

**University of Southern California**  
**VITERBI SCHOOL OF ENGINEERING**

Master of Science in Manufacturing Engineering  
*Program Learning Objectives*

The purpose of the USC Viterbi School of Engineering Master of Science in Manufacturing Engineering program prepares students for high-level professional employment in any sector of manufacturing related industries that incorporate advanced technical knowledge and skills in various fields of manufacturing. Graduates may pursue specialized industrial employment or advanced graduate studies related to innovation in design and implementation of products, manufacturing processes, and manufacturing systems or related areas.

Upon completion of the USC Viterbi School of Engineering Master of Science in Manufacturing Engineering, students will:

- demonstrate advanced understanding of contemporary engineering principles and associated innovative practices relevant to invention, innovation and design methodology and design technology (CAD), modern fabrication technologies, quality control, and systems engineering of manufacturing enterprises;
- demonstrate advanced understanding of subject matters related to design and manufacturing technologies with a focus on modern CAD and fabrication processes including 3D printing and additive manufacturing at various scales;
- have knowledge of metrology and inspection, and process modelling and control for quality and productivity improvement; and
- be able to apply critical principles and practices pertinent to the manufacturing engineering field in their employment practice.