

# ORAL AND CRANIOFACIAL SCIENCES (PHD)

Visit program website. (<https://dentistry.ucsf.edu/research/oral-craniofacial-sciences/>)

**Degree Offered:** PhD

**Program Leadership:**

Ralph Marcucio, PhD, Co-Director

Pamela Den Besten, DDS, MS, Co-Director

**Admissions Inquiries:**

Roger Mraz, Program Administrator

## Program Description

The Oral and Craniofacial Sciences (OCS) interdisciplinary PhD program provides students with the knowledge and research tools needed to study oral and craniofacial tissue and organ systems. From a variety of approaches, students learn about the functions of these tissues and systems, and about the conditions and diseases to which these tissues and systems are susceptible. The OCS program emphasizes the importance of translating scientific discovery into advances in patient treatment and clinical care.

The OCS graduate program aims to develop world leaders in scientific discovery, who will be able to translate their research into health benefits for patients worldwide. Recognizing that significant scientific discovery occurs at the crossroads of different disciplines, students acquire an outstanding level of competence in cell and molecular biology, which is incorporated with an in-depth examination of the key developmental, molecular, materials sciences questions related to oral and craniofacial sciences.

## Faculty

Fifty faculty members are associated with the OCS program, representing several departments in the UCSF School of Dentistry as well as many departments in the UCSF School of Medicine. This ensures a program curriculum that spans a range of disciplines. See a list of faculty (<https://dentistry.ucsf.edu/programs/oral-cranio-phd/faculty/>) and their research areas.

The OCS program office is located at the Parnassus campus. Visit the program website (<https://dentistry.ucsf.edu/programs/oral-cranio-phd/>) for more information.

The Oral and Craniofacial Sciences program is offered by the UCSF Graduate Division, administered by the UCSF School of Dentistry, and delivered by faculty members in the UCSF schools of dentistry and medicine.

## Admission Requirements

Completion of an undergraduate degree.

## Learning Outcomes

- To provide our students with a foundation in biological sciences that will allow them to address a wide range of scientific questions in oral and craniofacial research. The oral facial complex contains tissues and cells of multiple organs and systems, and therefore, advances in oral and craniofacial health require a solid base in the biological sciences. Built on this background, our program affords broad

scientific training that allows students to develop the interdisciplinary approaches required to address the problems of the craniofacial complex.

- To instill in our students our core scientific values of interdisciplinary collaboration and approaches to scientific questions; to work independently and as part of a team, and to value the contributions of others. The structure of our program, which includes research rotations in the first year, and a curriculum shared with the other flagship training programs on the UCSF campus, provides our students with a wide interdisciplinary experience, thus laying the foundation for research careers in dental and craniofacial research.
- To prepare the next generation of leaders in their fields and careers. Our program has a core emphasis on scientific excellence, and a focus on training in the tools, methods and knowledge necessary to conduct independent, rigorous, reproducible, and impactful research. Concurrently, we recognize that additional competencies—including leadership, management, effective written and oral presentation, communication and teamwork skills—will be needed for our students to successfully compete for positions in academia, industry, or the public sector. To address this need, we provide proactive mentoring and diverse professional development opportunities to help each student optimally prepare for their careers.

## Additional Information

### Program Faculty

- Find a program faculty list (<https://dentistry.ucsf.edu/programs/oral-cranio-phd/faculty/>) on the program website.

### Career Outcomes

- Find career outcomes and other data on PhD programs (<https://graduate.ucsf.edu/program-statistics/#career>) on the Graduate Division website.

## Degree Requirements

- Minimum GPA of 3.0
- All core courses and required activities taken and passed
- Pass qualifying examination
- Completion, submission and presentation of the dissertation
- For additional details, please see: [graduate.ucsf.edu/phd-degree](https://graduate.ucsf.edu/phd-degree) (<https://graduate.ucsf.edu/phd-degree/>)

## Core Courses

Code	Title	Units
BIOMED SCI 260	Cell Biology	4
OR CRA FAC 215	Laboratory Rotation	6
BIOMED SCI 225A	Biostatistics and Computational Biology	2.5
OR CRA FAC 221	Current Concepts in Oral Biology	2.5
OR CRA FAC 222	OCS PhD Seminar Series	1
RESTOR DEN 203	Mineralized Tissues:Science, Engineering & Clinical Aspects	2
OR CRA FAC 270	Journal Club	1

## Non-Course Core Requirements

Public presentation of dissertation work.