

ADDENDUM TO AGENDA
UNIVERSITY COMMITTEE ON COURSES AND CURRICULA
January 22, 2015

1. Welcome
2. Approval of Minutes
3. Course proposals by college/school

AGRICULTURE AND LIFE SCIENCES

Addition	GE 3813	Challenges in Global Engineering (Tabled at Dec. 15, 2015 meeting)
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4. Degree proposals by college/school

ENGINEERING

Modification	BS	Mechanical Engineering
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APPROVAL FORM FOR

DEGREE PROGRAMS

MISSISSIPPI STATE UNIVERSITY

NOTE: This form is a cover sheet that must accompany the degree program change proposal. The actual proposal should be prepared in accordance with format requirements provided in the *Guide and Format for Curriculum Proposals* published by the UCCC. Both cover sheet and proposal should be submitted, along with all required copies, to UCCC, Garner Hall, Room 279, Mail Stop 9702.

College: Engineering

Department: Mechanical Engineering

Contact Person: Rogelio Luck

Mail Stop: 9552 E-mail: luck@me.msstate.edu

Nature of Change: Modification

Date Initiated: 01/14/2016 Effective Date: Spring 2016

Degree to be offered at: Starkville (Campus 1)

Current Degree Program Name: Bachelor of Science

Major: Mechanical Engineering

Concentration:

New Degree Program Name:

Major:

Concentration:

Summary of Proposed Changes:


This program modification reverts back to the program prior to the program modification change approved in October 2015 due to ABET accreditation issues. However, the ECE course replacement of ECE 3183 with ECE 3413 will be retained from the program modification approved in October 2015.

Approved:

Date:


 Department Head

1/14/16


 Chair, College or School Curriculum Committee

1/19/16


 Dean of College or School

1/19/16

Chair, University Committee on Courses and Curricula

Chair, Graduate Council (if applicable)

Chair, Deans Council

IHL Action Required

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SACS Letter Sent

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Proposal for the Modification of the B.S. in Mechanical Engineering

1. CATALOG DESCRIPTION

No changes proposed.

2. CURRICULUM OUTLINE

Detailed list of changes

- Add Physics III (PH 2233) to Math/Science core.

CURRENT Degree Description	PROPOSED Degree Description
Degree: Bachelor of Science Major: Mechanical Engineering Concentration:	Degree: Bachelor of Science Major: Mechanical Engineering Concentration:
Mechanical Engineering is the application of science and mathematics to the design, development, and operation of mechanical and energy systems. Examples of these systems include mechanical devices ranging from simple linkages and gears to complex automated robots and energy systems ranging from basic water pumps to high-performance jet engines. Since the range of applications is so broad, virtually all industries employ Mechanical Engineers in various capacities. Some of the major areas of employment are the manufacturing, chemical, paper, aerospace, utility, construction, transportation, petroleum, electronics, and computer industries.	Mechanical Engineering is the application of science and mathematics to the design, development, and operation of mechanical and energy systems. Examples of these systems include mechanical devices ranging from simple linkages and gears to complex automated robots and energy systems ranging from basic water pumps to high-performance jet engines. Since the range of applications is so broad, virtually all industries employ Mechanical Engineers in various capacities. Some of the major areas of employment are the manufacturing, chemical, paper, aerospace, utility, construction, transportation, petroleum, electronics, and computer industries.
The mission of the Department of Mechanical Engineering is to educate students in fundamental engineering principles, thus enabling the understanding of existing and next generation technologies relevant to research and engineering practice. All graduates will receive a broad education that will enable them to be successful in industry or academia, the profession and the community.	The mission of the Department of Mechanical Engineering is to educate students in fundamental engineering principles, thus enabling the understanding of existing and next generation technologies relevant to research and engineering practice. All graduates will receive a broad education that will enable them to be successful in industry or academia, the profession and the community.
To carry out this mission, the Mechanical Engineering faculty, with input from other constituencies, has established the following objectives that describe the expected accomplishments of graduates during the first	To carry out this mission, the Mechanical Engineering faculty, with input from other constituencies, has established the following objectives that describe the expected accomplishments of graduates during the first

few years following graduation:

1. Apply fundamental engineering knowledge, industry perspective and research skills to become experts or leaders within a chosen engineering career path.
2. Exhibit life-long learning and develop personal and teamwork skills in order to effectively solve real-life problems and clearly communicate their results.
3. Practice ethical responsibility and accountability in professional activities and actively participate in professional development.

The Mechanical Engineering curriculum is designed to meet these objectives. The basic courses in mechanics, materials, thermodynamics, electrical engineering systems, and dynamics prepare the student for the comprehensive design courses in the senior year culminating in major design experiences in energy systems and in mechanical systems. Throughout the curriculum there is significant use of the computer to solve realistic engineering problems. All entering ME juniors are required to have a portable computer that they will use interactively in the classroom. The ME laboratory sequence stresses the planning, design, and operation of experiments. The curriculum also places a strong emphasis on technical communications. Senior technical electives allow the student to study particular areas of interest.

The Mechanical Engineering Program is accredited by the Engineering Accreditation Commission of ABET, <http://www.abet.org>.

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CURRENT CURRICULUM OUTLINE		PROPOSED CURRICULUM OUTLINE	
	Required Hours		Required Hours
English EN 1103, EN 1113	6	English EN 1103, EN 1113	6
Fine Arts	3	Fine Arts	3
Humanities	6	Humanities	6
Social/Behavioral Sciences	6	Social/Behavioral Sciences	6
Major Core		Major Core	
Mathematics	18	Mathematics	18
MA 1713, MA 1723, MA 2733, MA 2743, MA 3113, MA 3253		MA 1713, MA 1723, MA 2733, MA 2743, MA 3113, MA 3253	
Science	13	Science	16
CH 1211, CH 1213, CH 1223, PH 2213 PH 2223		CH 1211, CH 1213, CH 1223, PH 2213 PH 2223, PH 2233	
Engineering Topics	21	Engineering Topics	21
CSE 1233, ECE 3413, EM 2413, EM 2433, EM 3213, EM 3313, IE 3913		CSE 1233, ECE 3413, EM 2413, EM 2433, EM 3213, EM 3313, IE 3913	
ME Topics	46	ME Topics	43
ME 1111, ME 2133, ME 3103, ME 3113, <i>ME 3163</i> , ME 3313, ME 3403, ME 3423, ME 3513, ME 3523, ME 3613, ME 4111, ME 4301, ME 4333, ME 4401, ME 4403, ME 4443, ME 4643		ME 1111, ME 2133, ME 3103, ME 3113, ME 3313, ME 3403, ME 3423, ME 3513, ME 3523, ME 3613, ME 4111, ME 4301, ME 4333, ME 4401, ME 4403, ME 4443, ME 4643	
ME Technical Electives	6	ME Technical Electives	6
Writing Requirement GE 3513	3	Writing Requirement GE 3513	3
Total Hours	128	Total Hours	128

3. JUSTIFICATION AND STUDENT LEARNING OUTCOMES

There is no change in student learning outcomes.

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4. SUPPORT

See attached letters from ME faculty and ECE faculty.

5. PROPOSED 4-LETTER ABBREVIATION

No Change

6. EFFECTIVE DATE

Spring 2016



MISSISSIPPI STATE UNIVERSITY
JAMES WORTH
BAGLEY
COLLEGE OF ENGINEERING

DEPARTMENT OF
MECHANICAL ENGINEERING

January 11, 2016

University Committee on Courses and Curricula
281 Garner Hall
Mailstop 9702
Mississippi State University

RE: Curriculum Modification of the B.S. in Mechanical Engineering

UCCC Committee:

We, the Undergraduate Committee of the Department of Mechanical Engineering, provide our support for the curriculum modification of the B.S. in Mechanical Engineering as proposed in the attached proposal.

Please do not hesitate to contact us if any additional information is needed.

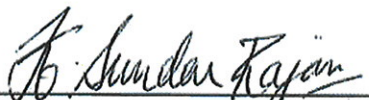
Sincerely,


Dr. Rogelio Luck, Professor 1/11/16 Date


Dr. Scott Thompson, Assistant Professor 1/12/16 Date


Dr. Richard Patton, Associate Professor 1/11/16 Date


Dr. Nima Shamsaei, Assistant Professor 1/12/16 Date


Dr. Sundar Krishnan, Associate Professor 12th Jan 2016 Date


Dr. Alta Knizley, Instructor 1/11/16 Date


Dr. Yucheng Liu, Associate Professor 1/12/16 Date


Mr. Dustin Spayde, Instructor 1/11/16 Date