**PURDUE UNIVERSITY**

REQUEST FOR ADDITION, EXPIRATION, OR REVISION OF AN UNDERGRADUATE COURSE (100-400 LEVEL)

**DEPARTMENT:** Mechanical Engineering  
**EFFECTIVE SESSION:** Spring 2011

**PROPOSED:**
- Subject Abbreviation: ME
- Course Number: 27000
- Long Title: **Basic Mechanics I**
- Short Title: **Basic Mechanics I**

**EXISTING:**
- Subject Abbreviation: ME
- Course Number: 27000
- Long Title: **Basic Mechanics I**
- Short Title: **Basic Mechanics I**

**TERMS OFFERED:**  
- Summer  
- Fall  
- Spring

**CAMPUS(ES) INVOLVED:**
- Calumet
- Cont Ed
- Ft. Wayne
- Indianapolis
- N. Central
- Tech Statewide
- W. Lafayette

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### CREDIT TYPE

1. Fixed Credit: Cr. Hrs. 3
2. Variable Credit Range: [ ]
   - Minimum Cr. Hrs (Check One): [ ]
   - Maximum Cr. Hrs (Check One): [ ]
3. Equivalent Credit: Yes [ ] No [ ]
4. Thesis Credit: Yes [ ] No [ ]

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### COURSE ATTRIBUTES

- Pass/Not Pass Only
- Satisfactory/Unsatisfactory Only
- Repeatable
- Maximum Repeatable Credit:
- Credit by Examination
- Designator Required
- Special Fees
- Registration Approval Type
- Instructor
- Variable Title
- Remedial
- Honors
- Full Time Privilege
- Off Campus Experience

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### COURSE DESCRIPTION (INCLUDE REQUIREMENTS):

**ME 27000 Basic Mechanics I**

Sem. 1 and 2 SS. Class 3, cr. 3.  
Prerequisite: PHYS 17200 & MA 16600 or equivalent. Concurrent Prerequisite: MA 26100 & ENGR 13200

Fundamental concepts of mechanics: vector operations, force and couples, free body diagrams, equilibrium of a particle and of rigid bodies. Friction, distributed forces. Centers of gravity and centroids. First & second moments of areas, lines and volumes. Applications from structural and machine elements such as bars, trusses, and friction devices. Kinematics and equations of motion of a particle for rectilinear and curvilinear motion.

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**Cross-Listed Courses:**

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**Calumet Department Head**
- Department Head: Date
- Calumet School Dean: Date

**Fort Wayne Department Head**
- Department Head: Date
- Fort Wayne School Dean: Date

**Indianapolis Department Head**
- Department Head: Date
- Indianapolis School Dean: Date

**North Central Department Head**
- Department Head: Date
- North Central Chancellor: Date

**West Lafayette Department Head**
- Department Head: Date
- West Lafayette College School Dean: Date
- West Lafayette Registrar: Date

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**OFFICE OF THE REGISTRAR**
# PURDUE UNIVERSITY
REQUEST FOR ADDITION, EXPIRATION, OR REVISION OF AN UNDERGRADUATE COURSE
(100-400 LEVEL)

**DEPARTMENT:** Mechanical Engineering  
**EFFECTIVE SESSION:** Spring 2011

**PROPOSAL:**
- New course with supporting documents
- Add existing course offered at another campus
- Expiration of a course
- Change in course number
- Change in course title
- Change in course credit/type

**PROPOSED:**
- Subject Abbreviation: ME
- Course Number: 27000

**TERMS OFFERED:**
- Check All That Apply:
  - Summer
  - Fall
  - Spring

**CAMPUS(ES) INVOLVED:**
- Calumet
- Cont Ed
- Ft. Wayne
- Indianapolis
- N. Central
- Tech Statewide
- W. Lafayette

**COURSE DESCRIPTION (INCLUDE REQUISITES):**

**ME 27000 Basic Mechanics I**  
Sem. 1 and 2 SS. Class 3, cr. 3.  
Prerequisite: PHYS 17200 & MA 16600 or equivalent. Concurrent Prerequisite: MA 26100 & ENGR 13200  
Fundamental concepts of mechanics: vector operations, force and couples, free body diagrams, equilibrium of a particle and of rigid bodies. Friction. Distributed forces. Centers of gravity and centroids. First & second moments of areas, lines and volumes. Applications from structural and machine elements such as bars, trusses, and friction devices. Kinematics and equations of motion of a particle for rectilinear and curvilinear motion.
TO: The Engineering Faculty

FROM: The Faculty of the School of Mechanical Engineering

RE: ME 27000 Prerequisite Changes

The Faculty of the School of Mechanical Engineering has approved the following prerequisite change. This action is now submitted to the Engineering Faculty with a recommendation for approval.

From:

ME 27000 Basic Mechanics I
Sem. 1, 2, & 3 Class 3, cr. 3
Prerequisite: PHYS 17200-Modern Mechanics
Concurrent Prerequisite: MA 26100-Multivariate Calculus

Fundamental concepts of mechanics: vector operations, force and couples, free body diagrams, equilibrium of a particle and of rigid bodies. Friction. Distributed forces. Centers of gravity and centroids. First and second moments of areas, lines and volumes. Applications from structural and machine elements such as bars, trusses and friction devices. Kinetics and equations of motion of a particle for rectilinear and curvilinear motion.

To:

ME 27000 Basic Mechanics I
Sem. 1, 2, & 3 Class 3, cr. 3
Prerequisite: PHYS 17200-Modern Mechanics and MA 16600-Analytical Geometry & Calculus II or equivalent
Concurrent Prerequisite: MA 26100-Multivariate Calculus and ENGR 13200-Transforming Ideas to Innovation II

Fundamental concepts of mechanics: vector operations, force and couples, free body diagrams, equilibrium of a particle and of rigid bodies. Friction. Distributed forces. Centers of gravity and centroids. First and second moments of areas, lines and volumes. Applications from structural and machine elements such as bars, trusses and friction devices. Kinetics and equations of motion of a particle for rectilinear and curvilinear motion.

Reason: The added concurrent prerequisite of ENGR 13200 is needed because of the course change in the First-Year Engineering program.

James D. Jones, Associate Professor and Associate Head
School of Mechanical Engineering

[Signature]

APPROVED FOR THE FACULTY OF THE SCHOOLS OF ENGINEERING BY THE ENGINEERING CURRICULUM COMMITTEE
ECC Minutes #10
Date 2/2/2011
Chairman ECC R. Cipra