18. Special Consideration

Dwight Look College of Engineering
Department of Mechanical Engineering
Minor in Design and Simulation of Mechanical Systems
Request for a new minor
SPECIAL CONSIDERATION
SPECIAL CONSIDERATION

DWIGHT LOOK COLLEGE OF ENGINEERING
DEPARTMENT OF MECHANICAL ENGINEERING
MINOR IN DESIGN AND SIMULATION OF MECHANICAL SYSTEMS
REQUEST FOR A NEW MINOR
Texas A&M University
Proposed Minor Field of Study

Name of Minor Program: Design and Simulation of Mechanical Systems

Department: Mechanical Engineering

College: Dwight Look College of Engineering

Will grant a minor [✓] Yes ☐ No Academic Year: 2016

A selection from among the following courses will constitute a minor field of study.

A. The following ___9___ hours of course work are required.
   MEEN 363
   MEEN 368
   MEEN 475

B. Select ___6___ hours from the following courses.
   MEEN 441
   MEEN 442
   MEEN 444
   MEEN 448
   MEEN 460
   MEEN 467

Please indicate further requirements such as grade point requirement, prerequisites, resident (if above the minimum 6 hours at the 300- to 400-level), capstone or methods courses.

Minimum of ____ hours required.

Minimum of 6 hours at 300- to 400-level
3.5 Minimum Overall GPA.

Prerequisites of required and elective courses must be satisfied (C or better) even if not counting toward degree or minor.

Reviewed and approved by:

Department Head/Program Director: [Signature]
Date: 7/23/15
AOC Dean of College: [Signature]
Date: 7/24/15
TO: Dr. Ann Kenmeier  
Associate Provost for Undergraduate Studies  
Texas A&M University

THROUGH: Dr. Prasad Enjeti  
Associate Dean for Undergraduate Programs  
Dwight Look College of Engineering

THROUGH: Dr. Andreas Polycarpou  
Meinhard H. Kotzebue '14 Professor and Department Head  
Department of Mechanical Engineering

FROM: Dr. Timothy Jacobs  
Undergraduate Program Director  
Department of Mechanical Engineering

DATE: July 23, 2015

RE: Proposed Minor Programs in Mechanical Engineering as Amended by UGA on 7/22/2015

The Department of Mechanical Engineering at Texas A&M University proposes the implementation of three minor programs as described herein. These programs have been approved by the faculty of the department on April 17, 2015.

The objectives of the MEEN minors are thus:

1. Expand the working knowledge of mechanical engineering principles to broader engineering activities, and
2. Provide non-MEEN students with a specialized aspect of mechanical engineering to enhance their skillset and capabilities within their discipline-specific field.

The approach taken to offer MEEN minors are thus:

1. Students must be high-achieving in their own discipline. Minimum GPA for MEEN minor applicants is 3.5.
2. Students may apply as early as their fourth semester of college but before their seventh semester of college.
3. Students may choose among one or more of the following three minor programs. Courses under each track are those required for the minor; students must still satisfy course prerequisites (C or better) which may or may not apply toward the minor or the student's major degree(s):
   a. Analysis, Design and Management of Energy Conversion Systems
      i. MEEN 344 – Fluid Mechanics
ii. MEEN 461 – Heat Transfer
iii. MEEN 421 – Thermal Fluid Systems Analysis and Design
iv. Two choices of:
   1. MEEN 410 – Internal Combustion Engines
   2. MEEN 436 – HVAC
   3. MEEN 437 – Building Energy Analysis
   4. MEEN 472 – Gas Dynamics

b. Control of Mechanical Systems
   i. MEEN 363 – Dynamics
   ii. MEEN 364 – Systems and Control
   iii. MEEN 431 – Advanced System Dynamics and Controls
   iv. Two choices of:
       1. MEEN 408 – Introduction to Robotics
       2. MEEN 411 – Mechanical Controls
       3. MEEN 432 – Automotive Engineering
       4. MEEN 433 – Mechatronics
       5. MEEN 434 – Dynamics and Modeling of Mechatronic Systems
       6. MEEN 459 – Mechanical Vibrations

c. Design and Simulation of Mechanical Systems
   i. MEEN 363 – Dynamics
   ii. MEEN 368 – Solid Mechanics in Mechanical Design
   iii. MEEN 475 – Materials in Design
   iv. Two choices of:
       1. MEEN 441 – Design of Mechanical Components and Systems
       2. MEEN 442 – Computer Aided Engineering
       3. MEEN 444 – Finite Element Analysis in Mechanical Engineering
       4. MEEN 448 – Fundamentals of Nondestructive Testing
       5. MEEN 460 – Corrosion Engineering
       6. MEEN 467 – Mechanical Behavior of Materials