



# MISSOURI UNIVERSITY OF SCIENCE AND TECHNOLOGY

*Formerly University of Missouri-Rolla*

Agenda  
Campus Curricula Committee Meeting  
May 4, 2010 Meeting  
3:15 p.m. Room 117 Fulton Hall

Approval of April 6, 2010 minutes.

**Review of submitted DC forms:**

DC 0362, Aerospace Engineering Bachelor of Science, effective Fall 2010. A proposal to modify the current curriculum for the Bachelor of Science in Aerospace Engineering.

DC 0364, Business and Information Technology, minor in Business, effective Fall 2010. A proposal to modify the current curriculum for the minor in Business by replacing Psych 50 with Fin 250.

**Review of submitted CC forms:**

CC 8002, IST 480, Web and New Media Studies, effective Fall 2010.

CC 8003, Engineering Management 373, Intelligent Investing, effective Fall 2010.

CC 8004, Aerospace Engineering 319, Advanced Thermodynamics, effective Summer 2010.

CC 8005, Aerospace Engineering 231, Aerodynamics I, effective Fall 2010.

CC 8006, Aerospace Engineering 251, Aerospace Structures I, effective Fall 2010.

CC 8007, Aerospace Engineering 271, Aerodynamics II, effective Fall 2010.

CC 8008, Aerospace Engineering 281, Aerospace Systems Design II, effective Fall 2010.

CC 8009, Aerospace Engineering 382, Spacecraft Design II, effective Fall 2010.

CC 8010, Mechanical Engineering 220, Engineering Design Methodology, effective Fall 2010.

CC 8011, Electrical Engineering 475, High Speed Digital Design, effective Spring 2011.

CC 8012, Computer Science 447, Advanced Topics in Artificial Intelligence, effective Spring 2011.



## MISSOURI UNIVERSITY OF SCIENCE AND TECHNOLOGY

*Formerly University of Missouri-Rolla*

CC 8013, Mining Engineering 313, Stage Pyrotechnics and Special Effects, effective Fall 2010.

CC 8014, Electrical Engineering 477, Advanced Topics in Antenna Analysis & Design, effective Spring 2011.

CC 8015, Finance 400, Special Problems, effective Fall 2010.

CC 8016, Finance 401, Special Topics, effective Fall 2010.

CC 8017, Finance 490, Graduate Research, effective Fall 2010.

CC 8018, Civil Engineering 457, Traffic Flow Theory and Characteristics, effective Spring 2011.

CC 8019, Mechanical Engineering 357, Integrated Product and Process Design, effective Fall 2010.

CC 8021, Engineering Management 137, Economic Analysis of Economic Projects, effective Fall 2010.

**Review of submitted EC forms:**

EC 2254, IST 301, Introduction to Web and New Media Studies, effective Fall 2010.

EC 2255, Ceramic Engineering 201, Applied Glass Forming, effective Fall 2010.

EC 2256, Mining Engineering 401, Research Methods, effective Fall 2010.

EC 2258, Math 401, Mathematical Logic with Applications, effective Summer 2010.

EC 2261, French 301, Introduction to Translation and Interpretation, effective Fall 2010.

DC # 0362-2010-AE-000-00

Effective Year: 2010

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 Aerospace Engineering

Department: MAE

Briefly describe action requested (Attach documentation as appropriate):

The following modifications are described in the attached pages:

1. Add Cmp Sc 53/54 as an option to the programming electives. To clean up the curriculum listing, move the list of electives to a footnote.
2. Add Chem 1, Phys 24, Math 204, IDE 50, IDE 110, and programming elective to the list of courses requiring a grade of C or better.
3. Change the footnote references in the curriculum as necessary to reflect the changes in the footnotes.

Recommended by Department:



(Chair signature)

Date: 03/01/10

Recommended by:



Discipline Specific Curricula Committee

(Chair signature)

Date: 3-28-10

Approved by Curricula Committee:

(Chair signature)

Date: \_\_\_\_\_

Approved by Faculty Senate:

(Chair signature)

Date: \_\_\_\_\_

02/26/10

(Revised 1/31/2008)

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## Detailed List of Modifications to the AE Eng Curriculum

Change the footnote references in the curriculum as detailed below.

- Chem 1 – Add footnote “4”
- IDE 50 – Add footnote “4”
- Physics 24 – Add footnote “4”
- Math 204 – Add footnote “4”
- IDE 110 – Add footnote “4”
- Comp SC - Add foot note “11”
- Elective/Ethics – replace “11” by “12”

Replace the old list of Notes with this list

- 1 Chemistry 1, 2 and 4 or an equivalent training program approved by Missouri S&T.
- 2 Must be one of the following: Political Science 90, History 112, History 175, or History 176.
- 3 Must be one of the following: Economics 121 or Economics 122.
- 4 A grade of “C” or better in Chem 1, Math 14, 15, 22, 204, Physics 23, 24, IDE 50, 110 and Computer programming is required both for enrollment in ME 219, AE 213, AE 231, or AE 251 and for graduation.
- 5 A grade of “C” or better in AE 160 and ME 219 is required both for enrollment in any courses which require either AE 160 or ME 219 as prerequisites and for graduation.
- 6 Must be one of the following: Comp Sc 228, Math 303, Math 308, or any 300-level math or computer science course approved by the student’s advisor.
- 7 Electives must be approved by the student’s advisor. Nine hours of technical electives must be in the Mechanical and Aerospace Engineering department. Three hours of departmental technical electives must be at the 300-level. Honor students have special requirements for technical electives.
- 8 This course can be selected from English 60, 160, SP&MS 85, or the complete four-course sequence in Advanced RCTC (Mil Sc 105, 106, 107, and 108 or Aerospace Studies 350, 351, 380, and 381).
- 9 All electives must be approved by the student’s advisor. Students must comply with the School of Engineering general education requirements with respect to selection and depth of study. These requirements are specified in the current catalog.
- 10 Each student is required to take six hours of free electives in consultation with his/her academic advisor. Credits which do not count towards this requirement are deficiency courses (such as algebra and trigonometry), and extra credits in required courses. Any courses outside of Engineering and Science must be at least three credit hours.
11. Computer Science requirement can be satisfied by taking CS 53 and CS 54.
12. Must be a course on engineering ethics, business ethics, social ethics, or any ethics course approved by the student’s advisor.

**NOTE:** All Aerospace Engineering students must take the Fundamentals of Engineering Examination prior to graduation. A passing grade on this examination is not required to earn a B.S. degree, however, it is the first step toward becoming a registered professional engineer. This requirement is part of the UMR assessment process as described in Assessment Requirements found elsewhere in the catalog. Students must sign a release form giving the University access to their Fundamentals of Engineering Examination score.

Effective Year: 2010

DC # 0364-2010-BUS-000-00

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:**

Minor in Business

**Department:** Business and Information Technology

**Briefly describe action requested (Attach documentation as appropriate):**

Change minor by deleting Psych 50 and adding Fin 250.

Thus:

A minor in Business and Management Systems\* requires the following 15 hours of course work:

- 1) BUS 110-Management and Organizational Behavior
- 2) BUS 120-Financial Accounting
- 3) FIN 250-Corporate Finance I
- 4) MKT 311-Marketing
- 5) Either ECON 121-Microeconomics or ECON 122-Macroeconomics

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

This minor will give students broader coverage of the critical areas of business management. Finance is an essential business topic that should be taken by any student minoring in business.

Recommended by Department: Carolene Fisher  
(Chair signature)

Date: 3/23/10

Recommended by: Patty Hachert  
Discipline Specific Curricula Committee (Chair signature)

Date: 3/25/10

Approved by Curricula Committee: \_\_\_\_\_  
(Chair signature)

Date: \_\_\_\_\_

Approved by Faculty Senate: \_\_\_\_\_  
(Chair signature)

Date: \_\_\_\_\_

(Revised 1/31/2008)

03/23/10

Effective Year: 2010

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: BIT

2. Discipline and Course Number: Present : IST 480

Proposed:

3. Course Title: Present: Web and New Media Studies

Proposed: Advanced Web and New Media Studies

Abbreviated Course Title: Advanced Web Studies

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

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

Present: The course examines web and new-media technologies from a socio-psychological perspective. The class will focus on recent innovations, integrating these approaches into class interaction and student projects.

Proposed: The course covers web culture, including topics such as social media; citizen journalism, crowd intelligence, privacy, and copyright. This course is an advanced version of Intro to Web Studies, with additional assignments.

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

7. Prerequisites:

Present: graduate standing

Proposed:

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

9. Justification: We are creating a new course (IST 301/380) that will meet at the same time, so the grad course will now include more assignments, plus, we took the opportunity to change the description to more accurately reflect the class content. Also, note that students cannot receive credit for both the Intro (301/380) course and this course.

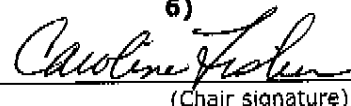
10. Semesters previously offered as an experimental course (101, 201, 301, 401):

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



(Chair signature)

Date: 3/17/10

Recommended by Discipline Specific Curricula Committee

(Chair signature)

Date: 3/22/10

Approved by Curricula Committee:

(Chair signature)

Date: \_\_\_\_\_

Approved by Faculty Senate:

(Chair signature)

Date: \_\_\_\_\_

CC File # 8003-2010-Emgt-393-10

Effective Year: 2010  
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: EMSE  
2. Discipline and Course Number: Present: ENG MGT 301 Proposed: Eng Mgt 393  
3. Course Title: Present: Intelligent Investing  
Proposed:

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

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

Present: In this course we examine methods and tools, which support building a personal portfolio that leads to long-term wealth for the owner. The approach is based on the teachings of Benjamin Graham and Warren Buffet.

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: n/a

Proposed:

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

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

### 10. Semesters previously offered as an experimental course (101, 201, 301, 401): SS'08, SP'10

### 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

Recommended by Discipline Specific Curricula Committee

Approved by Curricula Committee:

Approved by Faculty Senate:

(Chair signature)

(Chair signature)

(Chair signature)

(Chair signature)

Date: 03/26/10

Date: 3-20-09

Date:

Date:

(Revised 1/29/09)

CC File # 8004-2010-AE-319-32

Effective Year: 2010

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: AE

2. Discipline and Course Number: Present: AE 319

Proposed:

3. Course Title: Present:  
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:

Proposed:

5. If course requires field trip check box: ☐

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

7. Prerequisites:

Present: Ae Eng 233.

Proposed: None

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

9. Justification:

Ae 233 was deleted from the catalog in 2003.

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

*Robert McElroy*  
(Chair signature)

Date: 03/01/10

Recommended by Discipline Specific Curricula Committee

*John A. Bowers*  
(Chair signature)

Date: 3-20-10

Approved by Curricula Committee:

(Chair signature)

Date: \_\_\_\_\_

Approved by Faculty Senate:

(Chair signature)

Date: \_\_\_\_\_

(Revised 1/29/09)

CC File # 8005-2010-AE-231-32

Effective Year: 2010  
 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: Aerospace  
 2. Discipline and Course Number: Present: AE 231 Proposed: same  
 3. Course Title: Present: Aerodynamics I  
 Proposed: same

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

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

Proposed:

5. If course requires field trip check box: ☐

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

7. Prerequisites:  
 Present: Accompanied or preceded by Ae Eng 161 and a grad of "C" or better in Math 14 (or 8), 15 (or 21), 22, Physics 23, and Mc Eng 219  
 Proposed: Accompanied or preceded by AE 161 and a grade of "C" or better in Math 14 (or 8), 15 (or 21), 22, and Physics 23

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

9. Justification: The AE faculty met and made the decision to change the course prerequisites due to changes in the course contents.

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: 03/01/10  
 Date: 3-28-10  
 Date: \_\_\_\_\_  
 Date: \_\_\_\_\_

(Revised 1/29/09)

CC File # 8006-2010-AE-251-32

Effective Year: 2010  
 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: Aerospace  
 2. Discipline and Course Number: Present: AE 251 Proposed: same  
 3. Course Title: Present: Aerospace Structures I  
 Proposed: same

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

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

Proposed:

5. If course requires field trip check box: ☐

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

7. Prerequisites:  
 Present: IDE 110 and a grade of "C" or better in Math 14 (or 8), 15 (or 21), 22, and Physics 23

Proposed: "C" or better in Math 14 (or 8), 15 (or 21), 22, Physics 23 and IDE 110

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

9. Justification: C or better needed in prerequisites for adequate preparation.

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

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

*Robert Miska*  
 (Chair signature)

Date: 03/21/10

Recommended by Discipline Specific Curricula Committee

*John A. Barger*  
 (Chair signature)

Date: 3-26-10

Approved by Curricula Committee:

(Chair signature)

Date: \_\_\_\_\_

Approved by Faculty Senate:

(Chair signature)

Date: \_\_\_\_\_

(Revised 1/29/09)

CC File # 8007-2010-HE-271-32

Effective Year: 2010  
 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: Aerospace  
 2. Discipline and Course Number: Present: AE 271 Proposed: same  
 3. Course Title: Present: Aerodynamics II  
 Proposed: same

#### Abbreviated Course Title:

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

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

Present:

Proposed:

5. If course requires field trip check box: ☐

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

7. Prerequisites:

Present: Ae Eng 231

Proposed: "C" or better in AE 231 and ME 219

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

9. Justification: C or better needed in prerequisites for adequate preparation. ME 219 added due to changes in AE 271 course contents

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

*Adrian Medina*  
 (Chair signature)

Date: 03/01/10

Recommended by Discipline Specific Curricula Committee

*Jeffrey Bowen*  
 (Chair signature)

Date: 3-28-10

Approved by Curricula Committee:

(Chair signature)

Date: \_\_\_\_\_

Approved by Faculty Senate:

(Chair signature)

Date: \_\_\_\_\_

(Revised 1/29/09)

Effective Year: 2010  
 Term: Summer ☐ Fall ☒ Spring ☐

CC File # 8008-2010-AE-281-32

## 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: Aerospace
2. Discipline and Course Number: Present: AE 281 Proposed: same
3. Course Title: Present: Aerospace Systems Design II  
Proposed: same

#### Abbreviated Course Title:

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

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

Present:

Proposed:

5. If course requires field trip check box: ☐

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

7. Prerequisites:

Present: Ae Eng 235, 253, 280

Proposed: AE 280

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

9. Justification: There is no need for AE235 and AE 253. The students must take these course when they are taking AE 280.

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)

Date: 03/01/10

Recommended by Discipline Specific Curricula Committee

[Signature]  
 (Chair signature)

Date: 3-28-10

Approved by Curricula Committee:

\_\_\_\_\_  
 (Chair signature)

Date: \_\_\_\_\_

Approved by Faculty Senate:

\_\_\_\_\_  
 (Chair signature)

Date: \_\_\_\_\_

(Revised 1/29/09)

Effective Year: 2010  
 Term: Summer ☐ Fall ☒ Spring ☐

CC File # 8009-2010-HE-382-32

## 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: Aerospace  
 2. Discipline and Course Number: Present: AE 382 Proposed: same  
 3. Course Title: Present: Spacecraft Design II  
 Proposed: same

#### Abbreviated Course Title:

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

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

Present:

Proposed:

#### 5. If course requires field trip check box: ☐

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

#### 7. Prerequisites:

Present: Ae Eng 235, 253, and AE 380 for Ae Eng majors; consent of instructor for non-Ae Eng majors

Proposed: AE 380 for AE Eng majors; consent of instructor for non-AE Eng majors

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

9. Justification: There is no need for AE235 and AE 253. The students must take these course when they are taking AE 380.

#### 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

Robert M. Miller  
 (Chair signature)

Date: 03/04/10

Recommended by Discipline Specific Curricula Committee

James R. Bailey  
 (Chair signature)

Date: 3-28-10

Approved by Curricula Committee:

(Chair signature)

Date: \_\_\_\_\_

Approved by Faculty Senate:

(Chair signature)

Date: \_\_\_\_\_

(Revised 1/29/09)

CC File # 8010-2010-ME-220-10

Effective Year: 2010

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: MAE

2. Discipline and Course Number: Present:

Proposed: Mc Eng 220

3. Course Title: Present:

Proposed: Engineering Design Methodology

Abbreviated Course Title:

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

4. Catalog Description (40 Words or Less)

Present:

**Proposed:** This course examines structured engineering design theory and methodologies for conceptual design and redesign of products. Topical coverage includes customer needs gathering, functional modeling, engineering specifications creation (OFD), concept generation, selection and design embodiment. Team work/hands-on projects emphasized.

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:** Junior standing in engineering and at least 12 hours major field credit

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

9. Justification: This is to add Mc Eng 220 as a co-listing to the existing IDE 220. This co-listing will allow Mc Eng majors to begin including this course as a department technical elective.

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) IDE 220

2)

3)

4)

5)

6)

Recommended by Department

*Robert M. Smith*  
(Chair signature)

Date: 03/04/10

Recommended by Discipline Specific Curricula Committee

*Jeffrey B. Smith*  
(Chair signature)

Date: 3/28/10

Approved by Curricula Committee:

(Chair signature)

Date: \_\_\_\_\_

Approved by Faculty Senate:

(Chair signature)

Date: \_\_\_\_\_

(Revised 1/31/08)

03/04/10

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CC File # 2011-2010-EE-475-34

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: Elect. and Comp. Eng. Proposed:

2. Discipline and Course Number: Present: EE475

3. Course Title: Present: High Speed Digital Design  
Proposed: Topics in EMC and High Speed Digital DesignAbbreviated Course Title: Topics in EMC  
(24 Spaces or Less. Only needed for New Courses or Title Changes.)

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

Present: Techniques for designing and building high-speed digital circuits on printed circuit boards or multi-chip modules. Component and package selection, power bus design, decoupling, parasitic elements, grounding, shielding, and high-speed measurement techniques.

Proposed: This course will cover advanced topics in electromagnetic compatibility and high speed digital design that are not traditionally covered in other courses. Topics will depend on the latest developments in the field and on student needs.

5. If course requires field trip check box: ☐

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

7. Prerequisites:  
Present: EE 271

Proposed:

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

9. Justification: EE475 has evolved into a course where several topics are covered in the general area of electromagnetic compatibility and high-speed digital design. The course title and description should be changed to more accurately reflect the current content.

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 Kelvin E. Smith

(Chair signature)

Date: 10 Mar 2010

Recommended by Discipline Specific Curricula Committee John A. Parks

(Chair signature)

Date: 3/28/10

Approved by Curricula Committee: \_\_\_\_\_

(Chair signature)

Date: \_\_\_\_\_

Approved by Faculty Senate: \_\_\_\_\_

(Chair signature)

Date: \_\_\_\_\_

(Revised 1/29/09)

CC File # 8012-2010-15-447-32

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: Computer Science

2. Discipline and Course Number: Present: Cmp Sc 447 Proposed:

3. Course Title: Present: Advanced Topics in Artificial Intelligence

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: Objectives of work in artificial intelligence simulation of cognitive behavior and self-organizing systems. Heuristic programming techniques including the use of list processing languages. Survey of examples from representative application areas. The mind-brain problem and the nature of intelligence

Proposed: Advanced topics of current interest in the field of artificial intelligence. This course involves reading seminal and state-of-the-art papers as well as conducting topical research projects including design, implementation, experimentation, analysis, and written and oral reporting components.

5. If course requires field trip check box: ☐

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

7. Prerequisites:

Present: Cmp Sc 347

Proposed: Cmp Sc 347 or Cmp Sc 348 or CpE 358

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

9. Justification: The field of artificial intelligence has evolved significantly since the creation of this course requiring an update of the description and the number of appropriate 300 level prerequisite courses on campus has increased as well requiring an update of the allowed prerequisites.

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 NRJ (Chair signature)

Recommended by Discipline Specific Curricula Committee Emile J. J. J. (Chair signature)

Approved by Curricula Committee: \_\_\_\_\_ (Chair signature)

Approved by Faculty Senate: \_\_\_\_\_ (Chair signature)

Date: March 11, 10

Date: 3/25/2010

Date: \_\_\_\_\_

Date: \_\_\_\_\_

(Revised 1/29/09)

CC File # 8013-2010-MIN-313-32

Effective Year: 2010  
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: Min 313

Proposed:

3. Course Title: Present: Stage Pyrotechnics and Special Effects

Proposed:

Abbreviated Course Title: Stage Pyro & Spec Effect

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

### 4. Catalog Description (40 Words or Less)

Present: Use of energetic materials in close proximity to audiences. Provide participants with training preparing for Missouri Pyrotechnics Display Operators License. Covers: close proximity indoor and outdoor pyrotechnics and special effects. Working with stage crews and talent, safety and permitting.

Proposed:

### 5. If course requires field trip check box: ☐

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

### 7. Prerequisites:

Present: Chem 1. US Citizen or permanent resident (to fulfill the requirements of the SAFE EXPLOSIVES ACT 2003). Resident enrollment at MS&T (e.g. not distance or internet)

Proposed: Chem 1. US Citizen or permanent resident (to fulfill the requirements of the SAFE EXPLOSIVES ACT 2003). Successful background check. Resident enrollment at MS&T (e.g. not distance or internet)

### 8. Required for Majors: ☐

Elective for Majors: ☒

9. Justification: To verify compliance of students with safe explosives act of 2003. Increase protection of university by bringing in line with non ATF exempt institutions (S&T is exempt under political subdivision exemption to federal law)

10. Semesters previously offered as an experimental course (101, 201, 301, 401): FS2007 & FS2008

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

  
(Chair signature)

Date: 08/09/10

Recommended by Discipline Specific Curricula Committee

  
(Chair signature)

Date: 3-28-10

Approved by Curricula Committee:

(Chair signature)

Date: \_\_\_\_\_

Approved by Faculty Senate:

Date: \_\_\_\_\_

This fax was received by GFI FAXmaker fax server. For more information, visit: <http://www.gfi.com>

(Revised 1/31/08)

Effective Year: 2011

Term: Summer ☐ Fall ☐ Spring ☒

CC File # 8014-2010-EE-477-10

**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: Electrical &amp; Computer Engr

2. Discipline and Course Number: Present: EE 401

Proposed: EE 477

3. Course Title: Present: Advanced Topics in Antenna Analysis &amp; Design

Proposed: Same

Abbreviated Course Title: Adv Antenna Analy&amp;Design

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

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

Present: Introduction and discussion of advanced antenna design issues including aperature and microstrip antennas including simulation, design, and testing.

Proposed: Introduction and discussion of advanced antenna design issues including: polarization, antenna synthesis and source modeling, broadband antennas, aperature and microstrip antenna simulation and design, and antenna pattern measurement techniques including near-field to far-field transformation.

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: EE373 or equivalent

Proposed: same

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

9. Justification: This course has been taught as an experimental course two times and needs to be made into a permanent course as an addition to the ECE graduate course curriculum.

10. Semesters previously offered as an experimental course (101, 201, 301, 401): SP 2006 &amp; SP 2009

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

*Kelvin Engh*

(Chair signature)

Date: 17 Mar 2010

Recommended by Discipline Specific Curricula Committee

(Chair signature)

Date: 4-9-10

Approved by Curricula Committee:

(Chair signature)

Date: \_\_\_\_\_

Approved by Faculty Senate:

(Chair signature)

Date: \_\_\_\_\_

(Revised 1/29/09)

Effective Year: 2010

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 :

Proposed: FIN 400

3. Course Title: Present:

Proposed: Special Problems

Abbreviated Course Title: Special Problems

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

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

Present:

Proposed: Problems or readings on specific subjects or projects in finance.

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: Admission to the MBA program and permission of the instructor.

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

9. Justification: This will help identify special topics as being financial in nature rather than general 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)

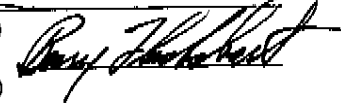
6)

Recommended by Department

  
(Chair signature)

Date: 3/23/10

Recommended by Discipline Specific Curricula Committee

  
(Chair signature)

Date: 3/25/10

Approved by Curricula Committee:

(Chair signature)

Date: \_\_\_\_\_

Approved by Faculty Senate:

(Chair signature)

Date: \_\_\_\_\_

CC File # 8016-2010-FIN-401-10

Effective Year: 2010

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 Tech

2. Discipline and Course Number: Present :

Proposed: FIN 401

3. Course Title: Present:

Proposed: Special Topics

Abbreviated Course Title: Special Topics

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

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

Present:

Proposed: This is designed to give the department an opportunity to test a new course. Variable title.

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: Admission to the MBA program.

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

9. 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)

2)

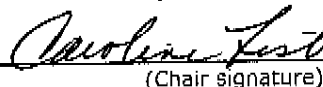
3)

4)

5)

6)

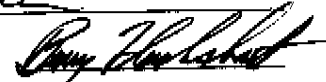
Recommended by Department



(Chair signature)

Date: 3/23/10

Recommended by Discipline Specific Curricula Committee



(Chair signature)

Date: 3/25/10

Approved by Curricula Committee:

(Chair signature)

Date: \_\_\_\_\_

Approved by Faculty Senate:

(Chair signature)

Date: \_\_\_\_\_

(Revised 1/29/09)

CC File # 8017-2010-FIN-490-10

Effective Year: 2010

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 :

Proposed: FIN 490

3. Course Title: Present:

Proposed: Graduate Research

Abbreviated Course Title: Graduate Research

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

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

Present:

Proposed: Research investigation of an advanced nature leading to a major report suitable for publication in a journal or in a conference proceedings.

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: Permission of the instructor.

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

9. Justification: This will help identify research as being financial in nature rather than general 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)

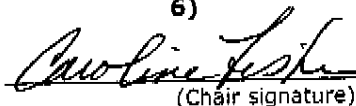
3)

4)

5)

6)

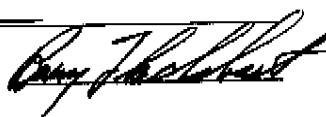
Recommended by Department



(Chair signature)

Date: 3/23/10

Recommended by Discipline Specific Curricula Committee



(Chair signature)

Date: 3/25/10

Approved by Curricula Committee:

(Chair signature)

Date: \_\_\_\_\_

Approved by Faculty Senate:

(Chair signature)

Date: \_\_\_\_\_

(Revised 1/29/09)

CC File # 8018-2010-CE-457-10

Effective Year: 2010-11

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: CarE

2. Discipline and Course Number: Present: CE401

Proposed: CE457

3. Course Title: Present: Advanced Flow Theory

Proposed: Traffic Flow Theory and Characteristics

Abbreviated Course Title: Traffic Flow Theory

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

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

Present: This course will cover advanced theories of traffic flow, traffic flow characteristics, statistical distributions of traffic flow parameters, traffic stream models, car following models, shock wave analysis, queuing analysis, traffic flow models for intersections, traffic simulation

Proposed:

5. If course requires field trip check box: ☐

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

7. Prerequisites:

Present: CE353 (or concurrently enrolled), knowledge of statistics, graduate standing or consent of instructor

Proposed:

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

9. Justification: New course

10. Semesters previously offered as an experimental course (101, 201, 301, 401): Spr 06, Spr 09

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



Date: 3/22/10

Recommended by Discipline Specific Curricula Committee



Date: 4-9-10

Approved by Curricula Committee:

(Chair signature)

Date:

Approved by Faculty Senate:

(Chair signature)

Date:

(Revised 1/29/09)

**CE 457 Advanced Traffic Flow Theory, Missouri University of Science and Technology**  
**Instructor: G. H. Bham, PhD**  
**Spring 2011**

**Semester:** Spring 2011  
**Catalog No.:** CE457  
**Class No.:** ????

**Lecture:** Tuesday and Thursday, 11 – 1215 AM  
**Location:** Rm. ????, BCH

**Instructor:** Ghulam H. Bham  
**Office:** 135 Butler Carlton Hall, 1401 N. Pine Street, Rolla, MO, 65409  
**Office Hours:** MW 11 – 1155 AM, 4 – 5 PM  
OR by appointment  
**Phone:** (573) 341- 6286  
**Fax:** (573) 341- 4729  
**Email:** [ghbham@mst.edu](mailto:ghbham@mst.edu)

**Course Website:** <http://blackboard.mst.edu/>

**Prerequisites:** Stat 213, CE211, CE353 (or concurrent enrollment), or consent of instructor

**Required Text:** Revised Traffic Flow Theory Monograph, 2001 (on-line document,  
<http://www.tft.pdx.edu/docs.htm>) (SAR)

**Recommended Texts:** 1) May, A. D. Traffic Flow Fundamentals, Prentice Hall, 1990. (MAY)  
 2) Daganzo, C. F. Fundamentals of Transportation and Traffic Operations, Pergamon, 1997. (FTTO)  
 3) Derlough, D.L. and M.J. Huber Traffic Flow Theory: A Monograph, Transport Research Board, National Research Council, Washington D.C. 1975. (on-line at <http://www.tft.pdx.edu/docs.htm>) (MON)

Technical documents and other texts will serve as additional text and readings.

### **COURSE GRADES**

#### **CE457**

Final Exam.	30%
Project	25%
Proposal Presentations	15%
Research Proposal	15%
Homework	15%

A weighted grade of 90 or above is guaranteed an A, 80 or above at least a B, 70 or above at least a C and 60 or above at least a D. However, curving of grades (if needed) may enable students to get higher letter grades than this list indicates.

**CE 457 Advanced Traffic Flow Theory, Missouri University of Science and Technology**  
**Instructor: G. H. Bham, PhD**  
**Spring 2011**

**POLICIES AND PROCEDURES**

**Course Presentations**

Students will be required to make technical presentations in class. Students usually have two to three presentations in class. Each student will discuss the topic of their presentation with the instructor well in advance. All students are required to submit their presentations 24-hour in advance of their class presentation to the instructor.

**Homework**

Problems are to be turned in at beginning of the class session. Late homework will receive a score of 0 points and no partial credit will be awarded on homework. No excuses for missed homework will be accepted other than certified medical excuses.

A hard copy of the homework is required. Electronic copies of the homework will not be accepted unless otherwise stated. Distance education students can submit homework on time electronically (for on time submission only), but they are required to mail (hard copy) their homework to the instructor in a timely manner. I require the homework to be technically accurate, neat and uniform. Use of a word processor and/or spreadsheet is strongly encouraged. All figures and sketches should be drawn using straight edges and/or curves and should be clearly labeled (see next paragraph for more details). Calculations should be concise, and should proceed from beginning to end in a clear and logical manner. Indicate your answers by either underlining or boxing them, and place them at the right side of your paper.

On homework, where needed sketch the physical setting of the problem. For example, draw a figure of the road, vehicle location, and other objects as needed. For graphs, label the axis and indicate significant points, and units of measurement. It is the responsibility of the student to clearly state what is given in the problem and what must be assumed.

**Assignments/Presentations/Proposals**

Students will be required to present research topics of their interest in class. Every student will be required to do two to three presentations. This will require the students to interact on a one to one basis with the instructor. Distance education students will present in class remotely.

**Examinations**

No excuses for missed exams will be accepted other than certified medical excuses.

**Attendance**

Historically, there is a strong correlation between attendance and good grades. Attendance of lectures is mandatory and I strongly encourage you to actively participate during lectures. In case you miss a lecture, you will be responsible for getting the material covered during your absence through the BB or other students in class. Unexcused absences will detrimentally affect your grade.

**Class Participation**

I expect all of you to be prepared for the lecture and participate when an opportunity is offered. The goal of my lectures will be to highlight the important concepts and to bring additional insight and clarity to the material in your textbook. Therefore, I request that you answer questions to the best of your ability. I also urge you to ask questions. Finally, I welcome your feedback. Please do not hesitate to suggest improvements to the course, both in writing and personally throughout the semester.

**Emails**

In your emails addressed to the instructor, mention subject as "CE457" and then describe the subject of your email. This makes it much easier to find emails from students. And you will get a reply sooner, hopefully. When submitting your work by email, make sure your files are named properly, e.g. if you are

**CE 457 Advanced Traffic Flow Theory, Missouri University of Science and Technology**  
**Instructor: G. H. Bham, PhD**  
**Spring 2011**

**submitting homework number one, you should name the file as: Yourlastname HW1 CE457.ext. If it is a presentation then name the file as Yourlastname PR1 CE457.ppt. All on-campus students are required to turn in their work in hard copy format.**

**Grading Philosophy**

I am a firm believer in basic concepts. This course will never be able to cover all the problems you will encounter in the real world. My goal is to help you learn how to identify the problem and then to identify the proper course of action to address the problem. Therefore, the focus of the grading will be to stress conceptual understanding. Applying a formula correctly may not be hard for most students. The real key is determining which formula to apply and when to apply it! Thus mathematical errors will result in smaller deductions while failure to demonstrate a conceptual understanding will result in larger deductions.

**Grade Disputes**

I realize that from your perspective, grades are very important. My objective in grading is to be consistent and fair. But fairness is highly subjective. My definition of fairness can and sometimes will be different than yours. Therefore you may dispute whether your answer is right or wrong and you may also dispute the consistency of the grading. However, the number of points deducted for an error is not a negotiable item.

**Disclaimers:**

1. This policy does not affect the review of your final course grade, which has to be handled through the appropriate University processes.
2. While I reserve the right to award credit during a review of your assignment, I also reserve the right to deduct points for errors found during the review. To rephrase it, if I find an error on your assignment that I had not caught in my initial grading, I may deduct additional points during the review of your grading.

**Academic Integrity**

Students are expected to respect and to maintain the university policy on academic integrity. Academic integrity is essential for the intellectual life of the University and for your continued academic and professional development and growth. As your instructor, I hold a very high standard for academic honesty in all your work. You as a student of this class have an obligation to adhere to that high standard. Should a case of academic dishonesty arise during the course of the semester, I will do the following: I will assign a failing grade to the work in question. I may fail you for the course. More specifically: cheating (includes plagiarism) on homework will result in a zero on the assignment. Cheating on exams and projects will result in an F for the course. Plagiarism on your project reports will result in an F for the course. And I will refer the incident to both the department Chair and to the Vice Provost for Undergraduates and Graduate Studies as required in Section 200.010 of the Collected Rules and Regulations of the University of Missouri.

By enrolling in this course and receiving this syllabus, whether in printed or electronic format, you are certifying knowledge of Sections 200.100 (Standard of Conduct) and 200.020 (Rules of Procedures in Student Conduct Matters) in the Collected Rules and Regulations of the University of Missouri and are pledging to abide by them. If you have not yet read these Sections, please do so. They can be found at the following URL address:  
<http://www.umsystem.edu/ums/departments/gc/rules/programs/200/>

An example of academic dishonesty is as follows. You must not place in any written assignment, report or otherwise, material that has been lifted, scanned, or copied, even electronically, from any other document (e.g. other student's work, "files", etc), except for those specifically approved by the instructor. You should not cheat, plagiarize, copy on homework, assignment, exams or projects. If you don't understand what it means to plagiarize, please talk to your instructor. If you are uncertain as to whether a certain action constitutes an infraction of academic integrity, please discuss it with the instructor before carrying out that action.

**CE 457 Advanced Traffic Flow Theory, Missouri University of Science and Technology**  
**Instructor: G. H. Bham, PhD**  
**Spring 2011**

**Disability Support Services**

If you have a documented disability and anticipate needing accommodations in this course, you are strongly encouraged to meet with me early in the semester. You will need to request that the Disability Services staff send a letter to me verifying your disability and specifying the accommodation you will need before I can arrange your accommodation.

**Evacuation**

Please be informed about the building egress routes as indicated on the link provided by the registrar's office. (<http://registrar.mst.edu/links/egress.html>). These routes have been developed as part of the campus' response to the request of the Governor's Security Task Force.

**REFERENCE LIST**

- Drew, D. R. Traffic Flow Theory and Control, 1968.  
Gazis, D. C. Traffic Science, Wiley, New York, 1974.  
Haight, F. A. Mathematical Theories of Traffic Flow, New York, NY: Academic Press, 1963.  
Leutzbach, W. Introduction to the Theory of Traffic Flow, 1988.  
Prigogine, I. and Herman, R. Kinetic Theories of Vehicular Traffic, American Elsevier, NY, 1971.

**CE 457 Advanced Traffic Flow Theory, Missouri University of Science and Technology**  
**Instructor: G. H. Bham, PhD**  
**Spring 2011**

**COURSE OUTLINE (tentative)**

<b>Topics</b>	<b>Chapters (Reading)</b>
1. Fundamentals of traffic flow <ul style="list-style-type: none"> <li>a. Speed, volume, density measurements</li> <li>b. Speed, density, flow relationships</li> </ul>	1&2 FTTO 2 SAR
2. Traffic flow characteristics <ul style="list-style-type: none"> <li>a. Flow characteristics</li> <li>b. Speed characteristics</li> <li>c. Density characteristics</li> </ul>	4 FTTO 2 SAR
3. Statistical distributions of traffic flow parameters <ul style="list-style-type: none"> <li>a. Counting and interval distributions</li> <li>b. Headway distributions</li> <li>c. Speed distribution models</li> <li>d. Gap acceptance distributions</li> </ul>	3 MON
4. Traffic stream models <ul style="list-style-type: none"> <li>a. Speed-density models</li> <li>b. Speed-flow models</li> <li>c. Density-flow models</li> </ul>	4 FTTO 2 SAR
5. Car-following models <ul style="list-style-type: none"> <li>a. Linear car-following models</li> <li>b. Traffic Stability</li> <li>c. Non-linear car-following models</li> <li>d. CF models to traffic stream models</li> </ul>	4 SAR
6. Shock wave analysis <ul style="list-style-type: none"> <li>• SW at intersections</li> <li>• SW along a highway</li> </ul>	11 MAY, MON
7. Queuing analysis <ul style="list-style-type: none"> <li>a. Queuing systems</li> <li>b. Queuing models for intersections and roadways</li> </ul>	8&9 SAR, MAY
8. Traffic flow models for intersections <ul style="list-style-type: none"> <li>a. Unsignalized intersection models</li> <li>b. Signalized intersection models</li> </ul>	8&9 SAR
9. Traffic simulation [time permitting] <ul style="list-style-type: none"> <li>a. Traffic flow simulation</li> <li>b. Steps in developing simulation models</li> </ul>	Handout, slides
Final Exam scheduled: TBD	

CC File # 8019-2010-ME-357-32

Effective Year: 2010

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: MAE

2. Discipline and Course Number: Present: Mc Eng 357 Proposed:

3. Course Title: Present: Integrated Product and Process Design  
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: Emphasize design policies of concurrent engineering and teamwork, and documenting of design process knowledge. Integration of various product realization activities covering important aspects of a product life cycle...

Proposed:

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

7. Prerequisites:

Present: Eng Mg 282 or Mc Eng 253

Proposed: Eng Mg 253 or Mc Eng 253

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

9. Justification: Correcting the prerequisite to match the co-listed Eng Mg 354. Eng Mg 282 was changed to Eng Mg 253 a while back.

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)

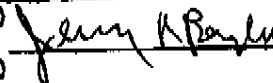
Recommended by Department



(Chair signature)

Date: 03/23/10

Recommended by Discipline Specific Curricula Committee



(Chair signature)

Date: 4-9-10

Approved by Curricula Committee:

(Chair signature)

Date: \_\_\_\_\_

Approved by Faculty Senate:

(Chair signature)

Date: \_\_\_\_\_

(Revised 1/29/09)

CC File # 8021-2010-Emgt-137-32

Effective Year: 2010

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: EMSE

2. Discipline and Course Number: Present: 137 Proposed:

3. Course Title: Present: Economic Analysis of Economic Projects  
 Proposed:

Abbreviated Course Title: Emgt 137  
 (24 Spaces or Less. Only needed for New Courses or Title Changes.)

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

Present: Engineering project analysis from an engineering economics perspective. Topics include: interest, equivalent worth, comparing alternatives, rate of return methods, depreciation and taxes, inflation and price changes, benefit-cost analysis and risk analysis.

Proposed:

5. If course requires field trip check box: ☐

6. Credit Hours: Present: Lecture: 2 Lab: Total: 2  
 Proposed: Lecture: Lab: Total:

7. Prerequisites:  
 Present: none

Proposed: Math 15

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

9. Justification: At the request of the instructor. Beginning or second semester freshmen are taking the class without the appropriate math skills.

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

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: 3/10/2010

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

Date: 4-9-10

Approved by Curricula Committee: \_\_\_\_\_  
 (Chair signature)

Date: \_\_\_\_\_

Approved by Faculty Senate: \_\_\_\_\_  
 (Chair signature)

Date: \_\_\_\_\_

(Revised 1/29/09)

**Effective Year: 2010**

Effective Term: Summer ☐ Fall ☒ Spring ☐

**EC File # 2254-FS2010-IST-301**

## 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:** Business and Information Technology

**Discipline and Course Number:** IST 301

**Course Title:** Introduction to Web and New Media Studies

**Abbreviated Title (24 spaces or less):** Intro to Web Studies

**Instructor(s):** Hall

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

**Prerequisites:** none

**Semester(s) previously taught:** none

**Brief Course Description: (40 words or less)**

**Brief Course Description:** (40 words or less)  
The course covers web culture, including topics such as social media; citizen journalism; crowd intelligence; privacy; and copyright.

**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 Lister (Chair Signature) Date: 3/17/10

Department Chair: \_\_\_\_\_ (Chair Signature)  
Discipline Specific Curricula Committee: \_\_\_\_\_ (Chair signature) Date: 3/22/10

Curricula Committee: \_\_\_\_\_ Date: \_\_\_\_\_  
(Chair Signature)

(Revised 1/31/2008)

03/18/10

EC File # 2255-FB2010-CER-201

Effective Year: 2010

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: Materials Science &amp; Engineering

Discipline and Course Number: Cer 201

Course Title: Applied Glass Forming

Abbreviated Title (24 spaces or less): Applied Glass Forming

Instructor(s): Dr. Mary Reidmeyer

Credit Hours: Lecture: 1.0 Lab: 1.0 Total: 2.0

Prerequisites: Cer 104 or Met 125; freshmen, sophomore, or junior only or by instructor permission

Semester(s) previously taught: Spring 2010

Brief Course Description: (40 words or less)

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

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: 3/4/10

Discipline Specific Curricula Committee: \_\_\_\_\_

(Chair signature)

Date: 3-2-10

Curricula Committee: \_\_\_\_\_

(Chair Signature)

Date: \_\_\_\_\_

(Revised 1/31/2008)

03/04/10

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EC File # 2256-FS2010-Min-401

Effective Year: ~~2009~~ 2010Effective 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: Mining and Nuclear Engineering

Discipline and Course Number: Min 401

Course Title: Research Methods

Abbreviated Title (24 spaces or less): Res. Meth.

Instructor(s): Samuel Frimpong

Credit Hours: Lecture: 3.0 Lab: Total:

Prerequisites: None

Semester(s) previously taught: FS2009

### Brief Course Description: (40 words or less)

This course introduces the foundation, dimensions, and methods for designing and investigating research problems. The course will focus on fundamental and applied research constitutions, research design methods, critical literature review, experimental design methods, dissertation composition and write-up, originality and contributions, intellectual property.

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: 03/10/10

Discipline Specific Curricula Committee:  (Chair signature)

Date: 3-28-10

Curricula Committee: \_\_\_\_\_ (Chair Signature)

Date: \_\_\_\_\_

(Revised 1/31/2008)

03/09/10

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Effective Year: 2010  
Effective Term: Summer XXX Fall \_\_\_\_\_ Spring \_\_\_\_\_

EC file #: \_\_\_\_\_

2258-FS 2010-MATH-401

### Experimental Course Form (EC)

This form must be filed with the Secretary to the Campus Curricula Committee, after the department chairs 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 and Statistics

Discipline and Course Number: Math 401

Course Title: Mathematical Logic with Applications

Abbreviated Title: (24 spaces or less): Logic & Apps

Instructor(s): Matt Insall

Credit Hours: Lecture: 3.0 Lab: \_\_\_\_\_ Total: 3.0

Prerequisites: Math 305 or Math 354 or Comp Sci 354 or Comp Eng 354 or Philos 354 or PhD candidate

Semester(s) previously taught: Fall 1990 (As Introduction to Mathematical Logic)

Brief Course Description (40 words or less): A mathematical introduction to logic, emphasizing model theory, with applications. Functional and relational languages, satisfaction, soundness and completeness theorems, compactness theorems, and definability. Finite Model Theory, and Nonclassical and Higher-Order Logics. Individual Projects that apply Logic to the student's major or vice versa.

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

- |    |    |    |
|----|----|----|
| 1) | 2) | 3) |
| 4) | 5) | 6) |

Department Chair: M. M. Insall for L. M. Hall

Date: 4-1-10

Discipline Specific Curricula Committee: Daniel Faurst  
(Chair Signature)

Date: 4/6/2010

Curricula Committee: \_\_\_\_\_  
(Chair Signature)

Date: \_\_\_\_\_

03/31/2010

(Revised 1/31/2008)

Effective Year: 2010

Effective Term: Summer ☐ Fall ☒ Spring ☐

EC File # 2261-FS2010-French-301

## 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: ALP

Discipline and Course Number: FR 301

Course Title: Introduction to Translation and Interpretation

Abbreviated Title (24 spaces or less): Intro to Translation

Instructor(s): Anna Monders

Credit Hours:      Lecture: 3      Lab:      Total: 3

Prerequisites: FR 170

Semester(s) previously taught: 0

**Brief Course Description: (40 words or less)**

This course will introduce students to translation and interpretation. Translation assignments, including current events and general scientific texts, will be used to hone French reading comprehension and writing skills. Interpretation will develop students' public speaking and oral comprehension skills.

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: April 6, 2010

Discipline Specific Curricula Committee: \_\_\_\_\_

(Chair signature)

Date: April 7, 2010

Curricula Committee: \_\_\_\_\_

(Chair Signature)

Date: \_\_\_\_\_

(Revised 1/31/2008)

04/06/10

## Course Syllabus

### FR 301 Introduction to Translation and Interpretation Fall 2010

**Instructor:** Anna Monders  
212 HSS  
341-4997 (office)

Email: [mondersa@mst.edu](mailto:mondersa@mst.edu)  
Office Hours: TBA or by appointment

#### Required texts:

- A good French-English / English- French Dictionary
- A good monolingual French Dictionary (*Larousse, MicroRobert, Petit Robert*)
- A good French grammar reference

#### Useful Internet Sites:

<http://atilf.atilf.fr> (Trésor de la langue française)

<http://iate.europa.eu> (EU's multilingual term base)

<http://www.olf.gouv.qc.ca/ressources/gdt.html> (Grand dictionnaire terminologique)

<http://www.larousse.fr/dictionnaires>

<http://www.larousse.fr/encyclopedie>

#### Course Description:

This course is an introduction to the basic practice of translation (written and sight) and consecutive interpretation both from French to English and English to French. Translation assignments are drawn from authentic texts covering a variety of text types, including current events and general scientific texts. We will develop skills for identifying and resolving translation problems, as well as hone French reading comprehension and writing skills. Interpretation practice will focus on developing students' ability to understand and analyze the message in the source language and to clearly convey the message in the target language. Public speaking skills will also be developed. The class will be conducted primarily in French.

#### Objectives:

- Improve your oral and written French skills
- Enrich your French vocabulary
- Develop your translation skills and attention to detail
- Enhance your public speaking skills in French

#### Presence and participation:

Your presence in class is vital. Not only do you miss out if you are absent, but as most of the class sessions are run as a participatory workshop, the rest of the class suffers as well. Full participation in each class is expected and required. You must arrive to class on time, prepared, and ready to participate. Written homework is due at the beginning of the class period unless otherwise noted on Blackboard. **Late homework will not be accepted** without prior approval of an extenuating circumstance. You may not work on homework during class or you will receive a zero for that assignment. All written assignments must be typed and printed before class or you will be marked off.

If you accumulate more than **three absences** during the semester, your final grade will be lowered by a half a letter grade for each additional absence. If you have **nine or more** absences, your final course grade will be an **F**.

1 - 3 absences: No penalty

4 - 8 absences: **Your semester grade will be docked half a letter grade for each absence**

9+ absences: **Course grade of F**

Please contact me if you know in advance you will be absent or if you are knocked out with the flu, etc. I can make exceptions for extenuating circumstances, but I need to be notified at the time, not at the end of the semester.

### **Grades:**

Your final grade will be based upon the following components:

Weekly translations	20%
Translation tests 2@5%	10%
Weekly interpretation	20%
Interpretation tests 2@5%	10%
Weekly sight translation	15%
Sight translation test	5%
Participation	20%

Final grades will be assessed according to the following scale:

A	90+
B	80-89
C	70-79
D	60-69
F	59 and below