, effective Fall 2011.

EC 2320, Statistics 301, Statistical Data Analysis Using SAS, effective Summer 2011.

EC 2323, Biological Sciences 201, Introduction to Synthetic Biology, effective Summer 2011.



MISSOURI UNIVERSITY OF SCIENCE AND TECHNOLOGY

Formerly University of Missouri-Rolla

EC 2324, Computer Science 401, Pervasive Computing, effective Fall 2011.

EC 2325, Computer Science 301, Introduction to Data Mining, effective Fall 2011.

EC 2326, Business 301, Development and management of new Products, effective Fall 2011.

EC 2327, Marketing 301, Promotions Management, effective Fall 2011.

EC 2328, Business 401, Innovation Management, effective Spring 2012.

EC 2329, IST 301, Advanced Digital Media, effective Fall 2011.

EC 2330, History 301, France and the Second World War, effective Fall 2011.

Tabled Items:

CC 8072, MSE 418, Principles for Advanced Microstructural Design, effective Spring 2011. **Tabled**

CC 8074, Explosives Engineering 491, Internship, effective Summer 2011. **Tabled**

CC 8075, Explosives Engineering 499, Practicum, effective Summer 2011. **Tabled**

DC #0377-2010-Emgt-000-00

Effective Year: 2011
 Effective Term: Summer ☐ Fall ☒ Spring ☐
 (Creating or modifying a degree program must be effective for a Fall term)

Degree Change Form (DC)

This form is to be used for creating or modifying degree programs, emphasis areas, and minors.

Title of degree program, emphasis area, or minor:
 Engineering Management

Department: EMSE

Briefly describe action requested (Attach documentation as appropriate):

To remove the Fundamentals of Engineering assessment requirement and replace it with the Associate Engineering Manager Certification. Footnote 5 would read as follow: All Engineering Management students must take the Associate Engineering Manager Certification exam prior to graduation. A passing grade on this examination is not required to earn a B.S. degree. This requirement is part of the Missouri S&T assessment process as described in Assessment Requirements found elsewhere in this catalog. Students must sign a release form giving the University access to their Associate Engineering Manager Certification score.

Recommended by Department: [Signature]
 (Chair signature)

Date: 11/17/10

Recommended by: [Signature]
 Discipline Specific Curricula Committee (Chair signature)

Date: 2/4/11

Approved by Curricula Committee: _____
 (Chair signature)

Date: _____

Approved by Faculty Senate: _____
 (Chair signature)

Date: _____

DC # 0378-2011- Psych-000-00

Effective Year: 2011
 Effective Term: Summer ☐ Fall ☒ Spring ☐
 (Creating or modifying a degree program must be effective for a Fall term)

Degree Change Form (DC)

This form is to be used for creating or modifying degree programs, emphasis areas, and minors.

Title of degree program, emphasis area, or minor:
 Bachelor of Arts Psychology (Secondary Education Emphasis)

Department: Psychological Science

Briefly describe action requested (Attach documentation as appropriate):

Psych 10 Introduction to Psychology is a required course for our Bachelor of Arts Psychology majors and it should also be a required course for our Bachelor of Arts Psychology majors in the Teacher Education Program. We wish to add this one-credit course to this degree program, as a Psychology Degree Requirement. This would increase the Psychology Degree Requirement hours from 16 to 17 semester hours. The course description is below.

Introduction to Psychology (LEC 1.0) An introduction to the study of psychology at Missouri S&T. Students will learn about personal and professional opportunities associated with the different areas of psychology and become acquainted with the psychology faculty and campus facilities.

Recommended by Department: Nancy Stone
 (Chair signature)

Date: 4/14/11

Recommended by: Rory Haskins
 Discipline Specific Curricula Committee (Chair signature)

Date: 1/27/11

Approved by Curricula Committee: _____
 (Chair signature)

Date: _____

Approved by Faculty Senate: _____
 (Chair signature)

Date: _____

DC # 0379-2011-Psych-000-00

Effective Year: 2011

Effective Term: Summer ☐ Fall ☒ Spring ☐

(Creating or modifying a degree program must be effective for a Fall term)

Degree Change Form (DC)

This form is to be used for creating or modifying degree programs, emphasis areas, and minors.

Title of degree program, emphasis area, or minor:

Bachelor of Science Psychology (Secondary Education Emphasis)

Department: Psychological Science

Briefly describe action requested (Attach documentation as appropriate):

Psych 10 Introduction to Psychology is a required course for our Bachelor of Science Psychology majors and it should also be a required course for our Bachelor of Science Psychology majors in the Teacher Education Program. We wish to add this one-credit course to this degree program, as a Psychology Degree Requirement. This would increase the Psychology Degree Requirement hours from 16 to 17 semester hours. The course description is below.

Introduction to Psychology (LEC 1.0) An Introduction to the study of psychology at Missouri S&T. Students will learn about personal and professional opportunities associated with the different areas of psychology and become acquainted with the psychology faculty and campus facilities.

Recommended by Department: Nancy J. Stone
(Chair signature)

Date: 1/14/11

Recommended by: Nancy J. Stone
Discipline Specific Curricula Committee (Chair signature)

Date: 1/27/11

Approved by Curricula Committee: _____
(Chair signature)

Date: _____

Approved by Faculty Senate: _____
(Chair signature)

Date: _____

From: 573 341 4362 Page: 1/4 Date: 1/21/2011 3:10:47 PM

DC # 0380-2011-C5-000-00

Effective Year: 2011

Effective Term: Summer ☐ Fall ☒ Spring ☐
(Creating or modifying a degree program must be effective for a Fall term)

Degree Change Form (DC)

This form is to be used for creating or modifying degree programs, emphasis areas, and minors.

Title of degree program, emphasis area, or minor:
B.S. in Computer Science

Department: Computer Science

Briefly describe action requested (Attach documentation as appropriate):
Change the courses permitted to count towards the humanities elective as follows:

- (1) Allow French 1 or any course for which French 1 is listed as a prerequisite, actual or implied, except French 360*
 - (2) Allow German 1 or any course for which German 1 is listed as a prerequisite, actual or implied
 - (3) Allow Spanish 1 or any course for which Spanish 1 is listed as a prerequisite, actual or implied, except Spanish 160*
 - (4) Allow Russian 1 or any course for which Russian 1 is listed as a prerequisite, actual or implied, except Russian 360*
 - (5) Disallow Art 80
- [*French 360, Spanish 160, and Russian 360 are excluded because they are history classes that would be more applicable to social science credit]

Clarify the B.S. in Computer Science program as listed in the undergraduate catalog by changing Footnote 5 to: "One approved literature course and one approved humanities course (see Cmp Sc web page)"

Recommended by Department: _____

(Chair signature)

Date: Jan 19, 2011

Recommended by: _____

Discipline Specific Curricula Committee

(Chair signature)

Date: 2/1/2011

Approved by Curricula Committee: _____

(Chair signature)

Date: _____

Approved by Faculty Senate: _____

(Chair signature)

Date: _____

(Revised 1/31/2008)

CC File # 8099. 2010 - CpE-439-10

Effective Year: 2012
Term: Summer ☐ Fall ☐ Spring ☒

Course Change Form (CC)

This form is for creating or modifying permanent courses.

Course Changes (Check all changes.)

New Course ☒

Course Deletion ☐

Credit Hours ☐

Prerequisites ☐

Course Title ☐

Catalog Description ☐

Course Number ☐

Co-listing ☐

Course Information (1-9 Must Be Completed. Leave "Proposed" Items blank if no change is being made.)

1. Department: Electrical & Computer Engr

2. Discipline and Course Number: Present: ~~CpE 401~~

Proposed: CpE 439

3. Course Title: Present: Clustering Algorithms
Proposed: Clustering Algorithms

Abbreviated Course Title: Clustering Algorithms

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

4. Catalog Description (300 Character Spaces or Less.)

Present: An introduction to the cluster analysis and clustering algorithms rooted in computational intelligence, computer science and statistics. Clustering in sequential data, massive data and high dimensional data.

Proposed: An introduction to cluster analysis & clustering algorithms rooted in computational intelligence, computer science & statistics. Clustering in sequential data, massive data & high dimensional data. Students will be evaluated by individual or group research projects & research presentations.

5. If course requires field trip check box: ☐

6. Credit Hours: Present: Lecture: 3 Lab: 0 Total: 3
Proposed: Lecture: 3 Lab: 0 Total: 3

7. Prerequisites:

Present: Graduate standing plus at least one graduate course in either statistics, data mining, neural networks or permission of the instructor.

Proposed: At least one graduate course in statistics, data mining, algorithms, computational intelligence, or neural networks, consistent with student's degree program.

8. Required for Majors: ☐ Elective for Majors: ☒

9. Justification: Clustering is a very important topic in computational intelligence. It's the preferred method of dealing with massive datasets. Clustering has become a necessary tool for data analysis & as a major research topic. S&T has a strong, multidisciplinary reputation in computational intelligence & this course is necessary to continue that strength.

10. Semesters

previously offered as an experimental course (101, 201, 301, 401): SP 2008 & SP 2010

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

1) EE 439 *KH* 2) CS 439 *BM* 3) Stat 439 *MT*

4) SysEng 439 *KG* 5)

Recommended by Department: *Kel* *Emilsson*

(Chair signature)

Date: 3 Dec 2010

Recommended by Discipline Specific Curricula Committee: *Steve Wathen*

(Chair signature)

Date: 1/4/11

Approved by Curricula Committee: _____

(Chair signature)

Date: _____

Approved by Faculty Senate: _____

(Chair signature)

Date: _____

Clustering (4XX)

Section A: Fall 2011

Class Hours: TBD

Room: TBD

Instructor: Dr. Donald Wunsch

Office: 131 EECH

TBD

Office Hours:

E-mail: dwunsch@mst.edu

Phone: (573) 341-4521

Prerequisites: At least one graduate course in statistics, data mining, algorithms, computational intelligence, or neural networks, consistent with the student's degree program.

Text: Rui Xu and Donald Wunsch, Clustering, IEEE Press / Wiley, 2008.

Description: An introduction to cluster analysis and clustering algorithms rooted in computational intelligence, computer science and statistics. Clustering in sequential data, massive data and high dimensional data.

Grading: Your grade will be based on the following:

Homework	5%
Presentations	10%
Project 1	10%
Design Project	75%

desired,
as much
research.

Homework will be problems from the book, split up among you as agreed by yourselves. The presentations will use the book as a starting point, and combine it with other papers if to create a research seminar which will be presented in class. The grade will depend just on delivery as on content. Project 1 will be a simple implementation of one of the algorithms from the book. The design project will be a use of clustering in your own

Policies: Although all homework and projects are individual efforts, collaboration is permitted and encouraged. You will have great latitude over research papers and seminars, so go ahead and begin exploring.

Welcome to the class!

CC File # 8102-2010-MinEng-408-11

Effective Year: FS2011
Effective Term: Summer ☐ Fall ☒ Spring ☐

Course Change Form (CC)

This form is for creating or modifying permanent courses.

Course Changes (Check all changes.)

New Course ☒

Course Deletion ☐

Credit Hours ☐

Prerequisites ☐

Course Title ☐

Catalog Description ☐

Course Number ☐

Co-listing ☐

Course Information (1-9 Must Be Completed. Leave "Proposed" items blank if no change is being made.)

1. Department: Mining and Nuclear Engineering

2. Discipline and Course Number: Present: Mi Eng 401

Proposed: Mi Eng 408

3. Course Title: Present: Research Methods
Proposed: Research Methods

Abbreviated Course Title: RES METH

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

4. Catalog Description (40 Words or Less)

Present: Foundations, dimensions, and methods for designing and investigating research problems. Focus on fundamental and applied research, research methods, literature review, experimental design and experimentation, dissertation composition, concepts of originality and intellectual property.

Proposed: Foundations, dimensions, and methods for designing and investigating research problems. Focus on fundamental and applied research, research methods, literature review, experimental design and experimentation, dissertation composition, concepts of originality and intellectual property.

5. If course requires field trip check box: ☐

6. Credit Hours:	Present:	Lecture: 3	Lab: 0	Total: 3
	Proposed:	Lecture: 3	Lab: 0	Total: 3

7. Prerequisites:

Present: Graduate Standing

Proposed: Graduate Standing

8. Required for Majors: ☒ Elective for Majors: ☐

9. Justification: This course is a core requirement of the graduate Mining Engineering program.

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

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

1)

2)

3)

4)

5)

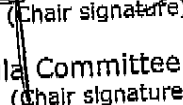
6)

Recommended by Department


(Chair signature)

Date: 11/24/10

Recommended by Discipline Specific Curricula Committee


(Chair signature)

Date: 2/4/11

Approved by Curricula Committee:

(Chair signature)

Date: _____

Date: _____

CC File # 8103-2010-Chem Eng-345-10

Effective Year: 2011
Term: Summer ☐ Fall ☒ Spring ☒

Course Change Form (CC)

This form is for creating or modifying permanent courses.

Course Changes (Check all changes.)

New Course ☒

Course Deletion ☐

Credit Hours ☐

Prerequisites ☐

Course Title ☒

Catalog Description ☒

Course Number ☒

Co-listing ☐

Course Information

(1-9 Must Be Completed. Leave "Proposed" items blank if no change is being made.)

1. Department: Chemical & Biological Eng.

Proposed: 345

2. Discipline and Course Number: Present: ~~301~~

3. Course Title: Present: Molecular Simulation in Engineering and Science
Proposed: Introduction to Molecular Modeling and Simulation

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

4. Catalog Description (300 Character Spaces or Less.)
Present: This special topics course deals with the application of molecular-level computer simulation in various engineering and science fields. Topics include molecularly based approaches, potential energy functions, Monte Carlo and molecular dynamics methodologies, static and dynamic properties of systems

Proposed: An introduction to the concepts of molecular-based modeling and simulations, their connections to other engineering approaches and their role in multiscale modeling. Major methodologies such as molecular dynamics and lattice and off-lattice Monte Carlo, and special case studies are discussed.

5. If course requires field trip check box: ☐

6. Credit Hours: Present: Lecture: 3 Lab: Total: 3
Proposed: Lecture: 3 Lab: Total: 3

7. Prerequisites:

Present: ChE 247

Proposed: ChE 247 or instructor approval

8. Required for Majors: ☐ Elective for Majors: ☒

9. Justification: This course introduces a modern engineering approach that has the characteristics of both experiment and theory and has seen growing interests among students, researchers, academia, and industries. It has been offered twice before as ChE 301 and is now more polished and better connected with other engineering courses with new course materials added from recent pedagogic and research findings.

10. Semesters previously offered as an experimental course (101, 201, 301, 401): Spring 03, Fall 06

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

1) 2) 3)

4) 5) 6)

Recommended by Department

(Chair signature)

Date: 11/5/10

Recommended by Discipline Specific Curricula Committee

(Chair signature)

Date: 2/4/11

Approved by Curricula Committee:

(Chair signature)

Date: _____

Approved by Faculty Senate:

(Chair signature)

Date: _____

CC File # 8105-2010-EE-409-33

Effective Term: FS 2011

Course Change Form (CC)

This form is for creating or modifying permanent courses.

Course Changes (Check all changes.)New Course ☐Course Deletion ☐Credit Hours ☐Prerequisites ☐Course Title ☒Catalog Description ☒Course Number ☐Co-listing ☐**Course Information** (1-9 Must Be Completed. Leave "Proposed" Items blank if no change is being made.)

1. School/College: Engineering

Department: Electrical and Computer

2. Discipline and Course Number: Present : EE 409

Proposed: Same

3. Course Title: Present: Electric and Hybrid Vehicles
Proposed: Advanced Electric-Drive Vehicles

Abbreviated Course Title: Adv Elec-Drive Vehicles

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

4. Catalog Description (40 Words or Less)

Present: This course covers an entire range of topics related to analysis, design, control, and optimization of electric, hybrid, and plug-in hybrid power trains including automotive applications of adjustable speed motor drives, energy storage systems, and advanced power converters.

Proposed: This course covers an entire range of advanced topics related to the analysis, design, control, simulation, and optimization of electric, hybrid, and plug-in hybrid power-trains including the automotive applications of adjustable speed motor drives, energy storage systems, and advanced power converters.

5. Credit Hours: Present: Lecture: 3 Lab: 0 Total: 3
Proposed: Lecture: 3 Lab: 0 Total: 3

6. Prerequisites:

Present: EE 305 or EE 353

Proposed: Same

7. Required for Majors: ☐ Elective for Majors: ☒

8. Justification: The new course title and catalog description better reflect the content of the course.

9. Semesters previously offered as an experimental course (101, 201, 301, 401): WS 2003 and FS 2005

10. List all co-listed courses, initialed by Dept. Chair(s) and Dean(s) if signatures do not appear below.

1)

4)

2)

5)

3)

6)

Recommended by Department

Kevin Erickson
(Chair signature)

Date: 3 Dec 2010

Recommended by School/College:

Steve W. Lathin
(Dean signature)

Date: 2/4/11

Recommended by UMR Curricula Committee:

(Chair signature)

Date: (Action)

Date: (Action)

CC File # 8106-2010-GE-484-11

Effective Year: 2011
Term: Summer ☐ Fall ☒ Spring ☒

Course Change Form (CC)

This form is for creating or modifying permanent courses.

Course Changes (Check all changes.)

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

Course Information (1-9 Must Be Completed. Leave "Proposed" items blank if no change is being made.)

1. Department: GSE Present: ~~GE 484~~ Proposed: GE 484

2. Discipline and Course Number: Present: ~~GE 484~~ Proposed: GE 484

3. Course Title: Present: Advanced Engineering and Environmental Geophysics
Proposed: Advanced Engineering and Environmental Geophysics

Abbreviated Course Title: Adv Engr & Env

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

4. Catalog Description (300 Character Spaces or Less.)
Present: An introduction to the theory and application of the gravity, magnetic, resistivity, self-potential induced polarization, seismic, electromagnetic and GPR methods as applied to the solution of engineering and environmental problems. Prerequisite: Admittance into USAES-S&T Co-operative Degree Program

Proposed:

5. If course requires field trip check box: ☐

6. Credit Hours:	Present:	Lecture:	Lab:	Total:
	Proposed:	Lecture:	Lab:	Total:

7. Prerequisites:
Present: Prerequisite: Admittance into USAES-S&T Co-operative Degree Program

Proposed:

8. Required for Majors: ☐ Elective for Majors: ☐

9. Justification: Course is only available to officers registered in USAES-MS&T Co-operative Degree Program

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

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

1) Geophy 484-2) 3)

4) 5) 6)

Recommended by Department Ralph E. Now (Chair signature)

Recommended by Discipline Specific Curricula Committee Steve W. Luthin (Chair signature)

Approved by Curricula Committee: _____ (Chair signature)

Approved by Faculty Senate: _____ (Chair signature)

Date: 12-15-10

Date: 2/4/11

Date: _____

Date: _____

From: 573 341 4362 Page: 1/7 Date: 1/7/2011 10:43:21 AM

cc File # 8107-2010-BioSci-335-10

Effective Year: 2011
Effective Term: Summer ☐ Fall ☒ Spring ☐

Course Change Form (CC)

This form is for creating or modifying permanent courses.

Course Changes (Check all changes.)

New Course ☒

Course Deletion ☐

Credit Hours ☐

Prerequisites ☐

Course Title ☐

Catalog Description ☐

Course Number ☒

Co-listing ☐

Course Information (1-9 Must Be Completed. Leave "Proposed" items blank if no change is being made.)

1. Department: Biological Sciences

2. Discipline and Course Number: Present: BioSci 301

3. Course Title: Present: Cancer Cell Biology

Proposed: BioSci 335

Proposed:
Abbreviated Course Title: Cancer Cell Biology

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

4. Catalog Description (40 Words or Less)

Present:

Proposed: Advanced biology course examining cellular processes that go awry during tumorigenesis. We will discuss cell cycle controls, signal transduction pathways, DNA repair, telomerase, apoptosis, cell migration and adhesion that are altered in cancer cells.

5. If course requires field trip check box: ☐

6. Credit Hours:

Present:

Lecture: 3

Lab: NA

Total: 3

Proposed:

Lecture: *

Lab: *

Total: *

7. Prerequisites:

Present: Bio 211

Proposed: Bio 211

8. Required for Majors: ☐ Elective for Majors: ☒

9. Justification: Course has been taught twice as 301 and is now being given a regular number.

10. Semesters previously offered as an experimental course (101, 201, 301, 401): F 2008, F 2010

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

1)

2)

3)

4)

5)

6)

Recommended by Department

[Signature]
(Chair signature)

Date: 1/3/11

Recommended by Discipline Specific Curricula Committee

[Signature]
(Chair signature)

Date: 1/21/2011

Approved by Curricula Committee:

(Chair signature)

Date: _____

Approved by Faculty Senate:

(Chair signature)

Date: _____

(Revised 1/31/08)

From: 573 341 4362 Page: 2/7 Date: 1/7/2011 10:43:21 AM

CC File # 8108-2010-BioSci-435-10

Effective Year: 2011
Effective Term: Summer ☐ Fall ☒ Spring ☐

Course Change Form (CC)

This form is for creating or modifying permanent courses.

Course Changes (Check all changes.)

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

Course Information (1-9 Must Be Completed. Leave "Proposed" items blank if no change is being made.)

1. Department: Biological Sciences Proposed: BioSci 435

2. Discipline and Course Number: Present: BioSci 401

3. Course Title: Present: Advanced Cancer Cell Biology
Proposed:

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

4. Catalog Description (40 Words or Less)

Present:

Proposed: Graduate level biology course examining cellular processes that go awry during tumorigenesis. We will discuss cell cycle controls, signal transduction pathways, DNA repair, telomerase, apoptosis, cell migration and adhesion that are altered in cancer cells. In addition to lecture, will include a weekly section to examine primary cancer literature.

5. If course requires field trip check box: ☐

6. Credit Hours: Present: Lecture: 3 Lab: NA Total: 3
Proposed: Lecture: 1 Lab: 1 Total: 2

7. Prerequisites:

Present: Bio 211

Proposed: Bio 211

8. Required for Majors: ☐ Elective for Majors: ☒

9. Justification: Course has been taught twice as 401 and is now being given a regular number.

10. Semesters previously offered as an experimental course (101, 201, 301, 401): F/S 2008, F/S 2010

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

1) 2) 3)
4) 5) 6)

Recommended by Department [Signature]
(Chair signature)

Date: 1/3/11

Recommended by Discipline-Specific Curricula Committee [Signature]
(Chair signature)

Date: 1/21/2011

Approved by Curricula Committee: _____
(Chair signature)

Date: _____

Approved by Faculty Senate: _____
(Chair signature)

Date: _____

From: 573 341 4362 Page: 2/4 Date: 1/21/2011 3:10:48 PM

CC File # 8109-2011-Geo-425-34

Effective Year: 2011
Term: Summer ☐ Fall ☒ Spring ☐

Course Change Form (CC)

This form is for creating or modifying permanent courses.

Course Changes (Check all changes.)

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

Course Information (1-9 Must Be Completed. Leave "Proposed" items blank if no change is being made.)

1. Department: GeoSci & Eng
2. Discipline and Course Number: Present: Geo 325 Proposed: Geo 425
3. Course Title: Present: Advanced Physical Geology
Proposed:

Abbreviated Course Title:

(24 Spaces or Less, Only needed for New Courses or Title Changes.)

4. Catalog Description (300 Character Spaces or Less.)

Present: History and materials of the Earth's crust, structures, and geological features of the surface. Study of common minerals and rocks, topographic and geologic maps, depositional systems, sedimentary classification systems.

Proposed: Examination of topics concerned with the physical properties of earth materials, processes affecting change of the surface and interior of the earth, and the driving forces causing these changes. Weekly critical assessment of literature, and an oral presentation & term paper required.

5. If course requires field trip check box: ☐

6. Credit Hours: Present: Lecture: 3 Lab: Total: 3
Proposed: Lecture: Lab: Total:

7. Prerequisites:

Present: Consent of instructor

Proposed: ~~Consent of instructors~~

8. Required for Majors: ☐ Elective for Majors: ☒

9. Justification: The level at which we want to cover this material in support of our graduate programs is more appropriate for a 400 level course. We would like to leave the prerequisites the same - target audience is graduate students almost all of which will have a sufficient background level in geology and geophysics to participate in this course.

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

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

1) 2) 3)
4) 5) 6)

Recommended by Department

[Signature]
(Chair signature)

Recommended by Discipline Specific Curricula Committee

[Signature]
(Chair signature)

Approved by Curricula Committee:

(Chair signature)

Approved by Faculty Senate:

(Chair signature)

Date: 1-19-11

Date: 2/1/2011

Date: _____

Date: _____

CC File # 8110-2011-SysEng-435-11

Effective Year: 2012

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

This form is for creating or modifying permanent courses.

Course Changes (Check all changes.)New Course ☒Course Deletion ☐Credit Hours ☐Prerequisites ☒Course Title ☐Catalog Description ☐Course Number ☐Co-listing ☐**Course Information** (1-9 Must Be Completed. Leave "Proposed" items blank if no change is being made.)

1. Department: Eng Management and Systems Eng

2. Discipline and Course Number: Present: SYS ENG 401 Proposed: SYS ENG 435

3. Course Title: Present:

Proposed: Model Based Systems Engineering

Abbreviated Course Title: Model Based Systems Eng

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

4. Catalog Description (300 Character Spaces or Less.)

Present: This course covers the use of models to represent systems and the underlying system elements, components, etc. Topics also include SysML, executable systems architectures, model repositories, integration of models and information, and use of MBSE in distributed systems.

Proposed:

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

7. Prerequisites:

Present: SYS ENG 433 or coursework in UML.

Proposed: SYS ENG 433 or instructor's consent.

8. Required for Majors: ☐ Elective for Majors: ☐

9. Justification: Course has been taught twice as an experimental course.

10. Semesters previously offered as an experimental course (101, 201, 301, 401): Sp'10 & Sp'11

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

1) 2) 3)

4) 5) 6)

Recommended by Department

(Chair signature)

Date: 01/13/2011

Recommended by Discipline Specific Curricula Committee

(Chair signature)

Date: 2/4/11

Approved by Curricula Committee:

(Chair signature)

Date: _____

Approved by Faculty Senate:

(Chair signature)

Date: _____

From: 573 341 4362 Page: 3/4 Date: 1/21/2011 3:10:48 PM

CC File # 8112-2011-CS-388-10

Effective Year: 2011

Term: Summer ☐ Fall ☒ Spring ☐

Course Change Form (CC)

This form is for creating or modifying permanent courses.

Course Changes (Check all changes.)

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

Course Information (1-9 Must Be Completed. Leave "Proposed" items blank if no change is being made.)

1. Department: Cmp Sc
 2. Discipline and Course Number: Present: Proposed: Cmp Sc 388
 3. Course Title: Present: Proposed: Introduction To High Performance Computer Architecture

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

4. Catalog Description (300 Character Spaces or Less.)
 Present:

Proposed: Overviews high performance architecture of computing systems and covers various architectural/hardware and software/algorithmic means that enhance performance. Uniprocessor and concurrent systems are investigated. Various computational models are studied and linked to commercial systems.

5. If course requires field trip check box: ☐

6. Credit Hours: Present: Lecture: Lab: Total:
 Proposed: Lecture: 3 Lab: 0 Total: 3

7. Prerequisites:
 Present:

Proposed: CpE 213 and Cmp Sc 253

8. Required for Majors: ☐ Elective for Majors: ☒

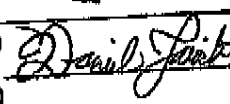
9. Justification: Offered twice before as experimental course. PhD qualifying subject examination on computer architecture is based on this course.

10. Semesters previously offered as an experimental course (101, 201, 301, 401): FS2009, FS2010

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

1) 2) 3)
 4) 5)

Recommended by Department: 

Recommended by Discipline Specific Curricula Committee (Chair signature): 

Approved by Curricula Committee: (Chair signature)

Approved by Faculty Senate: (Chair signature)

Date: Nov 2, 2010

Date: 2/1/2011

Date:

Date:

CC File # 8113-2011-ERP-348-32

Effective Year: 2011
Term: Summer ☐ Fall ☒ Spring ☐

Course Change Form (CC)

This form is for creating or modifying permanent courses.

Course Changes (Check all changes.)

New Course ☐

Course Deletion ☐

Credit Hours ☐

Prerequisites ☒

Course Title ☒

Catalog Description ☐

Course Number ☐

Co-listing ☐

Course Information (1-9 Must Be Completed. Leave "Proposed" items blank if no change is being made.)

1. Department: Business and Information Techn

2. Discipline and Course Number: Present : ERP 348

Proposed:

3. Course Title: Present:

Proposed: Strategic Enterprise Management Systems

Abbreviated Course Title: Strategic Ent Mgt Sys

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

4. Catalog Description (300 Character Spaces or Less.)

Present: This course will study different strategic performance management systems including dashboards, management cockpit, scorecards, and strategy maps in an organization. SAP's Strategic Enterprise Management (SEM), BusinessObjects Xcelsius, or similar tools will be used to enhance student education with

Proposed:

5. If course requires field trip check box: ☐

6. Credit Hours: Present:

Lecture: 3.0

Lab:

Total: 3.0

Proposed:

Lecture:

Lab:

Total:

7. Prerequisites:

Present: ERP 246 or BUS426 or ERP346 (maybe taken concurrently)

Proposed: ERP 246 or ERP346 (may be taken concurrently).

8. Required for Majors: ☐ Elective for Majors: ☒

9. Justification: BUS426 is changing for F11 and will no longer cover the prerequisite material needed.

Abbreviated course title changed to make it more descriptive (full title remains the same)

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

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

1) 2) 3)

4) 5) 6)

Recommended by Department

Caroline Fisher
(Chair signature)

Date: 2/3/11

Recommended by Discipline Specific Curricula Committee

Randy Thoburn
(Chair signature)

Date: 2/3/2011

Approved by Curricula Committee:

(Chair signature)

Date: _____

Approved by Faculty Senate:

(Chair signature)

Date: _____

CC File # 8114-2011-ERP-345-32

Effective Year: FS2011
Term: Summer ☐ Fall ☒ Spring ☐

Course Change Form (CC)

This form is for creating or modifying permanent courses.

Course Changes (Check all changes.)
New Course ☐ Course Deletion ☐ Credit Hours ☐ Prerequisites ☒
Course Title ☐ Catalog Description ☐ Course Number ☐ Co-listing ☐

Course Information (1-9 Must Be Completed. Leave "Proposed" Items blank if no change is being made.)

1. Department: Business & Info Tech
2. Discipline and Course Number: Present : ERP 345
3. Course Title: Present: Use of Business Intelligence
Proposed:

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

4. Catalog Description (300 Character Spaces or Less.)
Present: This course introduces data-oriented techniques for business intelligence. Topics include Business Intelligence architecture, Business Analytics, and Enterprise Reporting. SAP Business Information Warehouse, BusinessObjects, or similar tools will be used to access and present data, generate report
Proposed:

5. If course requires field trip check box: ☐

6. Credit Hours: Present: Lecture: 3.0 Lab: Total: 3.0
Proposed: Lecture: Lab: Total:

7. Prerequisites:
Present: ERP 246 or BUS426 or ERP346 (ERP 346 may be taken concurrently).

Proposed: ERP 246 or ERP346 (ERP 346 may be taken concurrently).

8. Required for Majors: ☐ Elective for Majors: ☒

9. Justification: BUS 426 is being changed to remove the prerequisite material.

10. Semesters previously offered as an experimental course (101, 201, 301, 401):
11. List all co-listed courses, Initialed by Dept. Chair, if signature does not appear below.

1) 2) 3)
4) 5) 6)

Recommended by Department: Caroline Fisher
(Chair signature)
Recommended by Discipline Specific Curricula Committee: Ray Phelan
(Chair signature)
Approved by Curricula Committee: _____
(Chair signature)
Approved by Faculty Senate: _____
(Chair signature)

Date: 2/3/11
Date: 2/8/2011
Date: _____
Date: _____

CC File # 8115-2011-ERP-448-32

Effective Year: 2011
Term: Summer ☐ Fall ☒ Spring ☐

Course Change Form (CC)

This form is for creating or modifying permanent courses.

Course Changes (Check all changes.)

New Course ☐

Course Deletion ☐

Credit Hours ☐

Prerequisites ☒

Course Title ☒

Catalog Description ☒

Course Number ☐

Co-listing ☐

Course Information (1-9 Must Be Completed. Leave "Proposed" items blank if no change is being made.)

1. Department: Business & Info Tech

2. Discipline and Course Number: Present : ERP 448

Proposed:

3. Course Title: Present: Enterprise Performance Management System Prototyping
Proposed: Enterprise Performance Dashboard Prototyping

Abbreviated Course Title: Dashboard Prototyping

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

4. Catalog Description (300 Character Spaces or Less.)
Present: This course will study Implementation and design practices for enterprise performance management and monitoring systems with a focus on dashboards, balanced scorecard, and value based management. SAP's Strategic Enterprise Management (SEM), Business Object Xcelsius, or similar tools will be used for

Proposed: Study of implementation and design practices for enterprise performance management systems with a focus on dashboards, balanced scorecard, and value-based management. SAP's BusinessObjects Ecelsius, Crystal Reports, BW, or similar tools will be used for project implementations.

5. If course requires field trip check box: ☐

6. Credit Hours: Present: Lecture: 3.0 Lab: Total: 3.0
Proposed: Lecture: Lab: Total:

7. Prerequisites:
Present: ERP444 or IST444

Proposed: ERP 346, (ERP444 or IST444)

8. Required for Majors: ☐ Elective for Majors: ☒

9. Justification: Correct error in prerequisites. ERP 346 is a prerequisite since ERP 345 was removed.

Provide more descriptive course title and catalog descriptions.

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

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

1) 2) 3)
4) 5) 6)

Recommended by Department

Caroline Fisher
(Chair signature)

Date: 2/3/11

Recommended by Discipline Specific Curricula Committee

Doug Thoburn
(Chair signature)

Date: 2/8/2011

Approved by Curricula Committee: _____
(Chair signature)

Date: _____

Approved by Faculty Senate: _____
(Chair signature)

Date: _____

CC File # 8116-2011-ERP-347-32

Effective Year: 2011
Term: Summer ☐ Fall ☒ Spring ☐

Course Change Form (CC)

This form is for creating or modifying permanent courses.

Course Changes (Check all changes.)
New Course ☐ Course Deletion ☐ Credit Hours ☐ Prerequisites ☒
Course Title ☐ Catalog Description ☒ Course Number ☐ Co-listing ☒
Course Information (1-9 Must Be Completed. Leave "Proposed" items blank if no change is being made.)

1. Department: Business and Information Techn
2. Discipline and Course Number: Present : ERP 347 Proposed:
3. Course Title: Present:
Proposed: Supply Chain Management Systems

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

4. Catalog Description (300 Character Spaces or Less.)
Present: The course studies the need for supply chain integration and the challenges of managing complex interfaces. This course focuses on the systems approach to the planning, analysis, design, development, and evaluation of supply chain. The course discusses activities that lead to integration of informat

Proposed: The course studies the need and challenges for supply chain integration with focus on the planning, analysis, design, development, and evaluation of supply chain in an ERP environment. SAP Supply Chain Management (SCM) or a similar system is used for project implementation.

5. If course requires field trip check box: ☐

6. Credit Hours: Present: Lecture: 3.0 Lab: Total: 3.0
Proposed: Lecture: Lab: Total:

7. Prerequisites:
Present: ERP 246 or BUS 426 or ERP 346 (may be taken concurrently)

Proposed: ERP 246 or ERP346 (may be taken concurrently).

8. Required for Majors: ☐ Elective for Majors: ☒

9. Justification: BUS426 is changing for F11 and will no longer cover the prerequisite material needed. The course description was shortened to fit. BUS 366 is no longer co-listed with ERP 347. (This was shown in Sp09, but isn't in the current Graduate Catalog, so it probably doesn't exist anyway.)

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

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

1) 2) 3)
4) 5) 6)

Recommended by Department

Carolyn Fisher
(Chair signature)

Recommended by Discipline Specific Curricula Committee

Roy Fisher
(Chair signature)

Approved by Curricula Committee: (Chair signature)

Approved by Faculty Senate: (Chair signature)

Date: 2/3/11

Date: 2/8/2011

Date: _____

Date: _____

CC File # 8117-2011-BUS-426-32

Effective Year: 2011
Term: Summer ☐ Fall ☒ Spring ☐

Course Change Form (CC)

This form is for creating or modifying permanent courses.

Course Changes (Check all changes.)

New Course ☐

Course Deletion ☐

Credit Hours ☐

Prerequisites ☒

Course Title ☒

Catalog Description ☒

Course Number ☐

Co-listing ☐

Course Information (1-9 Must Be Completed. Leave "Proposed" items blank if no change is being made.)

1. Department: Business and Information Techn

2. Discipline and Course Number: Present : BUS 426

Proposed:

3. Course Title: Present: Integration Using Enterprise Resource Planning
Proposed: Integration of Business Areas

Abbreviated Course Title: Integrate Business Areas

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

4. Catalog Description (300 Character Spaces or Less.)
Present: Students will learn to use enterprise resource planning (ERP) to operate a business more effectively. Emphasis will be on the business use of ERP and the integration of the business organization through use of this powerful software.

Proposed: Students will work on projects and simulations to learn to integrate the business functions to maximize performance efficiency and effectiveness. The consulting field will be covered through projects and readings.

5. If course requires field trip check box: ☐

6. Credit Hours: Present: Lecture: 3.0 Lab: Total:
Proposed: Lecture: Lab: Total:

7. Prerequisites:
Present: Preceded or accompanied by BUS 421.

Proposed: Student must have completed at least 12 hours towards the MBA degree.

8. Required for Majors: ☒ Elective for Majors: ☐

9. Justification: The ERP nature of this course conflicted with the ERP emphasis area offered to majors. This new description will have the same goal of integration using other methods, including business simulations and consulting projects when available. This will help prepare them for a career in consulting.

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

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

1) 2) 3)
4) 5) 6)

Recommended by Department Carolyn Lush
(Chair signature)

Recommended by Discipline Specific Curricula Committee Dany Headhart
(Chair signature)

Approved by Curricula Committee: _____
(Chair signature)

Approved by Faculty Senate: _____
(Chair signature)

Date: 2/3/11

Date: 2/8/2011

Date: _____

Date: _____

CC File # 8118-2011-IST-443-32

Effective Year: 2011
 Term: Summer ☐ Fall ☒ Spring ☐

Course Change Form (CC)

This form is for creating or modifying permanent courses.

Course Changes (Check all changes.)

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

Course Information (1-9 Must Be Completed. Leave "Proposed" items blank if no change is being made.)

1. Department: Business & Info Tech

2. Discipline and Course Number: Present : IST 443

Proposed:

3. Course Title: Present: Information Retrieval and Analysis

Proposed:

Abbreviated Course Title:

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

4. Catalog Description (300 Character Spaces or Less.)
 Present: Covers the applications and theoretical foundations of organizing and analyzing information of textual resources. Topics include information storage and retrieval systems, web search engines, text mining, collaborative filtering, recommender systems. Students will also learn the techniques with th

Proposed:

5. If course requires field trip check box: ☐

6. Credit Hours:	Present:	Lecture: 3.0	Lab:	Total:
	Proposed:	Lecture:	Lab:	Total:

7. Prerequisites:

Present: IST 223 or equivalent relational database experience

Proposed: ERP 345 or Statistics Knowledge

8. Required for Majors: ☐ Elective for Majors: ☒

9. Justification: Statistics or Business Intelligence needed, rather than DBMS, as course will now be taught.

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

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

1) 2) 3)

4) 5) 6)

Recommended by Department

Carolene Fisher
 (Chair signature)

Date: 2/3/11

Recommended by Discipline Specific Curricula Committee

Doug Fackel
 (Chair signature)

Date: 2/3/2011

Approved by Curricula Committee:

(Chair signature)

Date: _____

Approved by Faculty Senate:

(Chair signature)

Date: _____

CC File # 8119-2011-BUS-315-10

Effective Year: 2011
Term: Summer ☐ Fall ☒ Spring ☐

Course Change Form (CC)

This form is for creating or modifying permanent courses.

Course Changes (Check all changes.)
New Course ☒ Course Deletion ☐ Credit Hours ☐ Prerequisites ☐
Course Title ☐ Catalog Description ☐ Course Number ☐ Co-listing ☐

Course Information (1-9 Must Be Completed. Leave "Proposed" items blank if no change is being made.)

1. Department: Business and Information Techn

Proposed: BUS 315

2. Discipline and Course Number: Present :

3. Course Title: Present:

Proposed: Introduction to Teambuilding and Leadership

Abbreviated Course Title: Intro Teambuilding

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

4. Catalog Description (300 Character Spaces or Less.)

Present:

Proposed: This course covers an introduction to leadership styles, principles, models, issues, and applications through analytical and intellectual examination. Key components of teams are introduced, with opportunities to practice and develop both leadership and teambuilding skills.

5. If course requires field trip check box: ☐

6. Credit Hours:

Present:

Proposed:

Lecture: 3.0

Lecture:

Lab:

Lab:

Total: 3.0

Total:

7. Prerequisites:

Present:

Proposed:

8. Required for Majors: ☐ Elective for Majors: ☐

9. Justification: This course is an undergraduate version of BUS 415, part of the new Graduate Certificate in Sustainable Business.

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

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

1) 2) 3)

4) 5) 6)

Recommended by Department

Carolene Fisher
(Chair signature)

Recommended by Discipline Specific Curricula Committee

Randy Phelan
(Chair signature)

Approved by Curricula Committee:

(Chair signature)

Approved by Faculty Senate:

(Chair signature)

Date: 2/3/11

Date: 2/8/2011

Date: _____

Date: _____

CC File # 8120-2011-BUS-415-10

Effective Year: 2011
Term: Summer ☐ Fall ☒ Spring ☐

Course Change Form (CC)

This form is for creating or modifying permanent courses.

Course Changes (Check all changes.)

New Course ☒

Course Deletion ☐

Credit Hours ☐

Prerequisites ☐

Course Title ☐

Catalog Description ☐

Course Number ☐

Co-listing ☐

Course Information (1-9 Must Be Completed. Leave "Proposed" items blank if no change is being made.)

1. Department: Business and Information Techn

Proposed: BUS 415

2. Discipline and Course Number: Present:

3. Course Title: Present:

Proposed: Teambuilding and Leadership in Business Settings

Abbreviated Course Title: Teambuilding in Business

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

4. Catalog Description (300 Character Spaces or Less.)

Present:

Proposed: This course covers leadership styles, principles, models, issues, and applications through analytical and intellectual examination. Key components of teams are introduced, with opportunities to practice and develop both leadership and teambuilding skills.

5. If course requires field trip check box: ☐

6. Credit Hours:

Present:

Lecture: 3.0

Lab:

Total: 3.0

Proposed:

Lecture:

Lab:

Total:

7. Prerequisites:

Present:

Proposed: Admission to the Management of Sustainable Business Graduate Certificate program or to an M.S. program other than the MBA.

8. Required for Majors: ☒ Elective for Majors: ☐

9. Justification: This course is required for the new Graduate Certificate in Sustainable Business.

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

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

1) 2) 3)

4) 5) 6)

Recommended by Department

Carolyn Fisher
(Chair signature)

Date: 2/4/11

Recommended by Discipline Specific Curricula Committee

Bruce Fisher
(Chair signature)

Date: 2/8/2011

Approved by Curricula Committee:

(Chair signature)

Date: _____

Approved by Faculty Senate:

(Chair signature)

Date: _____

EC File # 2310-Sp2011-MiEng-42

Effective Year: **2011**
 Effective Term: Summer ☐ Fall ☐ Spring ☒

Experimental Course Form (EC)

An EC form must be submitted before an experimental course is to be offered. EC forms approved SP2009 or later allow the course to be offered twice at any time during the following three year period. After an experimental course has been offered twice, a CC form may be submitted to request a permanent course number.

A new course that is required as part of a degree program, minor, or graduate certificate may be submitted on a CC form to receive a permanent course number

Co-listed offerings should be submitted on one form, originating from the primary discipline.

Department: Mining Engineering

Discipline and Course Number: MI Eng 401

Course Title: Simulation of Mining Systems

Abbreviated Title (24 spaces or less): Sim of Mining Systems

Instructor(s): Kwame Awuah-Offei

Credit Hours: Lecture: 3 Lab: 0 Total: 3

Prerequisites: Graduate standing or Stats 213

Semester(s) previously taught:

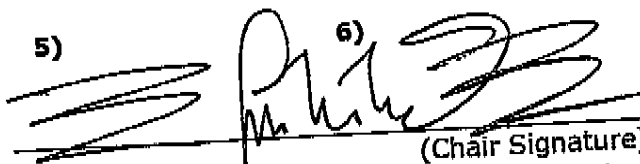
Brief Course Description: (40 words or less)

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

List all co-listed courses: Include initials of Dept. Chair, if signature is not already included below.

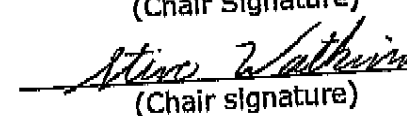
1) 2) 3)
 4) 5) 6)

Department Chair:


 (Chair Signature)

Date: 11/23/10

Discipline Specific Curricula Committee:


 (Chair signature)

Date: 2/4/11

Curricula Committee:

 (Chair Signature)

Date: _____

EC File # 2317-PS2011-EE-401

Effective Year: 2011
Effective Term: Summer ☐ Fall ☒ Spring ☐

Experimental Course Form (EC)

An EC form must be submitted before an experimental course is to be offered. EC forms approved SP2009 or later allow the course to be offered twice at any time during the following three year period. After an experimental course has been offered twice, a CC form may be submitted to request a permanent course number.

A new course that is required as part of a degree program, minor, or graduate certificate may be submitted on a CC form to receive a permanent course number

Co-listed offerings should be submitted on one form, originating from the primary discipline.

Department: Electrical & Computer Engr

Discipline and Course Number: EE 401

Course Title: Principle & Applications of Nanophotonics

Abbreviated Title (24 spaces or less): Prin & Appl Nanophotonic

Instructor(s): Dr. Hai Xiao

Credit Hours: Lecture: 3 Lab: 0 Total: 3

Prerequisites: EE 255 & EE 256

Semester(s) previously taught: FS 2007

Brief Course Description: (40 words or less)

The latest theories, design, fabrication, characterization and applications of nanophotonic devices including quantum dots, nanotubes, nanoparticles, photonic crystals, optical microcavities and optical nanomaterials.

List all co-listed courses: Include initials of Dept. Chair, if signature is not already included below.

1) 2) 3)
4) 5) 6)

Department Chair: Kelm Enshun (Chair Signature)

Date: 16 Dec 2010

Discipline Specific Curricula Committee: Steve Mathurin (Chair signature)

Date: 2/4/11

Curricula Committee: _____ (Chair Signature)

Date: _____

From: 573 341 4362

Page: 3/7

Date: 1/7/2011 10:43:22 AM

EC File # 2319 - FS 2011 - Chem - 401

Effective Year: 2011

Effective Term: Summer ☐Fall ☒Spring ☐

Experimental Course Form (EC)

This form must be filed with the Secretary to the Campus Curricula Committee, after the department chair's notation, by the appropriate deadline. Filing deadlines for inclusion in the initial release of the Schedule of Classes are as follows:

Summer and Fall Semester Offerings - January 1
Spring Semester Offerings - August 1

An EC form must be submitted each semester it is to be offered, not to exceed two offerings. An experimental course that is required should be submitted on a CC form. Co-listed offerings should be submitted on one form, originating from the primary discipline.

Department: Chemistry

Discipline and Course Number: Chem 401

Course Title: Synthesis and Bioapplications of Organofluorine Chemistry

Abbreviated Title (24 spaces or less): Organofluorine Chemistry

Instructor(s): V. Prakash Reddy

Credit Hours: Lecture: 3 Lab: Total: 3

Prerequisites: Chem 321 or equivalent.

Semester(s) previously taught:

Brief Course Description: (40 words or less)

Physicochemical characteristics; biological activity; general mechanistic aspects; synthetic methodologies; fluorinated organic compounds as mechanism based enzyme inhibitors; fluorinated amino acids; fluorinated carbohydrates; fluorinated peptide isosteres; fluorinated pharmaceuticals and anesthetics; organofluoro compounds in neurological disorders and anticancer agents.

List all co-listed courses: Include initials of Dept. Chair, if signature is not already included below.

1)

2)

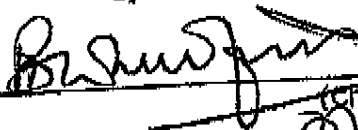
3)

4)

5)

6)

Department Chair:



Date:

12/25/10

Discipline Specific Curricula Committee:



Date:

1/21/2011

Curricula Committee:

(Chair Signature)

Date:

(Revised 1/31/2008)

From: 573 341 4362

Page: 4/7

Date: 1/7/2011 10:43:22 AM

EC File # 2320-SS2011-Stat-301

Effective Year: 2011
Effective Term: Summer ☒ Fall ☐ Spring ☐

Experimental Course Form (EC)

This form must be filed with the Secretary to the Campus Curricula Committee, after the department chair's notation, by the appropriate deadline. Filing deadlines for inclusion in the initial release of the Schedule of Classes are as follows:

Summer and Fall Semester Offerings - January 1
Spring Semester Offerings - August 1

An EC form must be submitted each semester it is to be offered, not to exceed two offerings.
An experimental course that is required should be submitted on a CC form. Co-listed offerings should be submitted on one form, originating from the primary discipline.

Department: Mathematics & Statistics

Discipline and Course Number: STAT 301

Course Title: Statistical Data Analysis Using SAS

Abbreviated Title (24 spaces or less): Stat Data Analysis SAS

Instructor(s): V.A. Samaranayake

Credit Hours: Lecture: 3 Lab: Total: 3

Prerequisites: One of Stat 213, 215, 217, 343 and one of Stat 346, 353, 443, ~~443~~, 444, 445

Semester(s) previously taught: Please see attachment

Brief Course Description: (40 words or less)

This course will introduce the student to selected data analytic tools implemented in the Statistical Analysis System (SAS) and appropriate and effective use of these tools. Focus would be on both the use of SAS data analytic tools and the theoretical and methodological rationale that form the basis of such analyses.

List all co-listed courses: Include initials of Dept. Chair, if signature is not already included below.

1)

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6)

Department Chair: Leon M. Hall (Chair Signature)

Date: 12-29-10

Discipline Specific Curricula Committee: Daniel J. Smith (Chair Signature)

Date: 1/21/2011

Curricula Committee: _____ (Chair Signature)

Date: _____

(Revised 1/31/2008)

From: 573 341 4362 Page: 5/7 Date: 1/7/2011 10:43:22 AM

Stat 301: Data Analysis using SAS

Previous Offerings and Course Rationale

This course was offered as Stat 401 in summer 2004 and then as a special topics summer course (Stat 400) in 2007, 2009, and 2010. We have decided to offer it in summer 2011 as a 301 course instead of a 400 level course. The course syllabus and prerequisites are changed somewhat from previous offerings to make it accessible to a wider variety of students from both within and outside our department. This decision was based on the broad interest this course has received from graduate students from other departments.

The rationale for the course and course content is given below:

Rationale: Statistical Analysis System (SAS) is one of the most versatile statistical software tools that is currently available to data analysts. It is widely used in academia, government, and industry, not only by statisticians, but also by scientists in many disciplines. It is considered to be one of the very few statistical software tools that consistently provide accurate and statistically valid analyses and results. Its versatility and flexibility comes at the expense of simplicity. SAS is a complex software tool whose full potential and features are reachable only by those with a good understanding of its workings and underlying statistical methodology.

Course Content: This course will introduce the student to selected data analytic tools implemented in the Statistical Analysis System (SAS) and appropriate and effective use of these tools. Focus would be on both the use of SAS data analytic tools and the theoretical and methodological rationale that form the basis of such analyses.

More details on the topics are: creating SAS data sets, data handling/preprocessing, creating simple summary statistics, procedures for creating standard experimental design structures and analyzing data from such experiments, linear and non-linear regression, introduction to time series analysis tools, multivariate methods, statistical techniques for classification and clustering, nonparametric statistical analysis, and statistical graphics. The basic statistical concepts behind each SAS procedure will be an integral part of the course.

From: 573 341 4362

Page: 1/3

Date: 1/31/2011 2:19:30 PM

EC File # 2323-592011-BioSci-201

Effective Year: 2011

Effective Term: Summer ☒Fall ☐Spring ☐

Experimental Course Form (EC)

An EC form must be submitted before an experimental course is to be offered. EC forms approved SP2009 or later allow the course to be offered twice at any time during the following three year period. After an experimental course has been offered twice, a CC form may be submitted to request a permanent course number.

A new course that is required as part of a degree program, minor, or graduate certificate may be submitted on a CC form to receive a permanent course number

Co-listed offerings should be submitted on one form, originating from the primary discipline.

Department: Biology / BioSci

Discipline and Course Number: 201

Course Title: Introduction to Synthetic Biology

Abbreviated Title (24 spaces or less): Synthetic Biology

Instructor(s): Dave Westenberg

Credit Hours: Lectures: 1 Lab: 2 Total: 3

Prerequisites: BioSci 110/111 and Chem 3

Semester(s) previously taught: New Course

Brief Course Description: (40 words or less)

Synthetic biology is the use of standardized parts to build devices or systems. Students will design parts (basic biological functions encoded as genetic material) and assemble devices (combinations of one or more parts encoding human-defined functions) resulting in systems (combinations of devices encoding human-defined functions). Students will participate in independent research projects.

List all co-listed courses: Include initials of Dept. Chair, if signature is not already included below.

1)

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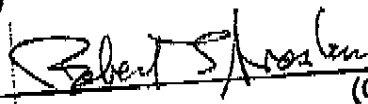
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6)

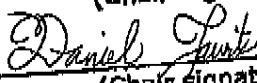
Department Chair:



(Chair Signature)

Date: 1/20/11

Discipline Specific Curricula Committee:



(Chair Signature)

Date: 2/7/2011

Curricula Committee:

(Chair Signature)

Date: _____

(Revised 10/12/201)

From: 573 341 4362

Page: 2/3

Date: 1/31/2011 2:19:30 PM

EC File # 2324-FS2011-CS-401

Effective Year: 2011

Effective Term: Summer ☐ Fall ☒ Spring ☐**Experimental Course Form (EC)**

This form must be filed with the Secretary to the Campus Curricula Committee, after the department chair's notation, by the appropriate deadline. Filing deadlines for inclusion in the initial release of the Schedule of Classes are as follows:

Summer and Fall Semester Offerings - January 1
Spring Semester Offerings - August 1

An EC form must be submitted each semester it is to be offered, not to exceed two offerings. An experimental course that is required should be submitted on a CC form. Co-listed offerings should be submitted on one form, originating from the primary discipline.

Department: Computer Science

Discipline and Course Number: Cmp Sc 401

Course Title: Pervasive Computing

Abbreviated Title (24 spaces or less): Pervasive Computing

Instructor(s): Dan Lin

Credit Hours: Lecture: 3 Lab: 0 Total: 3

Prerequisites: Cmp Sc 365 or CpE 319 or equivalent

Semester(s) previously taught: None

Brief Course Description: (40 words or less)

Pervasive computing aims to seamlessly integrate computing into our everyday activities, so that people do not need to care about computing artifacts. This course will introduce various techniques needed to realize pervasive computing, such as position tracking and ad-hoc networking.

List all co-listed courses: Include initials of Dept. Chair, if signature is not already included below.

1)

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6)

Department Chair: _____

(Chair Signature)

Date: Jan 26, 11

Discipline Specific Curricula Committee: _____

(Chair Signature)

Date: 2/7/2011

Curricula Committee: _____

(Chair Signature)

Date: _____

(Revised 1/31/2008)

From: 573 341 4362 Page: 3/3 Date: 1/31/2011 2:19:31 PM

EC File # 2325-F32011-CS-301

Effective Year: 2011
Effective Term: Summer ☐ Fall ☒ Spring ☐

Experimental Course Form (EC)

An EC form must be submitted before an experimental course is to be offered. EC forms approved SP2009 or later allow the course to be offered twice at any time during the following three year period. After an experimental course has been offered twice, a CC form may be submitted to request a permanent course number.

A new course that is required as part of a degree program, minor, or graduate certificate may be submitted on a CC form to receive a permanent course number

Co-listed offerings should be submitted on one form, originating from the primary discipline.

Department: Computer Science

Discipline and Course Number: Cmp Sc 301

Course Title: Introduction to Data Mining

Abbreviated Title (24 spaces or less): Intro Data Mining

Instructor(s): Jennifer Leopold and Chris Mertz

Credit Hours: Lecture: 3 Lab: 0 Total: 3

Prerequisites: Cmp Sc 238, one of Stat 213/215/217/343

Semester(s) previously taught: None

Brief Course Description: (40 words or less)

This course provides an introduction to classical data mining methods which can be used to predict unknown or future values of variables, or to find human-interpretable patterns that describe data. Topics will include classification, clustering, association rule discovery, sequential pattern discovery, regression, and deviation/anomaly detection.

List all co-listed courses: Include initials of Dept. Chair, if signature is not already included below.

1) 2) 3)
4) 5) 6)

Department Chair: [Signature] (Chair Signature)

Date: Jan 26, 11

Discipline Specific Curricula Committee: [Signature] (Chair Signature)

Date: 2/7/2011

Curricula Committee: _____ (Chair Signature)

Date: _____

EC File # 2326-FS2011-BUS-301

Effective Year: 2011

Effective Term: Summer ☐ Fall ☒ Spring ☐

Experimental Course Form (EC)

An EC form must be submitted before an experimental course is to be offered. EC forms approved SP2009 or later allow the course to be offered twice at any time during the following three year period. After an experimental course has been offered twice, a CC form may be submitted to request a permanent course number.

A new course that is required as part of a degree program, minor, or graduate certificate may be submitted on a CC form to receive a permanent course number

Co-listed offerings should be submitted on one form, originating from the primary discipline.

Department: Business & Info Technology

Discipline and Course Number: BUS 301

Course Title: Development and Management of New Products

Abbreviated Title (24 spaces or less): Devel+Mgmt New Prodycts

Instructor(s): Bonnie Bachman and Ralph Hanke

Credit Hours: Lecture: 3 Lab: Total: 3

Prerequisites:

Semester(s) previously taught:

Brief Course Description: (40 words or less)

Provides framework, tools, techniques, and perspectives to be effective in developing and managing new products. The course encompasses the new product development process from the identification of market need through planning for commercialization.

List all co-listed courses: Include initials of Dept. Chair, if signature is not already included below.

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2)

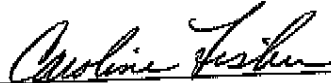
3)

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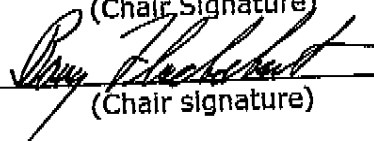
Department Chair:



(Chair Signature)

Date: 2/3/11

Discipline Specific Curricula Committee:



(Chair signature)

Date: 2/3/2011

Curricula Committee:

(Chair Signature)

Date: _____

EC File # 2327-FS2011-MKT-301

Effective Year: 2011
Effective Term: Summer ☐ Fall ☒ Spring ☐

Experimental Course Form (EC)

An EC form must be submitted before an experimental course is to be offered. EC forms approved SP2009 or later allow the course to be offered twice at any time during the following three year period. After an experimental course has been offered twice, a CC form may be submitted to request a permanent course number.

A new course that is required as part of a degree program, minor, or graduate certificate may be submitted on a CC form to receive a permanent course number

Co-listed offerings should be submitted on one form, originating from the primary discipline.

Department: Business & Info Technology

Discipline and Course Number: MKT 301

Course Title: Promotions Management

Abbreviated Title (24 spaces or less): Promotions Management

Instructor(s): Sarah Stanley

Credit Hours: **Lecture:** 3 **Lab:** **Total:** 3

Prerequisites:

Semester(s) previously taught:

Brief Course Description: (40 words or less)

Brief Course Description: (40 words or less)
A managerial examination of advertising techniques and how they affect decisions in advertising and sales promotion. Course topics include setting advertising objectives and the budget, applying media tools, and developing advertisements. Instructional methods may include a team project, Internet assignments, and workshops.

List all co-listed courses: Include initials of Dept. Chair, if signature is not already included below.

List all co-listed courses:

1)	2)	3)
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4) 5) 6)

Department Chair: Caroline Leslie (Chair Signature)

Date: 2/3/11

Department Chair: Cheryl E. Brown (Chair Signature)
Discipline Specific Curricula Committee: Darryl L. Hester (Chair signature)

Date: 2/8/2011

Curricula Committee: _____ (Chair Signature)

Date: _____

EC File # 2328-SP2012-BUS-401

Effective Year: 2012

Effective Year: 2012
Effective Term: Summer ☐ Fall ☐ Spring ☒

Experimental Course Form (EC)

An EC form must be submitted before an experimental course is to be offered. EC forms approved SP2009 or later allow the course to be offered twice at any time during the following three year period. After an experimental course has been offered twice, a CC form may be submitted to request a permanent course number.

A new course that is required as part of a degree program, minor, or graduate certificate may be submitted on a CC form to receive a permanent course number

Co-listed offerings should be submitted on one form, originating from the primary discipline.

Department: Business & Info Technology

Discipline and Course Number: BUS 401

Course Title: Innovation Management

Abbreviated Title (24 spaces or less): Innovation Management

Instructor(s): Bonnie Bachman and Ralph Hanke

Credit Hours:	Lecture: 3	Lab:	Total: 3
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Prerequisites: BUS 301 Devel+Mgmt New Products, Admittance to a graduate program

Semester(s) previously taught:

Brief Course Description: (40 words or less)

Brief Course Description: (40 words or less)
Examines the Innovation processes used by leading companies to launch new products and services. Constructs, methods, tools, technologies, and metrics for managing innovation are explored within the context of various industry segments and through the use of examples and cases.

List all co-listed courses: Include initials of Dept. Chair, if signature is not already included below.

1) 2) 3)

4) 5) 6)

Department Chair: Caroline Teske (Chair Signature)

Date: 2/3/11

Department Chair: Carol Ann Gustin (Chair Signature)
Discipline Specific Curricula Committee: Rory Shalvest (Chair signature)

Date: 2/8/2011

Curricula Committee: _____ (Chair Signature)

Date: _____

Effective Term: Summer ☐ Fall ☒ Spring ☐

Effective Year: 2011

Effective Term: Summer ☐ Fall ☒ Spring ☐

EC File # 2330-FB2011-Hist-30

Experimental Course Form (EC)

An EC form must be submitted before an experimental course is to be offered. EC forms approved SP2009 or later allow the course to be offered twice at any time during the following three year period. After an experimental course has been offered twice, a CC form may be submitted to request a permanent course number.

A new course that is required as part of a degree program, minor, or graduate certificate may be submitted on a CC form to receive a permanent course number

Co-listed offerings should be submitted on one form, originating from the primary discipline.

Department: History and Political Science

Discipline and Course Number: Hist 301

Course Title: France and the Second World War

Abbreviated Title (24 spaces or less): France and WWII

Instructor(s): Shannon Fogg

Credit Hours: Lecture: 3 Lab: Total:

Prerequisites: History 112 or Hist 176

Semester(s) previously taught: none

Brief Course Description: (40 words or less)

This seminar-style course examines France during the Second World War and covers topics such as resistance, collaboration, the Holocaust in France, and civilians' daily life. We will examine political decisions as well as lingering effects on French society.

List all co-listed courses: Include initials of Dept. Chair, if signature is not already included below.

1) 2) 3)

4) 5) 6)

Department Chair: Shannon Fogg (Chair Signature)

Date: 1/31/11

Discipline Specific Curricula Committee: _____ (Chair signature)

Date: _____

Curricula Committee: _____ (Chair Signature)

Date: _____

From: 573 341 4362 Page: 3/11 Date: 9/24/2010 3:25:30 PM

CC File # 8072-2010-MSE-418-10

Effective Year: 2011
Term: Summer ☐ Fall ☐ Spring ☒

Course Change Form (CC)

This form is for creating or modifying permanent courses.

Course Changes (Check all changes.)

New Course ☒

Course Deletion ☐

Credit Hours ☐

Prerequisites ☐

Course Title ☐

Catalog Description ☐

Course Number ☐

Co-listing ☐

Course Information (1-9 Must Be Completed. Leave "Proposed" items blank if no change is being made.)

1. Department: Materials Science & Engineering

2. Discipline and Course Number: Present:

Proposed: MSE 418

3. Course Title: Present:

Proposed: Principles for Advanced Microstructural Design

Abbreviated Course Title: Adv Microstructural

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

4. Catalog Description (300 Character Spaces or Less.)

Present:

Proposed: This course will introduce the microstructural principles that can be used to design advanced materials. It will help students learn about the principles and microstructural design approaches. In addition, they will design a theoretical microstructure for high efficiency structure.

5. If course requires field trip check box: ☐

6. Credit Hours: Present:

Lecture:

Lab:

Total:

Proposed:

Lecture: 3.0

Lab: 0.0

Total: 3.0

7. Prerequisites: Present:

Proposed: Graduate level

8. Required for Majors: ☐ Elective for Majors: ☒

9. Justification: This course is need for students to acquire the latest developments in Integrated Computational Materials Engineering (ICME) approach. ICME is being promoted by NAE, NSF and other federal agencies.

10. Semesters previously offered as an experimental course (101, 201, 301, 401): FS2004; SP2006 SP2011

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

1) 2) 3)
4) 5) 6)

Recommended by Department Wayne Shuler

(Chair signature)

Recommended by Discipline Specific Curricula Committee [Signature]

(Chair signature)

Approved by Curricula Committee: _____

(Chair signature)

Approved by Faculty Senate: _____

(Chair signature)

Date: 9/9/10

Date: 10-15-10

Date: _____

Date: _____

From: 573 341 4362 Page: 5/11 Date: 9/24/2010 3:25:31 PM

Effective Year: 2011

Term: Summer ☒ Fall ☐ Spring ☐

CC File # 8074-2010-ExpEng-491-10

Course Change Form (CC)

This form is for creating or modifying permanent courses.

Course Changes (Check all changes.)

New Course ☒

Course Deletion ☐

Credit Hours ☐

Prerequisites ☐

Course Title ☐

Catalog Description ☐

Course Number ☐

Co-listing ☐

Course Information (1-9 Must Be Completed. Leave "Proposed" Items blank if no change is being made.)

1. Department: Mining & Nuclear Engineering

2. Discipline and Course Number: Present:

Proposed: ExpEng 491

3. Course Title: Present:

Proposed: Internship

Abbreviated Course Title: Internship

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

4. Catalog Description (300 Character Spaces or Less.)

Present:

Proposed: Students apply critical thinking skills and discipline specific knowledge in a work setting based on a project designed by the advisor and employer. Activities will vary depending on the student's background and the setting. Requires major report and formal presentation to sponsoring organization.

5. If course requires field trip check box: ☐

6. Credit Hours:

Present:

Lecture:

Lab:

Total:

Proposed:

Lecture: 0-6

Lab:

Total: 0-6

0-15 Not
0-6

7. Prerequisites:

Present:

Proposed: 12hrs of ExpEng courses including ExpEng307.

8. Required for Majors: ☐ Elective for Majors: ☐

9. Justification: See attached Justification

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

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

1)

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6)

Recommended by Department

(Chair signature)

Recommended by Discipline Specific Curricula Committee

(Chair signature)

Approved by Curricula Committee:

(Chair signature)

Approved by Faculty Senate:

(Chair signature)

Date:

Date:

Date:

Date:

From: 573 341 4362 Page: 6/11 Date: 9/24/2010 3:25:31 PM

Explosives Engineering

Proposed courses:

491 Internship (IND 0.0-6.0) Students apply critical thinking skills and discipline specific knowledge in a work setting based on a project designed by the advisor and employer. Activities will vary depending on the student's background and the setting. Requires major report and formal presentation to sponsoring organization. 12hrs of ExpEng courses including ExpEng307.

499 Practicum (IND 0.0-6.0) This course is similar to the ExpEng 491 Internship course. The difference is that this course is intended for students who are already employed by an organization for whom they wish to continue working. Prerequisite: Prerequisite: 12hrs of ExpEng courses including ExpEng307.

Justification.

On 22 April 2010 the Coordinating Board of Higher Education (CBHE) approved (at state level) the new Master of Science in Explosives Engineering at the Missouri University of Science and Technology. The degree has been put in place and is listed in the new 2010-2012 graduate catalog with the first 11 classes/courses listed with the new ExpEng designation. We are very proud of this accomplishment.

The approved proposal package includes a 491 internship which is intended for students to gain practical experience in the explosives industry. The internship is modeled on the S&T Business program graduate internship. It is our intent to require the MS student in Explosives Engineering to acquire practical experience related to explosives in industry or government before graduating. We feel this is very important.

For persons already employed in industry or government the graduate "practicum" as offered by the S&T Business program, Business 499, makes sense over the 491 designation. The difference is the practicum is for students already employed. For the explosives engineering program it will be in explosives related employment. In addition we have currently submitted a Master of Science of Explosives Engineering non thesis degree option to cater for nontraditional students, such as those who are unable to stay on campus for 6 months to do a research project due to work, military commitments, or financial considerations due to loss of salary and having to support a family. For these persons whom the explosives engineering masters is a means of job advancement in their field we are opting for the practicum over the internship. The MS in explosives engineering without thesis will be reserved for those who are not able to complete a full research project and will be reserved for those in an explosives related industry or government position.

The above explains the background of our submission of a request for approval of ExpEng 491 Internship and ExpEng 499 practicum. We are still in the process of applying for new courses as we try to get everything up and running with the new program and we hope to have everything fully in place by fall 2011. Enrollment is already 13 MS students, 2 of which have already completed their thesis defense and will be graduating at Christmas. We also have 13 in the graduate certificate 6 of which have voiced the intent to join the masters when they have completed their certificates and a host of other applications anticipated to be processed before Christmas.

From: 573 341 4362 Page: 7/11 Date: 9/24/2010 3:25:32 PM

CC File #8075-2010-ExpEng-499-10

Effective Year: 2011
Term: Summer ☒ Fall ☐ Spring ☐

Course Change Form (CC)

This form is for creating or modifying permanent courses.

Course Changes (Check all changes.)

New Course ☒

Course Deletion ☐

Credit Hours ☐

Prerequisites ☐

Course Title ☐

Catalog Description ☐

Course Number ☐

Co-listing ☐

Course Information (1-9 Must Be Completed. Leave "Proposed" items blank if no change is being made.)

1. Department: Mining & Nuclear Engineering

2. Discipline and Course Number: Present:

3. Course Title: Present:

Proposed: Practicum

Abbreviated Course Title: Practicum

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

4. Catalog Description (300 Character Spaces or Less.)

Present:

Proposed: ExpEng 499 (498)

Ind Grp Projects

Table
New
Course

Proposed: This course is similar to the ExpEng 491 Internship course. The difference is that this course is intended for students who are already employed by an organization for whom they wish to continue working.

5. If course requires field trip check box: ☐

6. Credit Hours:

Present:

Lecture:

Lab:

Total:

Proposed:

Lecture: 0-6

Lab:

Total: 0-6

7. Prerequisites:

Present:

Proposed: Prerequisite: 12hrs of ExpEng courses including ExpEng307.

8. Required for Majors: ☐ Elective for Majors: ☒

9. Justification: See attached justification

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

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

1)

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4)

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6)

Recommended by Department:

Recommended by Discipline Specific Curricula Committee:

Approved by Curricula Committee:

Approved by Faculty Senate:

(Chair signature)

(Chair signature)

(Chair signature)

(Chair signature)

Date: 09/17/10

Date: 10-15-10

Date: _____

Date: _____

From: 573 341 4362 Page: 8/11 Date: 9/24/2010 3:25:32 PM

Explosives Engineering

Proposed courses:

491 Internship (IND 0.0-6.0) Students apply critical thinking skills and discipline specific knowledge in a work setting based on a project designed by the advisor and employer. Activities will vary depending on the student's background and the setting. Requires major report and formal presentation to sponsoring organization. 12hrs of ExpEng courses including ExpEng307.

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Justification.

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