

# Program Outcomes of the Mechanical Engineering Program

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## **Proposed:** (Version 1.3)

Produce graduates that have the ability to:

- (a) apply knowledge of mathematics, science, and engineering;
- (b) design and conduct experiments, as well as to analyze and interpret data;
- (c) design a system, component, or process to meet desired needs;
- (d) function on multi-disciplinary teams;
- (e) identify, formulate, and solve engineering problems;
- (f) understand professional and ethical responsibility;
- (g) communicate effectively;
- (h) understand the impact of engineering solutions in a global and societal context with a broad education;
- (i) recognize the need for, and engage in life-long learning;
- (j) be knowledgeable about contemporary issues;
- (k) use the techniques, skills, and modern engineering tools necessary for engineering practice;
- (l) be knowledgeable about chemistry and calculus-based physics with depth in at least one;
- (m) apply advanced mathematics through multivariate calculus and differential equations;
- (n) be familiar with statistics and linear algebra;
- (o) work professionally in the fluid/thermal systems area including the design and realization of such systems.
- (p) work professionally in the mechanical systems area including the design and realization of such systems.

Recent Document History	
Version	Adopted/Reaffirmed
1.3	xx/xxxx
1.2	10/2002
1.1	10/2001

Note: This document will be reviewed and, if appropriate revised, at least once every two years. Adoption of a new Version requires approval of the revision by a majority vote at a Faculty Meeting or comparable event to which all Department Faculty members are invited.

## **DOCUMENT REVISION HISTORY**

### **Version 1.3** [adopted xx/xxxx]

Changes from previous version:

- added review and revision frequency statement to the “Note”.

Adoption process:

- 9/6/2006: discussion and draft created at Department Faculty Meeting
- 9/13/2006: draft adopted at Department Faculty Meeting
- 9/??/2006: review and comment by Department Advisory Board
- 9/??/2006: review and comment by alumni on newsletter distribution list
- 9/??/2006: review and comment by student leadership
- 9/??/2006: considering input from the above sources, new version adopted at Department Faculty Meeting

### **Version 1.2** [adopted 10/2002]

Changes from previous version:

- Outcome “o” was split into two parallel statements to more clearly show in the curriculum fluid/thermal systems design content and mechanical systems design content.
- Document History table added to the document.
- A note defining the process for adopting future changes to the document was added.
- Document Revision History added to the document.

Adoption process: adopted 10/2002 at a Department Faculty Meeting after discussion at Dept. Faculty Retreat.

### **Version 1.1** [adopted 10/2001]

Changes from previous version:

- Outcomes “l, m, n, o” were added to the PO’s to better reflect the discipline of Mechanical Engineering

Adoption process: discussed and adopted at a Faculty Retreat.

### **Version 1.0** [adopted 10/2000]

Starting point was a clean sheet of paper. It was decided to use the “a-k” outcomes published in the EC2K Criteria as a starting point.

Adoption process: developed and adopted at a Faculty Retreat.