

(2) Computer impact statement (attach statement if provided by IFS):
NONE

(3) Faculty impact statement (this project/program affects use of existing faculty or requires new faculty):

NONE. This course has been taught twice by Professor Zimmers as a part of his regular course load

(4) Facilities impact statement (this proposed program affects use of existing facilities or requires new facilities):

NONE.

B. Provide a statement indicating who will assume financial responsibility for any new resources required:

ISE DEPARTMENT: Proposed New Minor for APC

Name and summary of current program:

Minor in Engineering Leadership

Proposed program changes (as they will appear in the catalog):

The minor in leadership provides students with the background and practice to become more effective leaders. The minor consists of 5 courses that explore different aspects of leadership. An ethics elective provides a basic framework for the understanding of ethical human interaction and behavior. IE 226 or CEE 202 provides quantitative decision making skills. IE 334 provides an understanding of how business organizations function, both properly and improperly. IE 382 provides a background in a range of topics that pertain to leadership skills. Finally, IE 281 provides an opportunity to use the skills learned throughout the program in a team-based, industrial project.

Prerequisites: To enter the program, students must have a calculus based course in probability and statistics: (IE 111, IE 328, MATH 231, ME 215 or CEE 12)

Minor Requirements:

The Minor in Leadership requires 5 courses:

1) Ethics Elective (choose one):

PHIL 8 (GCP 8) Ethics in Global Perspectives (4)

PHIL 105 Ethics (4)

PHIL 116 (REL 116) Bioethics (4)

PHIL 126 (HUM 126, REL 126) Professional Ethics (4)

PHIL 205 Contemporary Ethics (4)

STS 11 Technology and Human Values (4)

STS 252 (CSE 252) Computers, the Internet, and Society (3)

STS 323 (JOUR 323) Controversies (4)

2) Quantitative Decision Making Elective (choose one):

IE 226 Engineering Economy and Decision Analysis (3) spring

CEE 202 CEE Planning and Engineering Economy (3)

3) IE 334 Organizational Planning and Control (3) fall

4) IE 382 Leadership Development (3) spring

5) IE 281 Leadership Project (3)

Rationale for new program:

A large portion of students end up working in a leadership position at some point in their career. Currently, Lehigh does not offer an academic program that has a concentration in leadership skills and practice. Many IE alumni have praised the leadership skills they learned informally, both in and out of the classroom. Their suggestion to formalize this into a program of study initiated the development of this minor. Companies who hire our graduates were consulted to determine the leadership skills that would make graduates more attractive. IBM participated in a task force to consolidate the material. At a recent meeting of the ISE Advisory Board, the board unanimously favored pushing forward with the Minor in Leadership.

The minor involves the creation of 2 new courses: IE 382 Leadership Development and IE 281 Leadership Project. IE 382 Leadership Development has been taught several times using different formats as experimental courses. The enrollments have always been well above average for IE elective courses. Student comments indicate that the material learned in the course has allowed them to perceive leadership in a new light: both from the perspective of being a leader and as a team member. IE 281 will be a project course

that allows students to work on industry based projects to practice their skills. The ISE department has employed industry based projects as the capstone senior design project for many years. The department has many company contacts. Broadening the projects to include students from other majors on multi-disciplinary teams will benefit all participants.

The minor builds on a selection of courses the ISE department has offered for many years (IE 226 and IE 334). IE 226 is required for all IE and I&SE undergraduates. CEE 202 is required of all Civil and Environmental undergraduates. IE 334 is a popular elective for IE and I&SE graduates other engineering students, and business students.

Numerous schools, which compete with Lehigh for top high school students, have already implemented Leadership programs. The proposed minor packages several existing courses and adds two new ones to form a program that requires little additional resources. This program will serve as a marketing tool to attract more students to Lehigh.

Academic Impact Statement:

Is this proposed program interdisciplinary? **NO**

Identify any known effects of the proposed program change on other programs at the University.
NONE

If there are known effects, individuals in charge of the affected programs must be consulted about the proposed program change and the following information provided: **NONE**

Who was consulted?

Is the proposed program change acceptable to the affected programs?

Will any changes be required in the affected programs? If so, describe.

Identify any known effects of the proposed program change on the University's commitment to diversity.

NO KNOWN EFFECTS

Resource Impact Statement:

Provide each of the following:

Library impact statement **NONE**

Computer impact statement **NONE**

Faculty impact statement **NONE**

Facilities impact statement **NONE**

Provide a statement indicating who will assume financial responsibility for any new resources required: **ISE Department.**

Mechanical Engineering and Mechanics
Course and Curriculum Changes

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Proposed New Course

Mechanical Engineering and Mechanics

1. Proposed new course number and course description (as is it will appear in course catalog):

MECH 3. Fundamentals of Engineering Mechanics (3) fall, spring

Static equilibrium of particles and rigid bodies. Analysis of simple truss and frame structures, internal forces, stress, strain and Hooke's Law; torsion of circular shafts; pure bending of beams. Prerequisites: Phys 11; MATH 22 previously or concurrently. Mechanical Engineering and Mechanics, Bioengineering, and Civil Engineering majors or by consent of department chair. Credit not given for both Mech 2 and Mech 3

2. Instructional mode (i.e., lecture, recitation, laboratory, seminar, independent study, or other) and number of contact hours per week:

Three hours of lecture per week

3. Rationale for proposed new course:

Provide a foundation of the principles of mechanics for those students majoring in engineering disciplines for which this course is a prerequisite for advanced courses, especially courses in mechanics. Cover topics required for advanced engineering mechanics.

4. Academic impact on programs affected by new course:

Is this proposed new course cross-listed? No

Identify any known effects of the proposed new course on other programs at the University. This change primarily affects Civil Engineering and Bioengineering, and secondarily affects Materials Science and Industrial Engineering.

If there are known effects, individuals in charge of the affected programs must be consulted about the changes and the following information provided:

Who was consulted? The chairs of the departments of Bioengineering, Civil Engineering, Materials Science, and Industrial Engineering

Is the proposed new course acceptable to the affected program? Yes: Civil Engineering participated in the planning process and the restructuring of the course, and they have made a commitment to help with the formal instruction in the course. Materials Science and Industrial Engineering are minimally affected because MECH 2 Elementary Engineering Mechanics will continue to be offered for their students. Bioengineering will be modifying their program to require MECH 3 in place of the current MECH 2 requirement.

Will any changes be required in the affected programs? If so, describe. N/A

Identify any known effects of the proposed new course on the University's commitment to diversity. No known effects on diversity

5. Resource Impact Statement:

Provide each of the following:

Library impact statement: No impact on library

Computer impact statement: No known effects on computing

Faculty impact statement: The total number of students taking MECH 3 and MECH 2 will be the same as for MECH 2 in previous semesters. The change is simply a restructuring of the courses so that MECH 3 is more suited for students who will take advanced courses in Mechanics

Facilities impact statement: No impact on facilities.

Provide a statement indicating who will assume financial responsibility for any new resources required: Department of Mechanical Engineering and Mechanics.

Proposed New Course

Mechanical Engineering and Mechanics

1. Proposed new course number and course description (as is it will appear in course catalog):

ME 245. Engineering Vibrations (3) fall or spring
Physical modeling of vibrating systems. Free and Forced single and multiple degree of freedom systems
Computer simulations. Engineering applications. Prerequisites: MECH 102 and Math 205.

2. Instructional mode (i.e., lecture, recitation, laboratory, seminar, independent study, or other) and number of contact hours per week:

Lecture: three contact hours per week

3. Rationale for proposed new course:

Instruct students in the theory of vibrations and the use of computers to simulate such vibrational behavior in engineering systems.

4. Academic impact on programs affected by new course:

Is this proposed new course cross-listed? No

Identify any known effects of the proposed new course on other programs at the University. No known effects on any other program.

If there are known effects, individuals in charge of the affected programs must be consulted about the changes and the following information provided:

Who was consulted? N/A

Is the proposed new course acceptable to the affected program? N/A

Will any changes be required in the affected programs? If so, describe. N/A

Identify any known effects of the proposed new course on the University's commitment to diversity. No known effects on diversity.

5. Resource Impact Statement:

Provide each of the following:

Library impact statement: No impact on library

Computer impact statement: No known effects on computing

Faculty impact statement: Course has been taught by Professor M. Chew for two years. It may increase his overall teaching obligation by three credits

Facilities impact statement: No impact on facilities.

Provide a statement indicating who will assume financial responsibility for any new resources required: Department of Mechanical Engineering and Mechanics.

Proposed New Course

Mechanical Engineering and Mechanics

1. Proposed new course number and course description (as is it will appear in course catalog):

ME 373. Mechatronics (3)

Synergistic integration of mechanical engineering with electronics and intelligent computer control in designing and manufacturing machines, products and processes; semiconductor electronics, analog signal processing, with op amps, digital circuits, Boolean algebra, logic network designs, Karnaugh map, flip-flops and applications, data acquisition, A/D and D/A, interfacing to personal computers, sensors and actuators, microcontroller programming and interfacing. Prerequisites: ECE 83 or equivalent; ME 374 concurrently

2. Instructional mode (i.e., lecture, recitation, laboratory, seminar, independent study, or other) and number of contact hours per week:

One 3-hour lecture per week

3. Rationale for proposed new course:

Improve students' ability to design modern products and analyze modern machinery incorporating mechanical elements, electronic devices and microprocessors

4. Academic impact on programs affected by new course:

Is this proposed new course cross-listed? No

Identify any known effects of the proposed new course on other programs at the University. No known effects on any other program.

If there are known effects, individuals in charge of the affected programs must be consulted about the changes and the following information provided:

Who was consulted? N/A

Is the proposed new course acceptable to the affected program? N/A

Will any changes be required in the affected programs? If so, describe. N/A

Identify any known effects of the proposed new course on the University's commitment to diversity. No known effects on diversity.

5. Resource Impact Statement:

Provide each of the following:

Library impact statement: No impact on library

Computer impact statement: No known effects on computing

Faculty impact statement: Course has been taught by Professor M. Chew for two years. It may increase his overall teaching obligation by three credits.

Facilities impact statement: No impact on facilities.

Provide a statement indicating who will assume financial responsibility for any new resources required: Department of Mechanical Engineering and Mechanics

Proposed New Course

Mechanical Engineering and Mechanics

1. Proposed new course number and course description (as is it will appear in course catalog):

ME 374. Mechatronics Laboratory (3)

Experiments and applications utilizing combinations of mechanical, electrical, and microprocessor components. Theory and application of electronic and electro-mechanical equipment. operation and control of mechatronic systems. Projects integrating mechanical, electronic and microcontrollers. Prerequisites: ECE 83 or equivalent; ME 373 concurrently.

2. Instructional mode (i.e., lecture, recitation, laboratory, seminar, independent study, or other) and number of contact hours per week:

Two 3-hour laboratories per week

3. Rationale for proposed new course:

To improve student's ability to design and operate modern products and analyze modern machinery incorporating mechanical elements, electronic devices, and microprocessors

4. Academic impact on programs affected by new course:

Is this proposed new course cross-listed? No

Identify any known effects of the proposed new course on other programs at the University. No known effects on other programs.

If there are known effects, individuals in charge of the affected programs must be consulted about the changes and the following information provided:

Who was consulted? N/A

Is the proposed new course acceptable to the affected program? N/A

Will any changes be required in the affected programs? If so, describe. N/A

Identify any known effects of the proposed new course on the University's commitment to diversity. No known effects on diversity.

5. Resource Impact Statement:

Provide each of the following:

Library impact statement: No impact on library

Computer impact statement: No known effects on computing

Faculty impact statement: Course has been taught by Professor M. Chew for two years. It may increase his overall teaching obligation by three credits.

Facilities impact statement: No impact on facilities.

Provide a statement indicating who will assume financial responsibility for any new resources required: Department of Mechanical Engineering and Mechanics.

Proposed New Course

Mechanical Engineering and Mechanics

1. Proposed new course number and course description (as is it will appear in course catalog):

ME 385. Polymer Product Manufacturing (3)

Polymer processes such as injection molding through a combination of theory development, practical analysis, and utilization of commercial software. Polymer chemistry and structure, material rheological behavior, processing kinetics, molecular orientation development, process simulation software development, manufacturing defects, manufacturing window establishment, manufacturing process design, manufacturing process optimization. Prerequisites: Senior level standing in engineering or science. Credit not given for both ME385 and ME 485

2. Instructional mode (i.e., lecture, recitation, laboratory, seminar, independent study, or other) and number of contact hours per week:

Three contact hours per week

3. Rationale for proposed new course:

Improve students' ability to understand the application of fundamental science to polymer manufacturing processes

4. Academic impact on programs affected by new course:

Is this proposed new course cross-listed? No

Identify any known effects of the proposed new course on other programs at the University. No known effects on any other program.

If there are known effects, individuals in charge of the affected programs must be consulted about the changes and the following information provided:

Who was consulted? N/A

Is the proposed new course acceptable to the affected program? N/A

Will any changes be required in the affected programs? If so, describe. N/A

Identify any known effects of the proposed new course on the University's commitment to diversity. No known effects on diversity.

5. Resource Impact Statement:

Provide each of the following:

Library impact statement: No impact on library

Computer impact statement: The course has a significant computer usage component, and Lehigh currently has a license for 25 seats of simultaneous software usage.

Faculty impact statement: Course has been taught by Professor J. Coulter for three years.

Facilities impact statement: The computer facilities in the Mechanical Engineering Department will be utilized.

Provide a statement indicating who will assume financial responsibility for any new resources required: Department of Mechanical Engineering and Mechanics.

Proposed New Course

Mechanical Engineering and Mechanics

1. Proposed new course number and course description (as is it will appear in course catalog):
ME 485. Polymer Product Manufacturing (3)

An exploration of the science underlying polymer processes such as injection molding through a combination of theory development, practical analysis, and utilization of commercial software. Polymer chemistry and structure, material rheological behavior, processing kinetics, molecular orientation development, process simulation software development, manufacturing defects, manufacturing window establishment, manufacturing process design, manufacturing process optimization. This course is a version of ME 385 for graduate students, with research projects and advanced assignments. Closed to students who have taken ME 385. Prerequisites: Graduate level standing in engineering or science

2. Instructional mode (i.e., lecture, recitation, laboratory, seminar, independent study or other) and number of contact hours per week:
Three contact hours per week

3. Rationale for proposed new course:
Improve students' ability to develop and understand the application of fundamental science to polymer manufacturing processes

4. Academic impact on programs affected by new course:
Is this proposed new course cross-listed? No
Identify any known effects of the proposed new course on other programs at the University. No known effects on any other program.
If there are known effects, individuals in charge of the affected programs must be consulted about the changes and the following information provided:
Who was consulted? N/A
Is the proposed new course acceptable to the affected program? N/A
Will any changes be required in the affected programs? If so, describe. N/A
Identify any known effects of the proposed new course on the University's commitment to diversity. No known effects on diversity.

5. Resource Impact Statement:
Provide each of the following:
Library impact statement: No impact on library
Computer impact statement: The course has a significant computer usage component, and Lehigh currently has a license for 25 seats of simultaneous software usage.
Faculty impact statement: Course has been taught by Professor J. Coulter for three years.
Facilities impact statement: The computer facilities in the Mechanical Engineering Department will be utilized.
Provide a statement indicating who will assume financial responsibility for any new resources required: Department of Mechanical Engineering and Mechanics.

Proposed Course Change
Mechanical Engineering and Mechanics

1. Current course number and course description (from course catalog):

MECH 2. Elementary Engineering Mechanics (3) fall, spring

Static equilibrium of particles and rigid bodies. Analysis of simple truss and frame structures, internal forces, stress, strain, and Hooke's Law; torsion of circular shafts; pure bending of beams. Prerequisites: MATH 22 and Phys 11 (MATH 22 may be taken concurrently) (ES 2.5), (ED 0.5)

2. Proposed course number and course description (as it will appear in course catalog):

MECH 2. Elementary Engineering Mechanics (3) fall

Static equilibrium of particles and rigid bodies. Elementary analysis of simple truss and frame structures, internal forces, stress, and strain. Prerequisites: Phys 11; MATH 22 previously or concurrently

3. Nature of proposed change(s)

Course title change? If so, provide rationale below: N/A

Course number change? If so, provide rationale below: N/A

Change in course credits? If so, provide rationale below: N/A

Change in course description? If so, provide rationale below: This course is for students in programs that do not require additional courses in engineering mechanics. The course will be more applications oriented and less comprehensive than MECH 3, the required course for programs that require advanced engineering mechanics.

Other change(s)? If so, please describe below and provide rationale for each change. MECH 2 will be offered in the fall only because the enrollment will be significantly less.

4. Resource Impact:

Provide impact statements in the four areas listed below:

Library impact statement None

Computer impact statement None

Faculty impact statement There may be a slight reduction in the total sections of MECH 2 and MECH 3 offered.

Facilities impact statement None

Provide a statement indicating who will assume financial responsibility for any new resources required: Department of Mechanical Engineering and Mechanics

Proposed Course Change
Mechanical Engineering and Mechanics

1. Current course number and course description (from course catalog):

MECH 12. Strength of Materials (3) fall, spring

Transverse shear in beams. Mohr's circle for stress. Plastic yield criteria. Deflection of beams. Introduction to numerical analysis of simple structures. Fatigue and fracture. Column buckling. Stresses in thick-walled cylinders. Prerequisites: MECH 2 and MATH 23. (MATH 23 may be taken concurrently). (ES 2), (ED 1)

2. Proposed course number and course description (as it will appear in course catalog):

MECH 12. Strength of Materials (3) fall, spring

Transverse shear in beams. Mohr's circle for stress. Plastic yield criteria. Deflection of beams. Introduction to numerical analysis of simple structures. Fatigue and fracture. Column buckling. Stresses in thick-walled cylinders. Prerequisites: MECH 3; MATH 23. previously or concurrently.

3. Nature of proposed change(s)

Course title change? If so, provide rationale below: N/A

Course number change? If so, provide rationale below: N/A

Change in course credits? If so, provide rationale below: N/A

Change in course description? If so, provide rationale below: N/A

Other change(s)? If so, please describe below and provide rationale for each change. Change the prerequisite from MECH 2 to MECH 3, which is the required prerequisite for advanced engineering mechanics courses

4. Resource Impact:

Provide impact statements in the four areas listed below:

Library impact statement None

Computer impact statement None

Faculty impact statement None

Facilities impact statement None

Provide a statement indicating who will assume financial responsibility for any new resources required: Department of Mechanical Engineering and Mechanics

Proposed Course Change
Mechanical Engineering and Mechanics

1. Current course number and course description (from course catalog):

MECH 102 Dynamics (3) fall, spring

Particle dynamics, work-energy, impulse-momentum, impact, systems of particles; kinematics of rigid bodies, kinetics of rigid bodies in plane motion, energy, momentum, eccentric impact Prerequisites: MECH 2 and MATH 23. (ES 3), (ED 0)

2. Proposed course number and course description (as it will appear in course catalog):

MECH 102 Dynamics (3) fall, spring

Particle dynamics, work-energy, impulse-momentum, impact, systems of particles; kinematics of rigid bodies, kinetics of rigid bodies in plane motion, energy, momentum, eccentric impact Prerequisites: MECH 2 or MECH 3, MATH 23.

3. Nature of proposed change(s)

Course title change? If so, provide rationale below: N/A

Course number change? If so, provide rationale below: N/A

Change in course credits? If so, provide rationale below: N/A

Change in course description? If so, provide rationale below: N/A

Other change(s)? If so, please describe below and provide rationale for each change. Change the prerequisite from MECH 2 to MECH 2 or MECH 3 Either of these two beginning MECH courses provides adequate preparation for continuation in this subject

4. Resource Impact:

Provide impact statements in the four areas listed below:

Library impact statement None

Computer impact statement None

Faculty impact statement None

Facilities impact statement None

Provide a statement indicating who will assume financial responsibility for any new resources required: Department of Mechanical Engineering and Mechanics

Proposed Course Change
Mechanical Engineering and Mechanics

1. Current course number and course description (from course catalog):

ME 111. Professional Development (1) fall.

Examination of ethical and professional choices facing mechanical engineers. Written and oral communications. Industrial field trips (ES 0.5 ED 0.5)

2. Proposed course number and course description (as it will appear in course catalog):

ME 111. Professional Development (1) fall.

Examination of ethical and professional choices facing mechanical engineers. Written and oral communications.

Prerequisite: senior standing in Mechanical Engineering and Mechanics

3. Nature of proposed change(s)

Course title change? If so, provide rationale below: N/A

Course number change? If so, provide rationale below: N/A

Change in course credits? If so, provide rationale below: N/A

Change in course description? If so, provide rationale below: Delete reference to "industrial field trips." Students in class no longer make excursions to local industrial plants and facilities.

Accordingly, the previous class schedule of one 3-hour meeting per week will be altered and reduced to one 1-hour meeting per week.

Other change(s)? If so, please describe below and provide rationale for each change. N/A

4. Resource Impact:

Provide impact statements in the four areas listed below:

Library impact statement None

Computer impact statement None

Faculty impact statement There is a reduction in formal class instruction and activity.

Facilities impact statement The change will have a positive impact on scheduling, because a 3-hour block is no longer required. This will be especially beneficial for other laboratory classes.

Provide a statement indicating who will assume financial responsibility for any new resources required: Department of Mechanical Engineering and Mechanics

Proposed Course Change
Mechanical Engineering and Mechanics

1. Current course number and course description (from course catalog):

ME 207. Mechanical Engineering Laboratory III (2) fall

Formulation of laboratory experiments through open-ended planning, including decision criteria for laboratory techniques and approaches. Execution of experiments based on individual plans, followed by assessment of experimental results. Prerequisite: ME 121. (ES 1). (ED 1)

2. Proposed course number and course description (as it will appear in course catalog):

ME 207. Mechanical Engineering Laboratory III (2) fall, spring

Formulation of laboratory experiments through open-ended planning, including decision criteria for laboratory techniques and approaches. Execution of experiments based on individual plans, followed by assessment of experimental results. Prerequisite: ME 121

3. Nature of proposed change(s)

Course title change? If so, provide rationale below: N/A

Course number change? If so, provide rationale below: N/A

Change in course credits? If so, provide rationale below: N/A

Change in course description? If so, provide rationale below: To allow flexibility in scheduling and optimize laboratory space, ME 207 will be offered both fall and spring semesters.

Other change(s)? If so, please describe below and provide rationale for each change. N/A

4. Resource Impact:

Provide impact statements in the four areas listed below:

Library impact statement None

Computer impact statement None

Faculty impact statement None

Facilities impact statement None

Provide a statement indicating who will assume financial responsibility for any new resources required: Department of Mechanical Engineering and Mechanics

Proposed Course Change
Mechanical Engineering and Applied Science

DROP

1. Current course number and course description (from course catalog):

ME 208. Mechanical Engineering Laboratory IV (2) spring.

Formulation of laboratory experiments through open-ended planning, including decision criteria for laboratory techniques and applications. Execution of experiments based on individual plans followed by assessment of experimental results. Prerequisite ME 121, (ES I, ED 1)

2. Proposed course number and course description (as it will appear in course catalog): N/A

3. Nature of proposed change(s)

Course title change? If so, provide rationale below: N/A

Course number change? If so, provide rationale below: N/A

Change in course credits? If so, provide rationale below: N/A

Change in course description? If so, provide rationale below: N/A

Other change(s)? If so, please describe below and provide rationale for each change. Drop the course from the MEM curricula. ME 208 will be removed as a required course from the MEM curricula. The MEM curricula have sufficient laboratory experience without this course, and its removal will allow more flexibility within the MEM programs

3. Resource Impact:

Provide impact statements in the four areas listed below:

Library impact statement None

Computer impact statement None

Faculty impact statement There is a reduction in the required class instruction and activity.

Facilities impact statement The change will have a positive impact for MEM students in scheduling required and elective courses.

Provide a statement indicating who will assume financial responsibility for any new resources required: None

Proposed Course Change
Mechanical Engineering and Applied Science

DROP

1. Current course number and course description (from course catalog):

ME 210. Laboratory Projects (1-2) fall, spring

Experimental work including planning, design and development of apparatus, data collection and analysis as it pertains to an engineering problem. Progress is reported in the form of several planning and project reports. Prerequisite: Department permission required (ES 1) (ED 1)

2. Proposed course number and course description (as it will appear in course catalog): N/A

3. Nature of proposed change(s)

Course title change? If so, provide rationale below: N/A

Course number change? If so, provide rationale below: N/A

Change in course credits? If so, provide rationale below: N/A

Change in course description? If so, provide rationale below: N/A

Other change(s)? If so, please describe below and provide rationale for each change. Drop the course from the MEM curricula. ME 210 will be removed as a replacement for ME 207 Mechanical Engineering Laboratory III (2) fall or ME 208 Mechanical Engineering Laboratory IV (2) spring from the MEM curricula. The MEM curricula have sufficient laboratory experience without this course, and ME 207 Mechanical Engineering Laboratory III (2) fall, spring will be a required course.

4. Resource Impact:

Provide impact statements in the four areas listed below:

Library impact statement None

Computer impact statement None

Faculty impact statement There is a reduction in the elective laboratory options

Facilities impact statement None

Provide a statement indicating who will assume financial responsibility for any new resources required: None

Proposed Course Change
Mechanical Engineering and Mechanics

1. Current course number and course description (from course catalog):

ME 242. Mechanical Engineering Systems (3) fall, spring

The modeling and analysis of mechanical, fluid, electrical and hybrid systems, with emphasis on lumped models and dynamic behavior, including vibrations. Source-load synthesis. Analysis in temporal and frequency domains. Computer simulation of nonlinear models, and computer implementation of the superposition property of linear models. Prerequisites: MECII 102, MATH 205 and, previously or concurrently, ME 231 (ES 2). (ED 1)

2. Proposed course number and course description (as it will appear in course catalog):

ME 242 Mechanical Engineering Systems (3) fall or spring

Modeling and analysis of mechanical, fluid, electrical and hybrid systems, with emphasis on lumped models and dynamic behavior, including vibrations. Source-load synthesis. Analysis in temporal and frequency domains. Computer simulation of nonlinear models and computer implementation of the superposition property of linear models. Prerequisites: MECH 102 and MATH 205; ME 231 previously or concurrently

3. Nature of proposed change(s)

Course title change? If so, provide rationale below: N/A

Course number change? If so, provide rationale below: N/A

Change in course credits? If so, provide rationale below: N/A

Change in course description? If so, provide rationale below: In order to provide more flexibility for students, either ME 242 Mechanical Engineering Systems (3) or ME 245 Engineering Vibrations (3) may be chosen. Consequently, each semester one or the other will be offered.

Other change(s)? If so, please describe below and provide rationale for each change. N/A

4. Resource Impact:

Provide impact statements in the four areas listed below:

Library impact statement None

Computer impact statement None

Faculty impact statement None

Facilities impact statement None

Provide a statement indicating who will assume financial responsibility for any new resources required: Department of Mechanical Engineering and Mechanics

Proposed Course Change
Mechanical Engineering and Mechanics

1. Current course number and course description (from course catalog):

ME 21. Mechanical Engineering Laboratory I (1)
fall, spring
ME 104. Thermodynamics I (3) fall, spring
ME 121. Mechanical Engineering Laboratory II (1)
fall, spring
ME 215. Engineering Reliability (3) fall, spring
ME 231. Fluid Mechanics (3) fall, spring
ME 304. Thermodynamics II (3) fall, spring
ME 312. Synthesis of Mechanisms (3) fall
ME 321. Introduction to Heat Transfer (3) fall,
spring
ME 322. Gas Dynamics (3) spring
ME 323. Reciprocating and Centrifugal Engines (3)
fall
ME 331. Advanced Fluid Mechanics (3) fall
ME 340. Advanced Mechanical Design (3) fall
ME 341. Mechanical Systems (3) spring
ME 342. Dynamics of Engineering Systems (3)
spring
ME 343. Control Systems (3) fall
ME 344. (IE 344, MAT 344) Metal Machining
Analysis (3) spring
ME 348. Computer-Aided Design (3) spring
ME 360. (CHE 360) Nuclear Reactor Engineering
(3) spring
ME 387. (CHE 387, ECE 387) Digital Control (3)
spring
ME 389. (ECE 389, CHE 389) Control Systems
Laboratory (2) spring
MECH 12. Strength of Materials (3) fall, spring
MECH 102. Dynamics (3) fall, spring
MECH 302. Advanced Dynamics (3) spring
MECH 305. Advanced Mechanics of Materials (3)
fall
MECH 312. Finite Element Analysis (3) spring
MECH 313. Fracture Mechanics (3) spring
MECH 326. Aerodynamics (3) fall
MECH 328. Fundamentals of Aircraft Design (3)
spring

2. Proposed course number and course description (as it will appear in course catalog):

ME 21. Mechanical Engineering Laboratory I (1)
fall
ME 104. Thermodynamics I (3) spring
ME 121. Mechanical Engineering Laboratory II (1)
spring
ME 215. Engineering Reliability (3) fall
ME 231. Fluid Mechanics (3) fall
ME 304. Thermodynamics II (3)
ME 312. Synthesis of Mechanisms (3)
ME 321. Introduction to Heat Transfer (3)

ME 322. Gas Dynamics (3)
ME 323. Reciprocating and Centrifugal Engines (3)

ME 331. Advanced Fluid Mechanics (3)
ME 340. Advanced Mechanical Design (3)
ME 341. Mechanical Systems (3)
ME 342. Dynamics of Engineering Systems (3)

ME 343. Control Systems (3)
ME 344. (IE 344, MAT 344) Metal Machining
Analysis (3)
ME 348. Computer-Aided Design (3)
ME 360. Nuclear Reactor Engineering (3)

ME 387. (CHE 387, ECE 387) Digital Control (3)

ME 389. (ECE 389, CHE 389) Control Systems
Laboratory (2)
MECH 12. Strength of Materials (3) spring
MECH 102. Dynamics (3) fall
MECH 302. Advanced Dynamics (3)
MECH 305. Advanced Mechanics of Materials (3)

MECH 312. Finite Element Analysis (3)
MECH 313. Fracture Mechanics (3)
MECH 326. Aerodynamics (3)
MECH 328. Fundamentals of Aircraft Design (3)

3. Nature of proposed change(s)

Course title change? If so, provide rationale below: N/A

Course number change? If so, provide rationale below: N/A

Change in course credits? If so, provide rationale below: N/A

Change in course description? If so, provide rationale below: N/A

Other change(s)? If so, please describe below and provide rationale for each change. Altered semester in which courses are listed as being offered. The changes are in accordance with the B.S. ME and B.S. Mech programs and the current scheduling of advanced electives.

4. Resource Impact:

Provide impact statements in the four areas listed below:

Library impact statement None

Computer impact statement None

Faculty impact statement None

Facilities impact statement None

Provide a statement indicating who will assume financial responsibility for any new resources required: Department of Mechanical Engineering and Mechanics

Proposed Program Changes
Mechanical Engineering and Mechanics

Name and summary of current program: Minor in Aerospace Engineering

The minor in aerospace engineering provides a foundation for students who intend to pursue a career in the aerospace industry. This minor will also provide sufficient technical background in aerospace studies for undergraduates who plan to enter graduate programs in this field. The minor requires a minimum of 17 credits from the following course selection:

Required Courses

MECH 326	Aerodynamics (3)
MECH 305	Advanced Mechanics of Materials (3)
ME 343	Control Systems (3)
MECH 328	Fundamentals of Aircraft Design (3)

Elective Courses

ME 322	Gas Dynamics (3)
ME 323	Reciprocating and Centrifugal Engines (3)
ME 331	Advanced Fluid Mechanics (3)
ME 389	Controls Laboratory (2)
MECH 312	Finite Element Analysis (3)
ME 348	Computer-Aided Design (3)
MAT 309	Composite Materials (3)

Proposed program changes (as they will appear in the catalog):

The minor in aerospace engineering provides a foundation for students who intend to pursue a career in the aerospace industry. This minor will also provide sufficient technical background in aerospace studies for undergraduates who plan to enter graduate programs in this field. The minor requires a minimum of 17 credits from the following course selection:

Required Courses

MECH 326	Aerodynamics (3)
MECH 305	Advanced Mechanics of Materials (3)
ME 343	Control Systems (3)
MECH 328	Fundamentals of Aircraft Design (3)

Elective Courses

ME 304	Thermodynamics II (3)
ME 322	Gas Dynamics (3)
ME 323	Reciprocating and Centrifugal Engines (3)
ME 331	Advanced Fluid Mechanics (3)
ME 389	Controls Laboratory (2)
MECH 312	Finite Element Analysis (3)
ME 348	Computer-Aided Design (3)
MAT 309	Composite Materials (3)

Description of proposed change(s):

Add ME 304 Thermodynamics II (3) to the list of electives

Rationale for proposed change(s):

This course increases the options available for the student and it increases the topics that are fundamental in aerospace design

Academic Impact:

Is this proposed new program interdisciplinary? No

Identify any known effects of the proposed new program on other programs at the University.

None

If there are known effects, individuals in charge of the affected programs must be consulted about the new program and the following information provided:

Who was consulted? N/A

Is the proposed new program acceptable to all programs affected? N/A

Will any changes be required in the affected programs? If so, describe. N/A

Identify any known effects of the proposed new program on the University's commitment to diversity. No known effects on diversity

Resource Impact:

Provide each of the following:

Library impact statement: None

Computer impact statement: None

Faculty impact statement: None

Facilities impact statement: None

Provide a statement indicating who will assume financial responsibility for any new resources required: Department of Mechanical Engineering and Mechanics.

Proposed New Program
Mechanical Engineering and Mechanics
Minor in Mechanics of Materials

1. Proposed new program mission statement:

The proposed Minor Program will provide an opportunity for students with Majors other than Mechanical Engineering and Mechanics to learn basic principles in the mechanics of materials.

2. Rationale for proposed new program:

The Minor in Mechanics of materials is intended for students other than those majoring in ME/MECH who seek to learn basic principles in the mechanics of materials.

3. Description of proposed new program:

Minor in Mechanics of materials

The minor in mechanics of materials provides a view of mechanical strength and behavior of materials based on understanding a few basic concepts and using simplified material models. Courses selected for the minor emphasize concepts such as superposition of loadings; relation between external loads and internal stresses; factor of safety; safe design based on allowable stress or allowable loads; allowable deformation; and reliability of structures. Courses offer a wide variety of topics including analytical and numerical methods for solving mechanics problems; manufacturing and polymer processing. The mechanics of materials minor requires a minimum of 15 credits, which must be taken from MEM offerings. Two courses are required; and three additional electives must be selected. The minor is not available for students having a major in the Department of Mechanical Engineering and Mechanics.

Required courses

MECH 3 (3) Fundamentals of Engineering Mechanics

MECH 12 (3) Strength of Materials

Electives

ME 10 (3) Graphics for Engineering Design

ME 215 (3) Engineering Reliability

ME 240 (3) Manufacturing

ME 252 (3) Mechanical Elements

ME 344/MAT 344/IE 344* Metal Machining Analysis

ME 385 (3) Polymer Product Manufacturing

MECH 102 (3) Dynamics

MECH 305 (3) Advanced Mechanics of Materials

MECH 312 (3) Finite Element Analysis

MECH 313 (3) Fracture Mechanics

* This cross-listed course ME 344 counts as an elective.

Details of the Proposed Program (any information not supplied elsewhere on this form but important to the consideration of the proposed program)

ME 10 is a prerequisite for ME 240 and subsequently ME 344.

MECH 102 is a prerequisite for ME 252.

Implementation Plan (how the degree will be put into place, including initial admissions) Since this is an undergraduate minor program utilizing courses already in existence, the implementation of the program consists simply of students electing to take the appropriate courses. Admission to the program is for students outside the Department of Mechanical Engineering and Mechanics who choose to use their electives to complete the requirements of the minor

4. Academic Impact Statement:

Is the proposed new program interdisciplinary?

The only interdisciplinary feature of the minor is in the cross-listed course: ME344/MAT344/IE344. The nature of the minor is for students outside the Department of Mechanical Engineering and Mechanics to make their program interdisciplinary by incorporating mechanics of materials.

Identify any known effects of the proposed new program on other programs at the University.

The effect on MAT and IE is incidental amounting to their own students taking the cross-listed course: ME344/MAT344/IE344 within their major departments.

If there are known effects, individuals in charge of the affected programs must be consulted about the proposed new program and the following information provided:

Who was consulted? The Department of Materials Science was instrumental in the construction of the minor. Both departments met several times to make sure it sufficiently meets the needs and goals of students outside the Department of Mechanical Engineering and Mechanics.

Is the proposed new program acceptable to all other programs affected? Yes

Will any changes be required in the affected programs? If so, please describe below: No

Does the proposed new program affect the University's commitment to diversity in any way? If so, please describe below. No known effects on diversity.

5. Resource Impact

Provide each of the following:

Library impact statement **None**

Computer impact statement **None**

Faculty impact statement **This minor requires only existing courses. There will be no significant impact on faculty based on the expected number of students involved.**

Facilities impact statement **None**

Provide a statement indicating who will assume financial responsibility for any new resources required: **Department of Mechanical Engineering and Mechanics**

Proposed Program Changes
Mechanical Engineering and Mechanics

Name and summary of new program: B.S. in Mechanical Engineering

Proposed program changes (as they will appear in the catalog):

Undergraduate Curriculum in Mechanical Engineering

Freshman year, first semester (14 - 15 credits)

ENGL 1 Composition and Literature (3)
CHM 25 Introductory Chemical Principles and Laboratory (4) or
 PHY 11, 12 Introductory Physics I and Laboratory (5)
MATH 21 Calculus I (4)
ENGR 1 Engineering Computations (3) or
 ENGR 5 Introduction to Engineering Practice (3)

Freshman year: second semester (14 - 15 credits)

ENGL 2 Composition and Literature: Fiction, Drama, Poetry (3)
PHY 11, 12 Introductory Physics I and Laboratory (5) or
 CHM 25 Introductory Chemical Principles and Lab (4)
MATH 22 Calculus II (4)
ENGR 5 Introduction to Engineering Practice (3) or
 ENGR 1 Engineering Computations (3)

sophomore year: first semester (16 - 17 credit hours)

ME 10 Graphics for Engineering Design (3)
MECH 3 Fundamentals of Engineering Mechanics (3)
MAT 33 Engineering Materials and Processes (3)
MATH 23 Analytical Geometry & Calculus III (4)
 elective (3 - 4)

sophomore year: second semester (17 - 18 credit hours)*

ME 104 Thermodynamics I (3)
MECH 12 Strength of Materials (3)
PHY 21, 22 Introductory Physics II and Laboratory (5)
MATH 205 Linear Methods (3)
 elective (3 - 4)

**Co-op students must take ME 21 sophomore year second semester (18-19 credit hours). Co-op students will take a MATH elective (3) ME 231 (3), MECH 102 (3), and an HSS elective (3-4) during the summer after the sophomore year (12-13 credit hours). See Co-op program for details*

junior year, first semester (16 - 18 credit hours)

ME 21 Mechanical Engineering Laboratory I (1)
ME 231 Fluid Mechanics (3)
MECH 102 Dynamics (3)
ME 215 Engineering Reliability (3) or
 MATH 208 Complex Variables (3) or
 MATH 230 Numerical Methods (3) or
 MATH 231 Probability and Statistics (3)
 elective (6 - 8)

junior year, second semester (17 credit hours)

ME 121 Mechanical Engineering Laboratory II (1)
ME 211 Integrated Product Development I (3)
ME 240 Manufacturing (3)
ME 242 Mechanical Engineering Systems (3) or
 ME 245 Engineering Vibrations (3)
ME 252 Mechanical Elements (3)
ECE 83 Fundamentals of Electrical Engineering (3)
ECE 162 Electrical Laboratory (1)

senior year (30 - 34 credit hours)

ME 111	Professional Development (1) [<i>Fall only</i>]
ME 212	Integrated Product Development II (2) [<i>Fall only</i>]
ME 207	Mechanical Engineering Laboratory III (2)
ME 321	Introduction to Heat Transfer (3) electives (22 - 26)

The total number of credits required for graduation is 129. A total of 38 credits in electives must be taken. These electives are of five types:

Mechanical Engineering Electives

- Humanities/Social Sciences: A total of 17 credits of electives in humanities and social science, which must include ECO 1. (Note that these electives are in addition to the 6 hours of required freshman English.) See description of HSS in Section III of the catalog.
- ENGR. Elective A: One, 3-credit course selected from the following: MECH 302, MECH 305, ME 304, ME 322, ME 331, or ME 343
- ENGR. Elective B: One, 3-credit course selected from any ME 300 or MECH 300-level course, excluding ME 310.
- ENGR. Elective C: Three, 3-credit courses selected from any ME 300 or MECH 300-level course or an engineering/science/mathematics course, as approved by the department chair. ME 310 may be taken once to satisfy this requirement.
- Free electives: 6 credit hours in any subject area are required.

Description of proposed change(s):

- Replace MECH 2 Elementary Engineering Mechanics (3) (first semester, sophomore year) as a required course with MECH 3 Fundamentals of Engineering Mechanics (3) (first semester, sophomore year).
- Move ME 111 Professional Development (1) from sophomore, first semester to senior, first semester, and a reduction of contact hours from one 3-hour meeting per week to one 1-hour meeting per week.
- Drop ME 208 Mechanical Engineering Laboratory IV (2) (originally second semester, senior year) which results in a reduction of 2 hours from the total hours required for graduation.
- Drop ME 210 Laboratory Projects (2) (originally first or second semester, senior year), this has been allowed as a substitute for at most one of the two senior laboratory courses; however, since ME 208 will be dropped from the program no substitutions for ME 207 will be allowed.
- ME 207 Mechanical Engineering Laboratory III (2) (originally first semester, senior year) will be offered first semester, senior year and second semester, senior year.
- Allow ME 242 Mechanical Engineering Systems (3) (spring) or ME 245 Engineering Vibrations (3) (fall) to satisfy the requirement in the ME curriculum.
- ME 321 Introduction to Heat Transfer (3) will be listed as a required course for the senior year; it was previously listed as a "required" elective.
- Replace ECE 81 Principles of Electrical Engineering (4) (first semester, junior year) with ECE 83 Fundamentals of Electrical Engineering (3) (second semester, junior year) which results in a reduction of 1 hour from the total hours required for graduation.
- Increase the number of elective hours from 2-4 to 6-8 (first semester, junior year).
- Remove elective hours (second semester, junior year).
- Total hours required for graduation is reduced from 132 to 129.

Rationale for proposed change(s):

- MECH 3 Fundamentals of Engineering Mechanics (3) (first semester, sophomore year) will provide a foundation in the principles of mechanics for those students majoring in engineering disciplines for which advanced engineering mechanics is required.
- ME 111 Professional Development (1) will be more beneficial due to the maturity of seniors in contrast to sophomores.
- Drop ME 208 Mechanical Engineering Laboratory IV (2) (originally second semester, senior year) ME students have sufficient laboratory experience without ME 208. ABET does not require a laboratory course beyond ME 207.

- (iv) Drop ME 210 Laboratory Projects (2) (first or second semester, senior year). By consolidating the senior laboratory requirements, ME students can use ME 310 Directed Study (1-3) (fall, spring) for other projects or applications.
- (v) ME 207 Mechanical Engineering Laboratory III (2) (first semester, senior year) ME 207 will be offered both semesters of the senior year for scheduling convenience and laboratory space restrictions.
- (vi) Allowing ME 242 Mechanical Engineering Systems (3) (spring) or ME 245 Engineering Vibrations (3) (fall) gives students the opportunity to select different areas of concentration within mechanical engineering.
- (vii) ME 321 Introduction to Heat Transfer (3) will be listed as a required course for the senior year. This is a more appropriate designation since this course has been required for many years.
- (viii) ECE 83 Fundamentals of Electrical Engineering (3) (second semester, junior year) will be more suited for non-electrical engineering majors. The reduction in hours will allow more flexibility in the ME curriculum.
- (ix) Increase the number of elective hours from 2-4 to 6-8 (first semester, junior year). This is necessary because of the restructuring of the required ECE course.
- (x) Remove elective hours (second semester, junior year). This is necessary because of the restructuring of the required ECE course.
- (xi) Total hours required for graduation is reduced from 132 to 129. This is more in line with ME programs at other universities. It allows more flexibility in the ME curriculum.

Academic Impact:

Is this proposed new program interdisciplinary? No

Identify any known effects of the proposed new program on other programs at the University.
There are no known effects.

If there are known effects, individuals in charge of the affected programs must be consulted about the new program and the following information provided:

Who was consulted? N/A

Is the proposed new program acceptable to all programs affected? N/A

Will any changes be required in the affected programs? If so, describe. N/A

Identify any known effects of the proposed new program on the University's commitment to diversity. No known effects on diversity

Resource Impact:

Provide each of the following:

Library impact statement: No impact on library

Computer impact statement: No known effects on computing

Faculty impact statement: The reduction in total hours for the program will reduce the teaching requirement by 1 hour for the Department of Electrical Engineering and by 2 hours for the Department of Mechanical Engineering and Mechanics specifically in laboratory instruction.

Facilities impact statement: No impact on facilities.

Provide a statement indicating who will assume financial responsibility for any new resources required: Department of Mechanical Engineering and Mechanics.

Proposed Program Changes
Mechanical Engineering and Mechanics

Name and summary of new program: B S in Engineering Mechanics

Proposed program changes (as they will appear in the catalog):

Undergraduate Curriculum in Mechanical Engineering

Freshman year, first semester (14 - 15 credits)

ENGL 1 Composition and Literature (3)
CHM 25 Introductory Chemical Principles and Laboratory (4) or
 PHY 11, 12 Introductory Physics I and Laboratory (5)
MATH 21 Calculus I (4)
ENGR 1 Engineering Computations (3) or
 ENGR 5 Introduction to Engineering Practice (3)

Freshman year, second semester (14 - 15 credits)

ENGL 2 Composition and Literature: Fiction, Drama, Poetry (3)
PHY 11, 12 Introductory Physics I and Laboratory (5) or
 CHM 25 Introductory Chemical Principles and Lab (4)
MATH 22 Calculus II (4)
ENGR 5 Introduction to Engineering Practice (3) or
 ENGR 1 Engineering Computations (3)

sophomore year, first semester (16 - 17 credit hours)

ME 10 Graphics for Engineering Design (3)
MECH 3 Fundamentals of Engineering Mechanics (3)
MAT 33 Engineering Materials and Processes (3)
MATH 23 Analytical Geometry & Calculus III (4)
 elective (3 - 4)

sophomore year, second semester (17 - 18 credit hours)*

ME 104 Thermodynamics I (3)
MECH 12 Strength of Materials (3)
PHY 21, 22 Introductory Physics II and Laboratory (5)
MATH 205 Linear Methods (3)
 elective (3 - 4)

**Co-op students must take ME 21 sophomore year, second semester (18-19 credit hours). Co-op students will take ME 231 (3), MECH 102 (3), and two HSS electives (6-8) during the summer after the sophomore year (12-14 credit hours). See Co-op program for details*

junior year, first semester (16 - 18 credit hours)

ME 21 Mechanical Engineering Laboratory I (1)
ME 231 Fluid Mechanics (3)
MECH 102 Dynamics (3)
MATH 230 Numerical Methods (3)
 elective (6 - 8)

junior year, second semester (17 - 18 credit hours)

ME 121 Mechanical Engineering Laboratory II (1)
ME 240 Manufacturing (3)
ME 242 Mechanical Engineering Systems (3) or
 ME 245 Engineering Vibrations (3)
Math 208 Complex Variables (3)
ECE 83 Fundamentals of Electrical Engineering (3)
ECE 162 Electrical Laboratory (1)
 electives (3 - 4)

senior year (27 - 32 credit hours)

ME 111 Professional Development (1) [Fall only]
ME 207 Mechanical Engineering Laboratory III (2)
ME 321 Introduction to Heat Transfer (3)

electives (21 - 26)

The total number of credits required for graduation is 127. A total of 41 credits in electives must be taken. These electives are of four types:

Mechanical Engineering Electives

- a) Humanities/Social Sciences: A total of 17 credits of electives in humanities and social science, which must include ECO 1. (Note that these electives are in addition to the 6 hours of required freshman English.) See description of HSS in Section III of the catalog.
- b) ENGR. Elective A: Two, 3-credit courses selected from the following: MECH 302, MECH 305, ME 304, ME 322, ME 331, or ME 343.
- c) ENGR. Elective B: Four, 3-credit courses selected from any ME 300 or MECH 300-level course excluding ME 310.
- d) Free electives: 6 credit hours in any subject area are required.

Typical recommended options:

Applied Mathematics and Computational Mechanics

MECH 305	Advanced Mechanics of Materials (3)
MECH 312	Finite Element Analysis (3)
MATH 309	Theory of Probability (3)
MATH 322	Methods of Applied Analysis I (3)
MATH 323	Methods of Applied Analysis II (3)

Solid Mechanics

MECH 305	Advanced Mechanics of Materials (3)
MECH 307	Mechanics of Continua (3)
MECH 312	Finite Element Analysis (3)
MECH 313	Fracture Mechanics (3)
MATH 322	Methods of Applied Analysis I (3)

Engineering Materials

MECH 305	Advanced Mechanics of Materials (3)
MECH 313	Fracture Mechanics (3)
MAT 218	Mechanical Behavior of Materials (3)
PHY 31	Introduction to Quantum Mechanics (3)
PHY 363	Physics of Solids (3)

Fluid Mechanics

ME 331	Advanced Fluid Mechanics (3)
ME 322	Gas Dynamics (3)
MECH 326	Aerodynamics (3)
MATH 322	Methods of Applied Analysis I (3)

Description of proposed change(s):

- (i) Replace MECH 2 Elementary Engineering Mechanics (3) (first semester, sophomore year) as a required course with MECH 3 Fundamentals of Engineering Mechanics (3) (first semester, sophomore year).
- (ii) Move ME 111 Professional Development (1) from sophomore, first semester to senior, first semester, and a reduction of contact hours from one 3-hour meeting per week to one 1-hour meeting per week.
- (iii) Drop ME 208 Mechanical Engineering Laboratory IV (2) (originally second semester, senior year) which results in a reduction of 2 hours from the total hours required for graduation.
- (iv) Drop ME 210 Laboratory Projects (2) (originally first or second semester, senior year), this has been allowed as a substitute for at most one of the two senior laboratory courses; however, since ME 208 will be dropped from the program no substitutions for ME 207 will be allowed.
- (v) ME 207 Mechanical Engineering Laboratory III (2) (originally first semester, senior year) will be offered first semester, senior year and second semester, senior year.
- (vi) Allow ME 242 Mechanical Engineering Systems (3) (spring) or ME 245 Engineering Vibrations (3) (fall) to satisfy the requirement in the ME curriculum

- (vii) ME 321 Introduction to Heat Transfer (3) will be listed as a required course for the senior year; it was previously listed as a "required" elective
- (viii) Replace ECE 81 Principles of Electrical Engineering (4) (first semester, junior year) with ECE 83 Fundamentals of Electrical Engineering (3) (second semester, junior year) which results in a reduction of 1 hour from the total hours required for graduation.
- (ix) Increase the number of elective hours from 2-4 to 6-8 (first semester, junior year)
- (x) Remove elective hours (second semester, junior year).
- (xi) Total hours required for graduation is reduced from 130 to 127

Rationale for proposed change(s):

- (i) MECH 3 Fundamentals of Engineering Mechanics (3) (first semester, sophomore year) will provide a foundation in the principles of mechanics for those students majoring in engineering disciplines for which advanced engineering mechanics is required.
- (ii) ME 111 Professional Development (1) will be more beneficial due to the maturity of seniors in contrast to sophomores.
- (iii) Drop ME 208 Mechanical Engineering Laboratory IV (2) (originally second semester, senior year). ME students have sufficient laboratory experience without ME 208. ABET does not require a laboratory course beyond ME 207
- (iv) Drop ME 210 Laboratory Projects (2) (first or second semester, senior year). By consolidating the senior laboratory requirements, ME students can use ME 310 Directed Study (1-3) (fall spring) for other projects or applications.
- (v) ME 207 Mechanical Engineering Laboratory III (2) (first semester, senior year). ME 207 will be offered both semesters of the senior year for scheduling convenience and laboratory space restrictions.
- (vi) Allowing ME 242 Mechanical Engineering Systems (3) (spring) or ME 245 Engineering Vibrations (3) (fall) gives students the opportunity to select different areas of concentration within mechanical engineering
- (vii) ME 321 Introduction to Heat Transfer (3) will be listed as a required course for the senior year. This is a more appropriate designation since this course has been required for many years.
- (viii) ECE 83 Fundamentals of Electrical Engineering (3) (second semester, junior year) will be more suited for non-electrical engineering majors. The reduction in hours will allow more flexibility in the ME curriculum.
- (ix) Increase the number of elective hours from 2-4 to 6-8 (first semester, junior year). This is necessary because of the restructuring of the required ECE course.
- (x) Remove elective hours (second semester, junior year) This is necessary because of the restructuring of the required ECE course.
- (xi) Total hours required for graduation is reduced from 130 to 127. This is more in line with ME programs at other universities. It allows more flexibility in the ME curriculum.

Academic Impact:

Is this proposed new program interdisciplinary? No

Identify any known effects of the proposed new program on other programs at the University.

There are no known effects.

If there are known effects, individuals in charge of the affected programs must be consulted about the new program and the following information provided:

Who was consulted? N/A

Is the proposed new program acceptable to all programs affected? N/A

Will any changes be required in the affected programs? If so, describe. N/A

Identify any known effects of the proposed new program on the University's commitment to diversity. No known effects on diversity

Resource Impact:

Provide each of the following:

Library impact statement: No impact on library

Computer impact statement: No known effects on computing

Faculty impact statement: The reduction in total hours for the program will reduce the teaching requirement by 1 hour for the Department of Electrical Engineering and by 2 hours for the Department of Mechanical Engineering and Mechanics specifically in laboratory instruction

Facilities impact statement: No impact on facilities.

Provide a statement indicating who will assume financial responsibility for any new resources required: Department of Mechanical Engineering and Mechanics.

Proposed Program Changes for APC
Materials Science and Engineering Department
Realigning Curriculum for Majors

Page 1

Name and summary of current program:

Bachelor of Science in Materials Science and Engineering. This four-year program prepares students for careers in materials science and engineering.

Proposed program changes (as they will appear in the catalog):

[see also side-by-side curriculum changes on the third page]

Sophomore year, first semester (17 credits)

MAT 33 Engineering Materials and Processes (3)*
MAT 10 Materials Laboratory (1)
MATH 23 Analytic Geometry & Calculus III (4)
PHY 21, 22 Introductory Physics and Laboratory (5)
ECO 1 Economics (4)

Sophomore year, second semester (18 –19 credits)

MAT 20 Computational Methods in Materials Science (3) → see separate course change for MAT 20
MAT 203 Materials Structure at the Nanoscale (3)
MAT 205 Thermodynamics of Macro/Nanoscale Materials (3)
MATH 205 Linear Methods (3)
MECH 3 Fundamentals of Engineering Mechanics (3) → see description by Mech Engr and Mech Dept
HSS Humanities/Social Sciences Elective (3 or 4)

Junior year, first semester (18 credits)

MAT 201 Physical Properties of Materials (3)
MAT 216 Diffusion and Phase Transformations (3)
MAT 218 Mechanical Behavior of Macro/Nanoscale Materials (3)
MAT 101 Professional Development (2)
HSS Humanities/Social Sciences Elective (4)
Free Elective (3)

Junior year, second semester (18-19 credits)

MAT 204 Processing and Properties of Polymeric Materials (3) → the topics in MAT 226 have been incorporated into MAT 338, but MAT 226 is retained as a separate course, MAT 210 dropped
MAT 206 Processing and Properties of Metals (3)
MAT 214 Processing and Properties of Ceramic Materials (3)
ENGR 211 Integrated Product Development Projects I (3)
HSS Humanities/Social Sciences Elective (3 or 4)
Free Elective (3)

Senior year, first semester (15 credits)

MAT 302 Electronic Properties of Materials (3)
ENGR 212 Integrated Product Development Projects II (2)
ENGR SCI ELECT Engineering Science Elective (3)
ENGR SCI ELECT Engineering Science Elective (3)
HSS Humanities/Social Sciences Elective (4)

Senior year, second semester (16 credits)

MAT 338 Materials Selection and Failure Analysis (3) → incorporates topics in MAT 226; see separate course changes
CHE 60 Unit Operations Survey (3)
ECE 83 Fundamentals of Electrical Engineering (3) → new course see ECE submission
ECE 162 Electrical Laboratory (1) → ECE83/ECE162 are intended to replace the current MAT 352

AFPR ELECT Approved Elective (3)
Free Elective (3)

*MAT 33 is taught in both the fall and spring semesters

Description of proposed change(s):

1. Overall reduction of credits for graduation from 135 to 131. See next page.
2. Mat 20 will incorporate statistics and increase from 2 to 3 credits. Requirement for IE 328 Engineering Statistics (3 credits) will be dropped.
3. Replace MECH 2 with MECH 3 (temporarily listed as MECH 195)
4. Drop MAT 210 (2 credits) and incorporate these labs into MAT 204, MAT 206, and MAT 214. No credit changes in the latter courses
5. Incorporate the content of MAT 226 (1 credit) into MAT 338, increasing the credits for the latter course from 2 to 3 credits.
6. Drop the requirement of a free elective in the senior year.
7. ECE 83 and ECE 162 will replace the current requirement for ECE 81. No change in the number of credits

Rationale for proposed change(s):

The goal for these changes is to reduce the total required credits for graduation from 135 to 131 to bring our undergraduate program more inline with materials departments elsewhere and other engineering departments at Lehigh. These changes also give materials majors more freedom to take electives and minors.

Academic Impact Statement:

Is this proposed program change interdisciplinary?

Yes, we have reduced the teaching load in Industrial and Systems Engineering by dropping the IE 328 requirement. We have also replaced ECE 81 with ECE 83/162.

Identify any known effects of the proposed program change on other programs at the University.

IE 328 will no longer be required for materials majors. Thus, while the changes are neutral regarding faculty load in Materials Science and Engineering it reduces faculty load in Industrial and Systems Engineering.

The addition of ECE 83/162 may require additional resources for the lab course ECE 162.

If there are known effects, individuals in charge of the affected programs must be consulted about the proposed program change and the following information provided:

Industrial and Systems Engineering has been told that the IE 328 requirement is being dropped. Electrical and Computer Engineering commented that ECE162 may require additional resources for an increased enrollment in this lab course.

Who was consulted?

Greg Fonkay was consulted for the IE change. Doug Frey was consulted for the ECE change

Is the proposed program change acceptable to the affected programs?

Yes for the IE change. In principle, yes for the ECE change.

Will any changes be required in the affected programs? If so, describe.

For the ECE change, additional resources may be required. There will be negotiations among the dean and the department chairs to determine if 25-30 materials students can be added to the lab course ECE 162.

Identify any known effects of the proposed program change on the University's commitment to diversity.

No known effects

Resource Impact Statement:

Provide each of the following:

Library impact statement **No impact**
 Computer impact statement **No impact**
Faculty impact statement **No impact**
 Facilities impact statement **No impact**

Provide a statement indicating who will assume financial responsibility for any new resources required:

There will be negotiations among the dean and the department chairs to determine if 25-30 materials students can be added to the lab course ECE 162, and if additional resources will be required

Comparison between existing and proposed new curriculum beginning Spring 2007

	CURRENT CURRICULUM	PROPOSED CURRICULUM
Year 1	29 credits total	29 credits total
Fall Soph	<u>17-18 credits</u> 4 Math 23 5 Phys 21, 22 4 Eco I 1 MAT 10 3 (4) MAT 33 (or HSS 1)	<u>17-18 credits</u> 4 Math 23 5 Phys 21, 22 4 Eco I 1 MAT 10 3 MAT 33
Spring Soph	<u>17-18 credits</u> 3 Math 205 Linear Methods 3 Mech 2 Engineering Mechanics 3 MAT 203 Structure & Characterization 3 MAT 205 Thermo & Phase Diagrams 2 MAT 20 Computational Methods 4 (3) HSS 2 (or MAT 33)	<u>18 credits</u> 3 Math 205 Linear Methods 3 Mech 3 Engineering Mechanics Mechanics 3 MAT 203 Structure & Characterization 3 MAT 205 Thermo & Phase Diagrams 3 MAT 20 Computational Methods 3 HSS 1
Fall Junior	<u>18 credits</u> 3 MAT 201 Physical Properties of Materials 3 MAT 218 Mechanical Behavior 3 MAT 216 Diffusion & Phase Trans. 2 MAT 101 Professional Dev 3 Free Elective 1 4 HSS 3	<u>18 credits</u> 3 MAT 201 Physical Properties of Materials 3 MAT 218 Mechanical Behavior 3 MAT 216 Diffusion & Phase Trans. 2 MAT 101 Professional Dev. 3 Free Elective 1 4 HSS 2
Spring Junior	<u>18 credits</u> 3 ENGR 211 IPD #1 1 MAT 226 Materials Selection in Design 3 MAT 204 Polymers 3 MAT 206 Metals 3 MAT 214 Ceramics 2 MAT 210 Macro Processing Lab 3 HSS 4	<u>18 credits</u> 3 ENGR 211 IPD #1 3 MAT 204 Polymers 3 MAT 206 Metals 3 MAT 214 Ceramics 3 Free Elective 2 3 HSS 3
Fall Senior	<u>17-18 credits</u> 2 ENGR 212 IPD #2	<u>15 credits</u> 2 ENGR 212 IPD #2

	3	MAT 302 Electronic Properties of Matls	3	MAT 302 Electronic Properties of Matls
	3 (4)	Mat 352/Phys 190 (or ECE 81)	3	Eng. Sci. Elective 1
	3	IE 328/Math 231	3	Eng. Sci. Elective 2
	3	Eng. Sci. Elect. 1	4	HSS 4
	3	HSS 5		
Spring	<u>17 credits</u>		<u>16 credits</u>	
Senior	2	MAT 338 Failure Analysis Reports	3	MAT 338 Materials Selection and Failure Analysis
	3	ChemE 60	3	ChemE 60
	3	Approved Elective	4	ECE83(3) and ECE162(1)
	3	Eng. Sci. Elective 2	3	Approved Elective
	3	Free Elective 2	3	Free Elective 3
	3	Free Elective 3		

CURRENT TOTAL: 135 credits

PROPOSED TOTAL: 131 credits

* 1 MAT 226 Materials Selection in Design taught to non-Mat students as part of Mat 338 (first 5 wcks)

Proposed Course Changes for APC
Materials Science and Engineering Department
MAT 20

Kind of change, e.g., change in title:
Change of course content

Current course number and course description (from course catalog):

MAT 20. Computational Methods in Materials Science (2) spring
The use of computers and computational methods to solve problems in materials science and engineering. Students will employ both commercial packages and their own code in order to complete assignments. Students will utilize word processing and display packages to present results of projects. Prerequisite: ENGR 1 or equivalent. Rickman

Proposed course number and course description (as it will appear in course catalog):

MAT 20. Computational Methods in Materials Science (3) spring
The use of computers and computational methods to solve problems in materials science and engineering. Statistical analysis of data will be a major emphasis. Students will employ both commercial packages and their own code in order to complete assignments. Students will utilize word processing and display packages to present results of projects. Prerequisite: ENGR 1 or equivalent. Rickman

Description of proposed change(s):

Currently, MSE seniors take IE 328 for statistics. We plan to drop IE 328 from our program, and incorporate the statistics our students need into MAT 20, and raise the number of credits for MAT 20 from 2 to 3

Rationale for proposed change(s):

This change is part of our effort to reduce the number of credits taught. This change also gives students statistical analysis in the sophomore year, instead of the senior year, so that these concepts can be used in laboratory exercises for the junior and seniors years.

Impact Statement:

The impact on MSE students would be that students would have much less discussion of probability. However, this would be balanced by increased examples of statistical analysis related to materials science. For IE, the impact would be that 20-30 fewer students would be taking IE 328.

Proposed Course Changes for APC
Materials Science and Engineering Department
MAT 210

Kind of change, e.g., "change in title"

Dropping course from the catalog.

Current course number and course description (from course catalog):

Mat 210. Macro, Micro and Nanoscale Materials Processing Laboratory (2) spring
Processes for different materials classes and size scales. Direct experience with current and emerging materials. Class lectures to introduce principles and applications, followed by laboratory experiments such as synthesis and characterization of ceramic nanoparticle systems, forming of polymeric and polymer-based nanocomposite materials, and fabrication and heat treatment of metal systems. Prerequisites: MAT 204, 206, and 214 taken previously or concurrently.

Proposed course number and course description (as it will appear in course catalog):

Dropping course

Description of proposed change(s):

Dropping course. The content of this course, several laboratory exercises associated with MAT 204, MAT 206, and MAT 214 will be placed within these courses.

Rationale for proposed change(s):

This change helps in class scheduling and allows the course instructors in MAT 204, MAT 206 and MAT 214 to take direct control of these laboratories.

Impact Statement:

This change should be neutral since it is just moving course content

Proposed Course Changes for APC
Materials Science and Engineering Department
MAT 226

Kind of change, e.g., "change in title"

Changing the intended use of the course as a prerequisite.

Current course number and course description (from course catalog):

Mat 226. Materials Selection in Design (1) spring

Review of different classes of engineering materials and mechanical stress states experienced by structural components. Derivation of performance indices. Selection and design of materials based on materials selection charts and performance indices. Application of materials selection concepts to ENGR 211 IPD #1 course. Prerequisites: MECH 2 MAT 33 or consent of instructor. DuPont

Proposed course number and course description (as it will appear in course catalog):

Mat 226. Materials Selection in Design (1) spring

Review of different classes of engineering materials and mechanical stress states experienced by structural components. Derivation of performance indices. Selection and design of materials based on materials selection charts and performance indices. Prerequisites: MECH 3 MAT 33, or consent of instructor DuPont

Description of proposed change(s):

For materials majors, MAT 226 will no longer be required as a prerequisite for ENGR 211 (IPD#1). The content of MAT 226 will be moved to MAT 338 Materials Selection and Failure Analysis (3).

Rationale for proposed change(s):

For materials majors, the content of this course has been moved to the senior year after they have taken ENGR 211

Impact Statement:

This change should be neutral since it just reflects the movement of course content from one course to another. This course is listed as a possible elective in the Materials Science and Engineering Minor, and in fact, will remain as such

Proposed Course Changes for APC
Materials Science and Engineering Department
MAT 338

Kind of change, e.g., "change in title"

Change of course content and number of credits

Current course number and course description (from course catalog):

MAT 338. Failure Analysis Reports (2) spring

Application of chemical and mechanical failure concepts, microstructural analysis, and fracture surface characterization to the analysis and prevention of engineering component failures. Conduct laboratory investigations on component failures with written and oral presentations of the results. Prerequisites: senior standing and MAT 204, MAT 206, MAT 210, MAT 214, and MAT 302

Proposed course number and course description (as it will appear in course catalog):

MAT 338. Materials Selection and Failure Analysis (3) spring

Materials selection based on selection charts and performance indices. Application of chemical and mechanical failure concepts, microstructural analysis, and fracture surface characterization to the analysis and prevention of engineering component failures. Conduct laboratory investigations on component failures with written and oral presentations of the results. Prerequisites: senior standing and MAT 204, MAT 206, MAT 214, and MAT 302.

Description of proposed change(s):

Currently, MAT 226 is a separate 1-credit course covering materials selection in design. The content of this course and its credit will be added to MAT 338. MAT 210 that was previously a pre-requisite for MAT 338 has been dropped. MAT 226 will continue to be offered as a separate course for non-majors.

Rationale for proposed change(s):

This change is part of our effort to reduce the number of separate courses taught.

Impact Statement:

This change should be neutral since it is just combining two courses.

Proposed New Course for APC

1. Proposed new course number and course description (as is it will appear in course catalog):

ENGR 130; Engineering Communications (1) summer

Experience and theory in oral and written communications preparing students for their first Co-Op work assignments. Required of all Engineering Co-Op students. ENGR 200 Concurrently.

2. Instructional mode (i.e., lecture, recitation, laboratory, seminar, independent study, or other) and number of contact hours per week:

Three two-hour lecture/presentation classes in each Summer Session

3. Rationale for proposed new course:

Presently no required RCEAS course exists that addresses effective writing and public speaking. The course provides opportunities for Co-Op students to understand and apply key concepts regarding effective business communication.

4. Academic impact on programs affected by new course:

Is this proposed new course cross-listed?

No

Is the proposed new course acceptable to all affected programs?

Yes

If there are known effects, individuals in charge of the affected programs must be consulted about the changes and the following information provided:

Who was consulted?

Is the proposed new course acceptable to the affected program?

Will any changes be required in the affected programs? If so, describe.

Identify any known effects of the proposed new course on the University's commitment to diversity.

No known effects

5. Resource Impact Statement:

Provide each of the following:

Library impact statement: None

Computer impact statement: None

Faculty impact statement: None

Facilities impact statement: None

Provide a statement indicating who will assume financial responsibility for any new resources required:

The course has only been taught by Adjunct staff. Any shortfall in the Summer Sessions revenue stream attributable to the course is covered by RCEAS.

College of Arts and Sciences: Women's Studies Program

Proposed New Certificate Program in Women's Studies

1. Title of new certificate program

Women's Studies Graduate Certificate

2. Mission statement

This interdisciplinary graduate certificate moves Lehigh and the Women's Studies Program in a direction that places us in line with our peer institutions. A hallmark of an excellent Women's Studies Program is providing graduate training that is accessible by students across many disciplines. While we are not currently in a position to offer a masters program, the proposed WS Graduate Certificate does provide the opportunity for graduate students at Lehigh University to receive substantial training in women's studies as a supplement to their departmental degree. The Certificate Program will also provide WS faculty the opportunity to work with high quality graduate students in this area and to assist in attracting high-quality graduate students to existing masters and doctoral programs. We propose a small, flexible certificate that provides students with breadth and the challenge of working outside their home discipline.

The Graduate Certificate Program was designed to be similar in nature to those offered by several peer institutions including: Columbia, Cornell, American, CUNY, and Duke in that it offers a common core course and requires work outside the home department while maintaining the flexibility students need to combine the certificate with their disciplinary program.

3. Identify the proposed market and/or clients this proposed certificate program is designed to address:

The proposed certificate is geared primarily toward Lehigh University graduate students in fields where women and gender are a sub-field of study such as sociology, English, history, political science, psychology, education, and business. We find a small but steady number of graduate students in these areas who express a need for such an opportunity. Currently there are 2-3 students each in History, English, American Studies and Sociology who have substantive interest in Women's Studies. The proposed certificate would also be open to non-matriculating students; however, they are not our target group at this time.

4. Rationale for proposed certificate program

WS faculty have a small but steady number of graduate students who express an interest in in-depth study of Women's Studies that they cannot gain solely within their home department. With a strong and active WS Program we are able to offer across departments what no individual department can – concentrated study in Women's Studies. Interested students can gain the desired experience and expertise through the development of a WS graduate certificate. A WS certificate is a recognized and respected graduate experience for those who wish to become scholars in the field. The use of combined 300-400 level courses ensure that in any given semester we will have adequate enrollment in the classes we offer. Instructors of combined 300/400-level courses develop different requirements and offer additional instructional time for graduate enrollees.

5. Description of proposed new certificate program

The WS Graduate Certificate Students requires a total of 4 courses for at least 12 credits. One course must be WS 450. One additional course must be a 400-level only course. At least two courses must be taken outside your home department. Non-matriculating students must take at least one social science and one humanities course. The list of 400-level and 300-level courses is below.

A. Admissions criteria

Students must be either:

- a graduate in good-standing in a Lehigh University graduate program or
- hold a bachelor's degree or equivalent with a GPA of 3.0 or greater

B. Specific program requirements, including specific required and elective courses (See

graduate certificates guidelines document for rules about number and level of courses. If new courses to be added, attach a completed new course proposal form for each.)

12 credits required, no more than 6 credits at the 300-level. All students must complete WS 450. One 400-level class must be a 400-level only class. At least two courses must be taken outside the home department. At least one social science and one humanities course are required of non-matriculating students.

I. All students must take WS 450 Seminar in Feminist Theory

II. 400-level only courses (take at least one)

WS/POLS 442 Gender and Third World Development

WS/PSYC 484 Psychology of Gender

EDUC 471 Diversity and Multicultural Perspectives

WS 495 Independent Study

WS 430 Internship in Women's Studies

From the following categories take no more than 2 courses (6 credits) at the 300-level

III. 300/400-level courses

WS/SSP 365/465 Inequalities at Work

WS/ENGL 311/411 Literature of Women

WS/SSP 341/441 Women and Health

IV. 300-level courses

WS 330 Internship in Women's Studies

WS/SSP 310 Gender, Race, and Sexuality: The Social Construction of Differences

WS/MLL 326 Tradition and Resistance: Women Writers of Latin America

WS/MLL 327 Women Writing in French

WS/HIST 325 History of Sexuality and the Family in the U.S.

WS/POLS 342 Gender and Third World Development

WS/SSP 351 Gender and Social Change

WS/SSP 364 Sociology of the Family

WS 373 Women's Center Internship

6. Academic Impact**A. Is the proposed new program interdisciplinary?**

Yes.

B. Identify any known effects of the proposed new program on other programs at the University.

The certificate relies on existing courses at the 300 and 400 levels. Since WS currently has no 400-level courses we will need to cross-list existing 400-level courses in other departments taught by WS faculty. Some courses that appear as new courses are actually existing courses at the 300-level that can be combined with 400-level in one classroom with different work requirements and additional separate instruction for graduate students who desire to work in that course at the 400-level. The instructors for these courses have been consulted. Beyond this, there are no new courses and no one course is being required. Students will be provided individual advising by the Director in conjunction with their departmental advisor. The use of combined 300-400 level courses ensure that in any given semester we will have adequate enrollment in the classes we offer. The differing expectations and instructional time will ensure that the graduate students engage the material at the graduate level.

Departmental impact beyond the initial work to cross-list the courses will be minimal and limited to one or two students a semester in any given course. All CAS departments with courses included in the graduate certificate proposal have seen and support the proposal. The College of Education supports WS graduate students enrolling in EDUC 471. The proposed new program will benefit departments with graduate courses in WS by providing their students with additional training beyond what can be offered by any one department. It should also assist in attracting high quality graduate students to existing graduate programs.

C. If there are known effects, individuals in charge of the affected programs must be consulted about the proposed new program and the following information provided:**(1) Who was consulted?**

All department chairs whose courses will be cross-listed with Women's Studies. Additionally, the certificate proposal was circulated widely to departments and programs for their consultation.

(2) Is the proposed new program acceptable to all other programs affected?

Yes.

(3) Will any changes be required in the affected programs? If so, please describe below:

No

D. Does the proposed new program affect the University's commitment to diversity in any way? If so, please describe below:.

The proposed program supports and broadens the University's commitment to diversity by allowing graduate students to develop expertise in an area of inquiry related to diversity (women and gender studies). In addition, many of the WS courses and faculty incorporate many dimensions of inequality (sexual orientation, race/ethnicity, global diversity, etc.) into their research and teaching.

7. Resource Impact**A. Provide impact statements in the four areas listed below:****(1) Library impact statement (attach statement if provided by LTS)**

Women's Studies already exists as a minor with significant library holdings in that area holdings in that area due to our many faculty who work in research and teaching related areas. No new courses are being

developed for this major. We do not require any new collections, databases, video, or journal acquisitions. Roseann Bowerman in the library was consulted.

(2) Computer impact statement (attach statement if provided by LTS)

No significant resources are expected for this certificate

(3) Faculty impact statement (how proposed program affects load on existing faculty or requires new faculty)

The Women's Studies Graduate Certificate can be implemented using existing faculty resources for AY 2007-08. WS 450 will have to be taught each year and this can be done with existing resources. Women's Studies already offers approximately 10 courses at the 300-level and will have 8 at the 400-level once the cross-listings are completed. In any given academic year, 5-8 of these courses are offered, providing certificate students significant choice in their program. There are also a few cross-listed courses each summer. The Director, who currently serves as the minor advisor, will serve as Women's Studies Graduate Certificate advisor.

(4) Facilities impact statement (how proposed program affects load on existing facilities or requires new facilities)

No significant facilities changes are expected for this certificate.

B. Provide a statement indicating who will assume financial responsibility for any new resources required:

No new resources required.

COURSE CHANGE FORM
Changes due November 15, 2006

Submitting department/program: Biological Sciences

Contact person with e-mail/phone: R. Michael Burger; rmb206@lehigh.edu ; 8-5422

1. Courses added:

BioS 4XX: Advanced Neurobiology of Sensory Systems.

This course is designed to provide an overview of core principles of neuroscience through exploration of sensory systems. The course will provide an intensive review of fundamental neural signaling followed by a broad introduction to the major sensory pathways. Focus will be on major organizing principals of neural systems, and information processing. Student discussions and presentations will incorporate current literature and concepts.

2. Courses dropped:

n/a

3. Changes in course descriptions, titles, or numbers:

n/a

4. Cross-listings with other programs or departments added or dropped (Have the other departments been consulted?):

Not cross listed

5. Rationales for changes:

New course offering in the field of expertise of a new faculty member

6. Impacts on students already in the program (that could affect their ability to complete the program):

No negative impact

7. Impacts on students pursuing majors or minors in other programs or departments who are required to take courses in your department (that could affect their ability to complete those programs. Have the affected departments been consulted?):

No negative impacts

8. Impacts on faculty resources in your program (including class sizes, ability to offer certain courses or their frequency, additional faculty or TA staffing needs, etc.):

No additional resources required

9. Impacts on faculty resources in other programs or departments (including enrollments, cross-listings, etc. Have the other departments been consulted?):

No negative impact

10. Impacts on other university resources (staff, facilities, library and computing resources, etc. Have the affected units been consulted?):

No negative impact

COURSE CHANGE FORM
Changes due November 15, 2006

Submitting department/program: Biological Sciences

Contact person with e-mail/phone: Matthias Falk, mfalk@lehigh.edu; 8-5896

1. Courses added:

BioS 4XX: Current Research in Cell-Cell Junction Biology

Research presentations and discussion topics include: Structure and function of cell-cell junctions in cell-cell communication, cell adhesion and migration and in disease mechanisms. Particular emphasis will be on molecular aspects of gap junction biosynthesis and degradation, and on the regulation of direct cell-to-cell communication under physiological and pathological conditions. Prerequisite: consent of instructor.

2. Courses dropped:

n/a

3. Changes in course descriptions, titles, or numbers:

n/a

4. Cross-listings with other programs or departments added or dropped (Have the other departments been consulted?):

Not cross listed

5. Rationales for changes:

New course offering in the field of expertise of a new faculty member

6. Impacts on students already in the program (that could affect their ability to complete the program):

No negative impact

7. Impacts on students pursuing majors or minors in other programs or departments who are required to take courses in your department (that could affect their ability to complete those

programs. Have the affected departments been consulted?):

No negative impacts

8. Impacts on faculty resources in your program (including class sizes, ability to offer certain courses or their frequency, additional faculty or TA staffing needs, etc.):

No additional resources required

9. Impacts on faculty resources in other programs or departments (including enrollments, cross-listings, etc. Have the other departments been consulted?):

No negative impact

10. Impacts on other university resources (staff, facilities, library and computing resources, etc. Have the affected units been consulted?):

No negative impact

(2) Computer impact statement

(3) Faculty impact statement

(4) Facilities impact

B. Provide a statement indicating who will assume financial responsibility for any new resources required: none –

Proposed New Course

1. Proposed new course number and course description (as it will appear in course catalogue): *ENGL 497: Public Speaking*

This course is a public speaking course for students who are interested in public speaking. The course will cover the basics of public speaking, including the history of public speaking, the importance of public speaking, and the various types of public speaking. The course will also cover the various techniques of public speaking, including the use of visual aids, the use of humor, and the use of stories. The course will be taught in a lecture format with a lot of student participation. The course will be offered in the fall semester.

2. Instructional mode (lecture, recitation, laboratory, seminar, independent study, or other) and number of contact hours per week: *lecture 150 minutes/week.*

3. Rationale for proposed new course: *This course has been taught previously as a special topics course in Rochester (ENGL 497: Public Speaking). It is a required course for the Regulatory Affairs Certificate and will be offered as a regular course in the curriculum. The course may also be taken by students in the Health Care program.*

4. Academic impact on programs affected by new course:

A. Is the proposed course to be cross-listed? *No.*

B. Identify any known effects of the proposed new course on other programs at the University. *None.*

C. If there are known effects, individuals in charge of the affected programs must be consulted about the proposed new course and the following information provided: *Not applicable.*

(1) Who was consulted? *Not applicable.*

(2) Is the proposed new course acceptable to all other programs affected?
Not applicable.

(3) Will any changes be required in the affected programs? If so, please describe below: No significant.

D. Does the proposed new course affect the University's commitment to diversity in any way? If so, please describe below: No.

5. Resource Impact

A. Provide impact statements in the four areas listed below:

(1) Library impact statement: This certificate program is prepared almost entirely for the Distance Education market and has little discernible potential impact on campus facilities. The schedule of courses may result in an increase in help requests from students enrolled in the program.

(2) Computer impact statement: This certificate program is prepared almost exclusively for the Distance Education market and has little discernible potential impact on campus facilities.

(3) Faculty impact statement (How proposed program affects workload of faculty or resources (e.g. example: The Department of Chemistry has one full professor for the program to deliver one 3-credit lecture. See Appendix)

(4) Facilities impact statement (How proposed program affects use of existing facilities or requires new facilities) This certificate program is prepared almost exclusively for the Distance Education market and has little discernible potential impact on campus facilities.

B. Provide a statement indicating who will assume financial responsibility for any new resources required: Under the current operating budget financial model, it is assumed that the Department will assume full responsibility for any new resources required for this certificate program.

APPENDIX

The faculty member designing and teaching this course will be Dr. Ned Heindel Professor of Chemistry at Lehigh University.

Guest Lecturers:

It is clear that we will need the instructional services of active professionals for this certificate program. These individuals are professors, professionals, and/or alumni with extensive experience in regulatory affairs. We have spoken to a number of them and they have indicated a willingness to teach in the certificate program. The guest lecturers may include:

James E. Roberts	Professor – Lehigh University
Christine Ochola	Professor -- Villanova University
Eve Damiano	Azevan Pharmaceuticals
Matt Hsu	J&J Pharmaceuticals
Susmita SenGupta	CVS Pharmacy
James Stefely	3M (Health Care Division)
Robert SeEVERS	Eli Lilly Pharmaceuticals
Janis Upeslakis	Wyeth Pharmaceuticals
Larry AugsburgER	Professor – University of Maryland
Christian Wertz	Elan Pharmaceuticals
Carl Burke	Merck
Dev Mehra	Formulations, Inc.
James Rittenburg	Authentix
David Fairhurst	Particle Sciences
Patricia Cash	Sanofi-Aventis Pharmaceuticals
Robert Shorr	Prolong Pharmaceuticals
Steven Baertschi	Eli Lilly Pharmaceuticals

Earth and Environmental Sciences COURSE & CURRICULUM CHANGES: 2006-2007

1. *Courses dropped*

EES 428 Stress and Strain in Rocks

Rationale:

Stress and Strain in Rocks has 1. never been very popular, 2. is no longer central to Anastasio's active research so is less necessary for graduate student training, and 3. some course topics can still be covered as need arises using EES 427 or EES 493.

2. *Courses added*

ES402/EES402 Environmental Scientific Foundations for Policy Design

Course explores the science behind the environmental issues that bear on the policy process at local, national, and global scales. Scientific concepts will be explored with the goal of understanding ways in which they can better inform the policy process at all scales. The course delves into the science of selected environmental issues that have either arisen from anthropogenic activities, or that impact social systems. The course will consist of readings and discussions of several timely topics and one major class-wide project to be selected each semester. 3 credits (NS) Sahagian

Rationale:

Required course for anticipated degree program, MA Environmental Policy Design, elective offering for EES, developed by new faculty member Sahagian

Other changes (number, title, prerequisites, distribution designation)

Title Change (only change the title):

NONE

Prerequisites Change:

EES 405-Paleo-and Environmental Magnetism

Prerequisite change from EES309 to Consent of course instructor.

Rationale: EES 309 has been dropped from the EES curriculum.

3. *Changes in description and credits*

EES 427 Orogenic Belts.

From Current course description:

Geometry, kinematics, and mechanics of compressional orogenic belts. Course emphasize deformational, depositional, and metamorphic processes in forearc and backarc regions. Lectures, seminars, and fieldtrips. Prerequisites: EES 131, EES 213, EES 223 or their equivalents. Anastasio

To Proposed course description:

Geometry, kinematics, and mechanics of orogenic belts. Course will explore current paradigms of depositional, deformational, and metamorphic processes in the Earth's crust. Lectures, seminars and fieldtrips. Topically variable may be repeated for credit. Prerequisites: EES 131, EES 213, EES 223 or their equivalents. Anastasio

Rationale:

Changes in description to EES 427 allow it to be repeated for credit when topic varies.

4. Impacts of course changes

There as no substantive impacts from these course changes

Program changes

NONE

College of Arts and Sciences: Women's Studies Program

Proposed New Certificate Program in Women's Studies

1. Title of new certificate program

Women's Studies Graduate Certificate

2. Mission statement

This interdisciplinary graduate certificate moves Lehigh and the Women's Studies Program in a direction that places us in line with our peer institutions (put examples here). A hallmark of an excellent Women's Studies Program is providing graduate training that is accessible by students across many disciplines. While we are not currently in a position to offer a masters program, the proposed WS Graduate Certificate does provide the opportunity for graduate students at Lehigh University to receive substantial training in women's studies as a supplement to their departmental degree. The Certificate Program will also provide WS faculty the opportunity to work with high quality graduate students in this area and to assist in attracting high-quality graduate students to existing masters and doctoral programs. We propose a small, flexible certificate that provides students with breadth and the challenge of working outside their home discipline.

The Graduate Certificate Program was designed to be similar in nature to those offered by several peer institutions including: Columbia, Cornell, American, CUNY, and Duke in that it offers a common core course and requires work outside the home department while maintaining the flexibility students need to combine the certificate with their disciplinary program.

3. Identify the proposed market and/or clients this proposed certificate program is designed to address:

The proposed certificate is geared primarily toward Lehigh University graduate students in fields where women and gender are a sub-field of study such as sociology, English, history, political science, psychology, education, and business. We find a small but steady number of graduate students in these areas who express a need for such an opportunity. Currently there are 2-3 students each in History, English, American Studies and Sociology who have substantive interest in Women's Studies. The proposed certificate would also be open to non-matriculating students; however, they are not our target group at this time.

4. Rationale for proposed certificate program

WS faculty have a small but steady number of graduate students who express an interest in in-depth study of Women's Studies that they cannot gain solely within their home department. With a strong and active WS Program, we are able to offer across departments what no individual department can – concentrated study in Women's Studies. Interested students can gain the desired experience and expertise through the development of a WS graduate certificate. A WS certificate is a recognized and respected graduate experience for those who wish to become scholars in the field. The use of combined 300-400 level courses ensure that in any given semester we will have adequate enrollment in the classes we offer. Instructors of combined 300/400-level courses develop different requirements and offer additional instructional time for

graduate enrollees.

5. Description of proposed new certificate program

The WS Graduate Certificate Students requires a total of 4 courses for at least 12 credits. At least two courses must be at the 400-level with one of these a 400-level only class. At least two courses must be taken outside your home department. Non-matriculating students must take at least one social science and one humanities course. The list of 400-level and 300-level courses is below.

A. Admissions criteria

Students must be either:

- a graduate in good-standing in a Lehigh University graduate program or
- hold a bachelor's degree or equivalent with a GPA of 3.0 or greater

B. Specific program requirements, including specific required and elective courses (See graduate certificates guidelines document for rules about number and level of courses. If new courses to be added, attach a completed new course proposal form for each.)

12 credits required, no more than 6 credits at the 300-level All students must complete WS 450. One 400-level class must be a 400-level only class. At least two courses must be taken outside the home department. At least one social science and one humanities course are required of non-matriculating students.

I. All students must take WS 450.

II. 400-level courses: (take at least one for 3 credits – one must be 400-only) 400-level only courses are indicated by *

WS 450 Seminar in Feminist Theory

WS/SSF 465 Inequalities at Work

WS/ENGL 411 Literature of Women

*WS/POLS 442 Gender and Third World Development

*WS/PSYC 484 Psychology of Gender

*EDUC 471 Diversity and Multicultural Perspectives

*WS 495 Independent Study

*WS 430 Internship in Women's Studies

WS/SSF 461 Women and Health

III. 300-level courses: (take no more than two for 6 credits)

WS 330 Internship in Women's Studies

WS 311 Literature of Women

WS 310 Gender, Race, and Sexuality: The Social Construction of Differences

WS326 Tradition and Resistance: Women Writers of Latin America

WS 365 Inequalities at Work

WS 327 Women Writing in French

WS325 History of Sexuality and the Family in the U.S

WS 341 Women and Health

WS342 Gender and Third World Development

WS351 Gender and Social Change

WS364 Sociology of the Family

WS373 Women's Center Internship

6. Academic Impact

A. Is the proposed new program interdisciplinary?

Yes.

B. Identify any known effects of the proposed new program on other programs at the University.

The certificate relies on existing courses at the 300 and 400 levels. Since WS currently has no 400-level courses, we will need to cross-list existing 400-level courses in other departments taught by WS faculty. Some courses that appear as new courses are actually existing courses at the 300-level that can be combined with 400-level in one classroom with different work requirements and additional separate instruction for graduate students who desire to work in that course at the 400-level. The instructors for these courses have been consulted. Beyond this, there are no new courses and no one course is being required. Students will be provided individual advising by the Director in conjunction with their departmental advisor. The use of combined 300-400 level courses ensure that in any given semester we will have adequate enrollment in the classes we offer. The differing expectations and instructional time will ensure that the graduate students engage the material at the graduate level.

Departmental impact beyond the initial work to cross-list the courses will be minimal and limited to one or two students a semester in any given course. All CAS departments with courses included in the graduate certificate proposal have seen and support the proposal. The College of Education supports WS graduate students enrolling in EDUC 471. The proposed new program will benefit departments with graduate courses in WS by providing their students with additional training beyond what can be offered by any one department. It should also assist in attracting high quality graduate students to existing graduate programs.

C. If there are known effects, individuals in charge of the affected programs must be consulted about the proposed new program and the following information provided:

(1) Who was consulted?

All department chairs whose courses will be cross-listed with Women's Studies. Additionally, the certificate proposal was circulated widely to departments and programs for their consultation

(2) Is the proposed new program acceptable to all other programs affected?

Yes.

(3) Will any changes be required in the affected programs? If so, please describe below:

No.

D. Does the proposed new program affect the University's commitment to diversity in any way? If so, please describe below:.

The proposed program supports and broadens the University's commitment to diversity by allowing graduate students to develop expertise in an area of inquiry related to diversity (women and gender studies). In addition, many of the WS courses and faculty incorporate many dimensions of inequality (sexual orientation, race/ethnicity, global diversity, etc.) into their research and teaching.

7. Resource Impact

A. Provide impact statements in the four areas listed below:

(1) Library impact statement (attach statement if provided by LTS)

Women's Studies already exists as a minor with significant library holdings in that area holdings in that area due to our many faculty who work in research and teaching related areas. No new courses are being developed for this major. We do not require any new collections, databases video, or journal acquisitions. Roseann Bowerman in the library was consulted

(2) Computer impact statement (attach statement if provided by LTS)

No significant resources are expected for this certificate.

(3) Faculty impact statement (how proposed program affects load on existing faculty or requires new faculty)

The Women's Studies Graduate Certificate can be implemented using existing faculty resources

for AY 2007-08, WS 450 will have to be taught each year and this can be done with existing resources. Women's Studies already offers approximately 10 courses at the 300-level and will have 8 at the 400-level once the cross-listings are completed. In any given academic year, 5-8 of these courses are offered, providing certificate students significant choice in their program. There are also a few cross-listed courses each summer. The Director, who currently serves as the minor advisor, will serve as Women's Studies Graduate Certificate advisor.

(4) Facilities impact statement (how proposed program affects load on existing facilities or requires new facilities)

No significant facilities changes are expected for this certificate.

B. Provide a statement indicating who will assume financial responsibility for any new resources required:

No new resources required.

Women's Studies Program Catalog Changes – Fall 2007

Graduate Courses

Proposed Course Changes (add a new course)

1. Proposed new course number and course description (as is it will appear in course catalog):

WS 450 Seminar in Feminist Theory (3) A graduate seminar providing foundational study of multidisciplinary theoretical frameworks of women's studies.

2. Instructional mode (i.e., lecture, recitation, laboratory, seminar, independent study, or other) and number of contact hours per week:

Seminar

3. Rationale for proposed new course:

To serve the needs of the proposed graduate certificate. This will be the 400-level version of the existing WS 350 class. To be taught concurrently. Graduate enrollees will have different requirements and additional instruction.

4. Academic impact on programs affected by new course:

a. **Is this proposed new course cross-listed?** No.

b. **Is the proposed new course acceptable to all affected programs?** n/a

c. **If there are known effects, individuals in charge of the affected programs must be consulted about the changes and the following information provided:**

1. **Who was consulted?** No one else. Course is only WS

2. **Is the proposed new course acceptable to the affected program?** n/a

3. **Will any changes be required in the affected programs? If so, describe.** n/a

d. **Identify any known effects of the proposed new course on the University's commitment to diversity.**

The course topic is in Women's Studies, an area of diversity of concern to the University. Content area will cover the intersections of race, class, and gender.

5. Resource Impact Statement:

a. **Provide each of the following:**

1. **Library impact statement:** None.
 2. **Computer impact statement:** None.
 3. **Faculty impact statement:** Slight. WS will need to make sure that this course is taught regularly, at least once every 3 semesters. With the added FTE of the WS Director, this need can be met. Course will be taught concurrently with WS 350.
 4. **Facilities impact statement:** None
- b. **Provide a statement indicating who will assume financial responsibility for any new resources required:**

WS will assume financial responsibility for any new resources required.

Proposed Course Changes (add a new course)

1. Proposed new course number and course description (as is it will appear in course catalog):

WS 465 (SSP 465) Inequalities at Work (3) Primary focus is on race, gender, and class as axes of disadvantage and privilege in work and employment. We will explore both theories and empirical studies of inequality as well as their social, political, and practical ramifications for the workplace. Krasas (SS)

2. Instructional mode (i.e., lecture, recitation, laboratory, seminar, independent study, or other) and number of contact hours per week:

Seminar

3. Rationale for proposed new course:

To serve the needs of the proposed graduate certificate. This will be the 400-level version of the existing WS/SSP 365 class. To be taught concurrently. Graduate enrollees will have different requirements and additional instruction.

4. Academic impact on programs affected by new course:

a. **Is this proposed new course cross-listed?** Yes.

b. **Is the proposed new course acceptable to all affected programs?** Yes

c. **If there are known effects, individuals in charge of the affected programs must be consulted about the changes and the following information provided:**

1. **Who was consulted?** Sociology and Anthropology

2. **Is the proposed new course acceptable to the affected program?** Yes.

3. **Will any changes be required in the affected programs? If so, describe.** No.

d. **Identify any known effects of the proposed new course on the University's commitment to diversity.**

The course content concerns issues of diversity and inequality in the workplace.

5. Resource Impact Statement:

a. **Provide each of the following:**

1. **Library impact statement:** None.

2. **Computer impact statement:** None.

3. Faculty impact statement: None.

4. Facilities impact statement: None

b. Provide a statement indicating who will assume financial responsibility for any new resources required:

WS will assume financial responsibility for any new resources required

Proposed Course Changes (add a new course)

1. Proposed new course number and course description (as is it will appear in course catalog):

WS 411 (ENGL 411) Literature of Women (3) Women's works about women. Besides re-reading familiar feminists fiction, drama, and poems, an introduction to contemporary and often experimental works by less famous writers. (HU)

2. Instructional mode (i.e., lecture, recitation, laboratory, seminar, independent study, or other) and number of contact hours per week:

Seminar

3. Rationale for proposed new course:

To serve the needs of the proposed graduate certificate. This will be the 400-level version of the existing ENGL 311 class. To be taught concurrently. Graduate enrollees will have different requirements and additional instruction.

4. Academic impact on programs affected by new course:

a. **Is this proposed new course cross-listed?** Yes.

b. **Is the proposed new course acceptable to all affected programs?** Yes.

c. **If there are known effects, individuals in charge of the affected programs must be consulted about the changes and the following information provided:**

1. **Who was consulted?** English

Is the proposed new course acceptable to the affected program? Yes

Will any changes be required in the affected programs? If so, describe. No.

d. **Identify any known effects of the proposed new course on the University's commitment to diversity.**

The course content concerns women's writing.

5. Resource Impact Statement:

a. **Provide each of the following:**

1. **Library impact statement:** None.

2. **Computer impact statement:** None

3. **Faculty impact statement:** None.

4. **Facilities impact statement:** None

b. **Provide a statement indicating who will assume financial responsibility for any new resources required:**

WS will assume financial responsibility for any new resources required

Proposed Course Changes (add a new course)

1. Proposed new course number and course description (as is it will appear in course catalog):

WS 491 Independent Study (3) Individually supervised course in area of Women's Studies not ordinarily covered in regularly listed courses Prerequisite: consent of the Program Director

2. Instructional mode (i.e., lecture, recitation, laboratory, seminar, independent study, or other) and number of contact hours per week:

Independent study

3. Rationale for proposed new course:

To serve the needs of the proposed graduate certificate.

4. Academic impact on programs affected by new course:

a. Is this proposed new course cross-listed? No

b. Is the proposed new course acceptable to all affected programs? n/a

c. If there are known effects, individuals in charge of the affected programs must be consulted about the changes and the following information provided:

1. Who was consulted? n/a

2. Is the proposed new course acceptable to the affected program? n/a

3. Will any changes be required in the affected programs? If so, describe. n/a

d. Identify any known effects of the proposed new course on the University's commitment to diversity.

Intensive study in women s studies

5. Resource Impact Statement:

a. Provide each of the following:

1. Library impact statement: None.

2. Computer impact statement: None

3. Faculty impact statement: None.

4. Facilities impact statement: None

- b. **Provide a statement indicating who will assume financial responsibility for any new resources required:**

WS will assume financial responsibility for any new resources required.

Proposed Course Changes (add a new course)

1. Proposed new course number and course description (as is it will appear in course catalog):

WS 430 Internship in Women's Studies (3) Internship related to women s studies. Supervised by Women's Studies faculty. Prerequisite: consent of the Program Director

2. Instructional mode (i.e., lecture, recitation, laboratory, seminar, independent study, or other) and number of contact hours per week:

Internship

3. Rationale for proposed new course:

To serve the needs of the proposed graduate certificate.

4. Academic impact on programs affected by new course:

a. Is this proposed new course cross-listed? No

b. Is the proposed new course acceptable to all affected programs? n/a

c. If there are known effects, individuals in charge of the affected programs must be consulted about the changes and the following information provided:

1. Who was consulted? n/a

2. Is the proposed new course acceptable to the affected program? n/a

3. Will any changes be required in the affected programs? If so, describe. n/a

d. Identify any known effects of the proposed new course on the University's commitment to diversity.

Intensive practical experience in field setting pertinent to women's studies.

5. Resource Impact Statement:

a. Provide each of the following:

1. Library impact statement: None.

2. Computer impact statement: None.

3. Faculty impact statement: None.

4. Facilities impact statement: None

- b. Provide a statement indicating who will assume financial responsibility for any new resources required:**

WS will assume financial responsibility for any new resources required.

Proposed Course Changes (Modify existing description/cross-list)

1. Current course number and course description (from course catalog):

POLS 442 Gender and Third World Development (3) Issues of international economic development with a particular focus on how gender informs both the academic discourse of development as well as how development policies are gendered in their conception and implementation. Stewart-Gambino

2. Proposed course number and course description (as it will appear in course catalog):

WS 442 (POLS 442) Gender and Third World Development (3) Issues of international economic development with a particular focus on how gender informs both the academic discourse of development as well as how development policies are gendered in their conception and implementation. Stewart-Gambino

3. Description of proposed change(s):

Cross-list with Political Science

4. Rationale for proposed change(s):

To serve the needs of the proposed graduate certificate.

5. Impact Statement:

None. This course is offered now and will not be affected other than potential additional enrollment of a student or two on occasion. Political Science and the instructor have been consulted and support the cross-listing.

Proposed Course Changes (Modify existing description/cross-list)

1. Current course number and course description (from course catalog):

PSYC 484 Psychology of Gender (3) Major theoretical approaches and empirical debates in the psychology of gender, with a focus on the interplay of nature and nurture in producing gender similarities, gender differences and gender variation in personality, social behaviors, cognitive abilities, achievement, sexuality, and mental health. Methodological issues in gender research. Prerequisite: graduate standing. Department permission required. Hyland

2. Proposed course number and course description (as it will appear in course catalog):

WS 484 (PSYC 484) Psychology of Gender (3) Major theoretical approaches and empirical debates in the psychology of gender, with a focus on the interplay of nature and nurture in producing gender similarities, gender differences and gender variation in personality, social behaviors, cognitive abilities, achievement, sexuality, and mental health. Methodological issues in gender research. Prerequisite: graduate standing. Department permission required. Hyland

3. Description of proposed change(s):

Cross-list with Psychology

4. Rationale for proposed change(s):

To serve the needs of the proposed graduate certificate.

5. Impact Statement:

None. This course is offered now and will not be affected other than potential additional enrollment of a student or two on occasion. Psychology and the instructor have been consulted and support the cross-listing.

Proposed Course Changes (Modify existing description/cross-list)

1. **Current course number and course description (from course catalog):**
SOC 441 Women and Health (3)
2. **Proposed course number and course description (as it will appear in course catalog):**
WS 441 (SOC 441) Women and Health (3)
3. **Description of proposed change(s):**
Cross-list with Sociology
4. **Rationale for proposed change(s):**
To serve the needs of the proposed graduate certificate.
5. **Impact Statement:**
None. This course is offered now and will not be affected other than potential additional enrollment of a student or two on occasion. Sociology and the instructor have been consulted and support the cross-listing.

College of Arts and Sciences: Environmental Initiative

Proposed New Course

1. Proposed new course number and course description (as it will appear in course catalogue): ES 402: Scientific Foundations for Environmental Policy Design (3 credits): This course explores the science behind the environmental issues that bear on the policy process at local, national and global scales. Scientific concepts will be explored with the goal of understanding ways in which they can better inform the policy process at all scales. The course delves into the science of selected environmental issues that have either arisen from anthropogenic activities, or that impact social systems. (SAHAGIAN)

2. Instructional mode (lecture, recitation, laboratory, seminar, independent study, or other) and number of contact hours per week: Lecture, reading and discussion. Three contact hours per week

3. Rationale for proposed new course: Required course for anticipated degree program, MA Environmental Policy Design, elective offering for EES graduate programs, and ES graduate certificate, developed by new faculty member Sahagian. It will delve into the scientific literature that is most relevant to policy issues so that students can better understand the scientific basis for environmental decision making

4. Academic Impact on programs affected by new course: The newly proposed M.A. in Environmental Policy Design will depend on this required course being offered. It will also enhance the curricula of other related M.A. curricula on campus. No programs will be adversely affected

A. Is the proposed course to be cross-listed? Yes (with EES402)

B. Identify any known effects of the proposed new course on other programs at the University.
The course will provide additional electives for EES graduate students, giving policy-relevance to their course work and research

C. If there are known effects, individuals in charge of the affected programs must be consulted about the proposed new course and the following information provided:

(1) Who was consulted? EES faculty

(2) Is the proposed new course acceptable to all other programs affected? YES

(3) Will any changes be required in the affected programs? If so, please describe below:

D. Does the proposed new course affect the University's commitment to diversity in any way?
If so, please describe below: No.

5. Resource Impact

A. Provide impact statements in the four areas listed below:

(1) Library impact statement Covered in EI library impact statement, in which it was stated that there will need to be some increased spending on books and reference works covering environmental policy, recycling, and environmental management. No additional impact from this proposal.

(2) Computer impact statement None

(3) Faculty impact statement The course is part of the expected course load for the joint EI faculty.

(4) Facilities impact statement No impact

B. Provide a statement indicating who will assume financial responsibility for any new resources required: EI

Proposed Course Changes

1. Current course number, title, course description, and credits (from present course catalog)

MACC 401. Professional Issues in Accounting (3)

This course consists of three modules designed to provide students with an overview of professional accounting topics. The first module introduces business case analysis. Cases will be dissected, analyzed and discussed. A range of business topics will be used to demonstrate the case method. The second module examines the behavioral foundations of the negotiation process. Topics include planning, tactics, power, integrative and distributive bargaining, behavioral styles and individual and team negotiations. The third module examines ethical issues as they relate to business. Through debate and case studies, students will be challenged to determine what are acceptable and ethical business practices, primarily in an international environment, and how these practices relate to the highly diverse elements that comprise today's complex global enterprises. Open only to MSAIA students.

2. Proposed course number, title, course description, and credits (as it will appear in the catalogue)

MACC 401. Professional Issues in Accounting – Negotiation (1)

This course examines the behavioral foundations of the negotiation process. Topics include planning tactics, power, integrative and distributive bargaining, behavioral styles and individual and team negotiations. MACC 401 and MACC 402 are prerequisites to the balance of the MACC core course sequence. Open only to MSAIA students.

MACC 402. Professional Issues in Accounting – Case Analysis (1)

Introduces business case analysis. Cases will be dissected, analyzed and discussed. A range of business topics will be used to demonstrate the case method. MACC 401 and MACC 402 are prerequisites to the balance of the MACC core course sequence. Open only to MSAIA students.

MACC 403. Professional Issues in Accounting – Ethics (1)

Examines ethical issues as they relate to business. Through debate and case studies, students will be challenged to determine what are acceptable and ethical business practices, primarily in an international environment, and how these practices relate to the highly diverse elements that comprise today's complex global enterprises. Open only to MSAIA students.

3. Nature of proposed change(s)

A. Course title change? If so provide rationale below:

As indicated by the foregoing descriptions, we are proposing to separate MACC 401, now a three-credit course into three one-credit courses. We have been offering MACC 401 over three Friday/Saturdays in August, during the Summer II session, before students start the rest of the MACC core sequence. The reason for doing so was twofold. (1) to provide students with necessary skills they require to be successful in the MSAIA Program and in their careers, and (2) to reduce the students' workload in the fall and spring semesters. We have been scheduling the MACC 401 course on Fridays and Saturdays to avoid conflicts with students' summer internships. Unfortunately the modules scheduled earliest in August have been conflicting with internships, which are typically not completed until around August 10th to 12th. We intend to avoid this problem by scheduling two of the courses (MACC 401 and MACC 402) during the third and fourth Friday/Saturday sequences in August. We intend to schedule MACC 403 in the spring semester. We have found that the information in MACC 403 does not need to be a prerequisite for the rest of the core sequence. Hence, we intend to offer this course in the spring. It is not desirable to schedule MACC 403

in the fall due to a heavier workload in the fall semester as compared to the spring. Because we are thus compelled to schedule the courses over two different semesters, a reasonable solution is to split MACC 401 into three separate courses. Otherwise we would be required to keep the course grade in suspense over several semesters.

B. Course number change? If so, provide rationale below:

Please see explanation under 3(A).

C. Change in course credits? If so provide rationale below:

Please see explanation under 3(A).

D. Change in course description? If so provide rationale below:

Please see explanation under 3(A).

E. Other change(s)? If so, please describe below and provide rationale for each change.

4. Resource Impact

A. Provide impact statements in the four areas listed below:

(1) Library impact statement (attach statement if provided by LTS)

No change

(2) Computer impact statement (attach statement if provided by LTS)

No change.

(3) Faculty impact statement (how proposed program affects use of existing faculty or requires new faculty)

No change.

(4) Facilities impact statement (how proposed program affects use of existing facilities or requires new facilities)

No change

B. Provide a statement indicating who will assume financial responsibility for any new resources required:

No new resources are required.

GRC

I recommend that the following change be added to R&P 3.27.2 based on the discussion in the GRC on February 13, 2007:

Change the sentence "Graduate student incomplete course grades which are not removed remain as N grades on the student's record" to:

Graduate student incomplete course grades which are not removed remain as N or N(grade) on the student record for one year. After one year, the N grade will be converted to an F and the N(grade) will be converted to the parenthetical letter grade.

Revised 3.27.2 would now read:

3.27.2 Incomplete (N grade)

The N grade is defined as in section 3.8.2 except that parenthetical grades are not required for thesis or research courses and graduate students have a calendar year to remove course incomplete grades unless an earlier deadline is specified by the instructor. Graduate student incomplete course grades which are not removed remain as N or N(grade) on the student record for one year. After one year, the N grade will be converted to an F and the N(grade) will be converted to the parenthetical letter grade. Thesis or research project N grades may remain beyond one year until the work is completed.