

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

Ph.D. in Aerospace Engineering  
*Program Learning Objectives*

The purpose of the PhD program in Aerospace Engineering is to prepare students to execute original, high-level research in the discipline specific to the student's area of emphasis, especially aerodynamics, experimental and computational fluid mechanics, turbulence, animal aero- and hydrodynamics, combustion, shock wave behavior, metallic materials, dynamical systems, and dynamics and control. Graduates might be employed at leading research universities, or in any research-centric arena.

The doctoral degree program in aerospace engineering is designed to satisfy the following learning objectives:

1. provide breadth of knowledge to further an awareness of the interdisciplinary nature of aerospace engineering;
2. provide depth of knowledge in a particular field of study;
3. further develop the ability to formulate problems, to synthesize and integrate information, to work collaboratively, and to communicate effectively;
4. educate students in methods of advanced analysis and the use of tools appropriate to an increasingly complex field;
5. develop an awareness of the dynamic and evolving nature of the field, including current controversies, novel approaches, and significant critiques;
6. develop the skills pertinent to the research process, including the students' ability to work independently and to publish the results of their research;
7. promote a sense of scholarship, leadership, and service among our graduates; and
8. prepare students for successful careers regardless of the path they follow.