

**TO:** The Engineering Faculty

**FROM:** The Faculty of the School of Mechanical Engineering

**DATE:** August 23, 2000

**RE:** ME 440 Course Description Changes

The Faculty of the School of Mechanical Engineering has approved the following course description changes to ME 440, effective Spring Semester 2001. This action is now submitted to the Engineering Faculty with a recommendation for approval.

**FROM**

**ME 440 Internal Combustion Engines** Sem. 2. Class 2, lab. 3, cr. 3 (el.). Prerequisite: ME 300, 309, and 315.

Cycle analysis, computer modeling, measurement methods, friction, air and fuel metering, fuels and lubricants, controls, emissions. Emphasis is on engines as thermodynamic machines Application of Thermodynamics, Fluid Mechanics and Heat. Professor Abraham.

**TO:**

**ME 440 Internal Combustion Engines** Sem. 2. Class 2, lab. 3, cr. 3. Prerequisite: ME 300, corequisite: ME 315.

Application of Thermodynamics, Fluid Mechanics and Heat Transfer to processes in Internal Combustion Engines. Intake and exhaust processes in engines. Spark-ignition, compression-ignition and alternate engines will be covered. Discussion of design and operating parameters and their influence on engine performance. Laboratory work on engine teardown, intake system, fuel injection system, spark-ignition and compression-ignition engines to complement lectures. Discussion of current challenges facing engine designers.

**Reason:** The updated description more accurately describes the current content of the course. The changes are largely editorial with some slight changes in emphasis because of the evolution of the course. Also, the ME 309 prerequisite is not necessary because ME 309 is a prerequisite for ME 315 which is also now a corequisite for ME 440. ME 315 has moved from a prerequisite to a corequisite to enable more students who are out-of-sequence to register for ME 440 before they graduate. The elective course designation "(el.)" will also be deleted because it is inconsistent with the rest of the Undergraduate Catalog. Finally, the faculty listing is being deleted from the undergraduate course description as recommended by the Committee on Faculty Relations for all undergraduate courses.

APPROVED FOR THE FACULTY  
OF THE SCHOOLS OF ENGINEERING  
BY THE COMMITTEE ON  
FACULTY RELATIONS

*E. Daniel Hirleman* / 900  
E.D. Hirleman, Head  
School of Mechanical Engineering

CFR Minutes           #929          

Date           10/11/00          

Chairman CFR           C.D. Sutton