

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

Doctor of Philosophy in Petroleum Engineering  
Program Learning Objectives

The purpose of the USC Viterbi School of Engineering Doctor of Philosophy Degree program in Petroleum Engineering is to prepare students to do original research in Petroleum Engineering so they can advance to a career in industry or academia.

- Upon completion of the USC Ph.D. Degree in Petroleum Engineering, students will have taken the set of core courses covering subsurface reservoir analysis; subsurface flow and transport processes; well and aquifer testing; enhanced oil recovery; well completion and control; and fluid flow in porous media.
- USC Viterbi School of Engineering students enrolled in the Ph.D. in Petroleum Engineering will demonstrate understanding of and ability in applying contemporary research in Petroleum Engineering to industry contexts and be able to engage in innovative practices informed by such research pertinent to Petroleum Engineering in diverse contexts.
- USC Viterbi School of Engineering students enrolled in the Ph.D. in Petroleum Engineering 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 a research area of emphasis within Petroleum Engineering and a scholarly result.
- USC Viterbi School of Engineering doctoral students in Petroleum Engineering who plan to pursue an academic career will have worked as a teaching assistant for one year;
- USC doctoral students enrolled in the Ph.D. degree program in Petroleum Engineering will demonstrate understanding of leading research teams in Petroleum Engineering by mentoring undergraduate and master's students and fellow Ph.D. students who are less advanced than they are in their doctoral program.

