

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

Doctor of Philosophy in Materials Science  
Program Learning Objectives

The purpose of the USC Viterbi School of Engineering Doctor of Philosophy Degree program in Materials Science is to prepare students to do original research in Materials Science.

- Upon completion of the USC Doctor of Philosophy Degree in Materials Science, students will have taken the set of core courses covering the fundamentals of thermodynamics, kinetics, structure, mechanical and electrical properties of materials.
- USC Viterbi School of Engineering doctoral students enrolled in the PhD program in Materials Science will demonstrate understanding of and ability in applying contemporary research in Materials Science to industry contexts and be able to engage in innovative practices informed by such research pertinent to Materials Science in diverse contexts.
- USC Viterbi School of Engineering doctoral students must demonstrate the ability to do original research by writing and defending a dissertation based on their research and supervised by their dissertation committee. The dissertation must show mastery of an area of emphasis within Materials Science and a scholarly result.
- USC Viterbi School of Engineering doctoral students who plan to pursue an academic career are encouraged to work as a teaching assistant for one year;
- USC doctoral students enrolled in the PhD degree program in Materials Science will demonstrate understanding of leading research teams in Materials Science by mentoring undergraduate and master's students and fellow Ph.D. students who are less advanced than they are in their doctoral program.