

University of Southern California
VITERBI SCHOOL OF ENGINEERING

Bachelor of Science in Mechanical Engineering
Program Learning Objectives

The purpose of the Bachelor of Science in Mechanical Engineering program is to provide the educational foundation for a successful career path, one that may include employment as a professional mechanical engineer, work in a field outside of mechanical engineering, or pursuit of further education. Students will learn to apply their technical skills in mathematics, science, and engineering to the solution of complex problems encountered in modern mechanical engineering practice.

Upon completion of the Bachelor of Science in Mechanical Engineering degree program, students will have:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics;
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors;
3. an ability to communicate effectively with a range of audiences;
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts;
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives;
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions; and
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.