

Oral Science, PhD

Learning Outcomes

Acquisition of Broad-Based Foundational Knowledge in Oral Science

- Demonstrate a broad-based understanding of the scientific disciplines relevant to oral science.
- Demonstrate mastery of the literature and background knowledge pertaining to one's chosen area of research.
- Understand the principles of biostatistical analyses and appropriate engagement with biostatisticians.

Development of Critical Thinking Skills

- Critically analyze primary scientific literature.
- Rationally debate and defend scientific viewpoints using scientific principles and critical analysis skills.
- Demonstrate problem-solving skills.

Understanding of the Scientific Method and Its Application

- Formulate hypotheses or experimental objectives that address knowledge gaps in the literature.
- Formulate a logical and feasible approach to test a hypothesis or accomplish research objectives.
- Critically evaluate results and draw appropriate conclusions from the data.

Proficiency in Research

- Conduct research in a responsible and ethical manner.
- Carry out an in-depth research project and contribute intellectually and technically to all parts of its development, execution, and analysis.

Proficiency in Scientific Communication

- Demonstrate proficiency in scientific writing as evidenced by first-author manuscripts and by composing grant applications.
- Organize, defend, and communicate ideas effectively in scientific oral presentations and settings.

Interpersonal and Leadership Skills

- Demonstrate an ability to work, when appropriate, in teams or collaborative settings with a diverse workforce.
- Develop leadership skills, commensurate with experience, facilitate group discussions, teach, and/or conduct meetings.
- Effectively mentor and motivate subordinates and/or peers.
- Respond appropriately to positive or negative feedback.

Requirements

The Doctor of Philosophy program in oral science requires a minimum of 72 s.h. of graduate credit, including advanced coursework and original research that culminates in the successful defense of a dissertation. Students must pass a comprehensive examination, prepare and gain approval of a research project, and complete and successfully defend a dissertation that describes the results of their research.

Completion of the program usually requires four to six years of full-time study. Students must maintain a cumulative grade-point average of at least 3.00 to earn the degree.

Dental Public Health Distinction Track

The PhD in oral science is a research-intensive degree program. Students may elect, with program approval, to follow a special track dedicated to dental public health.

In addition to an in-depth research project leading to a dissertation, students must complete a minimum of 72 s.h. that includes a minimum of 30 s.h. of coursework. Required courses include seminars in dental research, dental science research methodology, statistical methods for dental research, research design in dentistry, and scholarly integrity and responsible conduct in research. The dental public health track will have additional required courses.

Students also have the opportunity to take elective courses that are chosen to supplement their specific area of research. Most courses are completed in the first two years of the program. Students must then pass a comprehensive examination. Thereafter, the focus is on continuing a line of research that leads to peer-reviewed publications and a dissertation. Students must then pass a final exam. The average time to program completion is five years.

Admission

Applicants to the PhD program must meet the admission requirements of the Graduate College and those specified by the program.

Applicants to the PhD program must submit a statement describing past research experience and current research interests, and state how completion of the PhD program fits their career goals. A personal interview may be requested.

Applications must be received by Dec. 1 for full consideration of financial support.

Programs normally begin July 1 each year.