

Ohio University ME Program Educational Objectives

PEOs Reviewed / Modified / Approved (2007-2009) by Industrial and Student Advisory Boards

1. Prepare graduates for **engineering careers and advanced education**
 - a. Graduates will be able to perform as competent entry-level engineers in a range of industries.
 - b. Select graduates with the ability and desire will be able to perform as competent graduate students in a range of graduate programs (including engineering, business, medicine, law or other related fields).
2. Graduate mechanical engineers with **technical skills**
 - a. Demonstrate a grasp of engineering knowledge
Supporting outcomes:
 - Mastery of fundamentals – including Mathematics and Basic Sciences, Engineering Mechanics, and Thermal Sciences
 - Knowledgeable in engineering specialty topics – including Materials and Manufacturing
 - b. Proficient in learning, using, and understanding technology, resulting in a solid foundation for life-long learning
 - c. Demonstrate an ability to apply knowledge to solve contemporary engineering problems
Supporting outcomes:
 - Solve open-ended problems
 - Formulate and articulate the problem to be solved, develop requirements, gather data, determine root cause if appropriate and synthesize solutions.
 - Differentiate between and work in situations that require evolutionary design (use of standard parts, standard practices, and engineering standards) and revolutionary ideas (innovation and creativity)
3. Graduate mechanical engineers with **skills to perform in the work environment**
Supporting outcomes:
 - Safety and health – including awareness of Material Safety Data Sheets and appropriate use of personal protective equipment and Design for Safety methods
 - Technical communication: Oral and written
 - Teamwork
 - Project management: planning, scheduling, budgeting
 - Self evaluation, leading to improvement
 - Awareness of standards, including safety, design, manufacturing, testing and quality
 - Appreciation of engineering integration with business – including market awareness, customer satisfaction, quality, continuous improvement, profit, and awareness of the concepts of mission, vision and core values for a company.
 - Ethical and effective decision making involving environmental health and safety, economics, time, quality, performance, reliability and life cycle.
4. Graduate mechanical engineers who are **informed and aware** of contemporary issues and the impact of engineering on society