Mechanical Engineering Program Student Learning Outcomes

These high-level outcomes flow down from the objectives and then on to the measurable course outcomes as shown in the overall assessment process flowchart. They are referenced to the program objective that they most directly support, and identified as either ABET outcomes (Criterion 3) or ASME outcomes (Criterion 8).

Outcomes that directly support the technical skills (TS) objective

1. TS.Design) [ABET-c] OU ME graduates will demonstrate an ability to design a system, component, or process to meet desired needs
2. TS.Problemsolving) [ABET-e] OU ME graduates will demonstrate an ability to identify, formulate, and solve engineering problems
3. TS.Experimental.1) [ABET-b] OU ME graduates will demonstrate an ability to design and conduct experiments, as well as to analyze and interpret data.
4. TS.Technology) [ABET-k] OU ME graduates will demonstrate an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice
5. TS.Fundamentals) [ABET-a and ASME-1,2,&3] OU ME graduates will demonstrate a familiarity with statistics and linear algebra, a knowledge of chemistry and calculus-based physics (with depth in physics), and an ability to apply their knowledge of advanced mathematics (through multivariate calculus and differential equations), science, and engineering.

Outcomes that directly support the work skills (WS) objective

6. WS.Team) [ABET-d] OU ME graduates will demonstrate an ability to function on multi-disciplinary teams
7. WS.Communication) [ABET-g] OU ME graduates will demonstrate an ability to communicate effectively
8. WS.LLLearning) [ABET-i] OU ME graduates will demonstrate a recognition of the need for, and an ability to engage in life-long learning
9. WS.Professional) [ABET-f] OU ME graduates will demonstrate an understanding of professional and ethical responsibility.

Outcomes that directly support the global & contemporary (GC) objective

10. GC.Global_Societal) [ABET-h] OU ME graduates will have the broad education necessary to understand the impact of engineering solutions in a global and societal context.
11. GC.Contemporary) [ABET-j] OU ME graduates will demonstrate a knowledge of contemporary issues.