

University of Southern California
VITERBI SCHOOL OF ENGINEERING

Doctor of Philosophy in Biomedical Engineering
Program Learning Objectives

The purpose of the USC Viterbi School of Engineering Doctor of Philosophy in Biomedical Engineering is to prepare its graduates for research-oriented careers in leading academic institutions, industry, and government. Graduates of the program will be particularly well prepared to lead research programs and research teams in bio-systems and signals, device and diagnostic technologies, molecular and cellular biosystems engineering, or neuroengineering. Upon completion of the USC Viterbi School of Engineering Doctor of Philosophy in Biomedical Engineering,

- Graduates will demonstrate understanding of contemporary research in bio-systems and signals, device and diagnostic technologies, molecular and cellular biosystems engineering, or neuroengineering.
- Graduates will demonstrate understanding of applying contemporary research practices in Biomedical Engineering to industry contexts and will be able to engage in innovative practices informed by such research in diverse contexts.
- Graduates will be able to articulate and launch an independent research agenda under the guidance of their faculty advisor. Graduates will be able to implement innovative research practices under the guidance of their faculty advisor and in concert with their research team.
- Graduates will demonstrate understanding of leading research teams in Biomedical Engineering by mentoring undergraduate and Master's students, as well as more junior Ph.D. students.
- Graduates will demonstrate the ability to teach by assisting senior faculty in teaching within a core area of emphasis in Biomedical Engineering.
- Graduates will complete and orally defend an acceptable dissertation based on original investigation and supervised by their dissertation committee. The dissertation must show mastery of an area of emphasis within Biomedical Engineering, capacity for independent research, and scholarly results.