Oral Science

Director
• Jeffrey A. Banas (Pediatric Dentistry)

Graduate degrees: MS in oral science; PhD in oral science

Faculty: [https://dentistry.uiowa.edu/directory](https://dentistry.uiowa.edu/directory)
Website: [https://dentistry.uiowa.edu/students/specialty-programs/oral-science-graduate-program](https://dentistry.uiowa.edu/students/specialty-programs/oral-science-graduate-program)

Graduate programs in oral science require that students complete courses from a core curriculum and conduct independent research leading to a thesis. The programs prepare and equip graduates for a variety of career options for which the ability to conduct research or understand the principles of scientific inquiry are essential.

Students must enroll in a professional certificate program offered by a College of Dentistry department in order to enroll in the Master of Science program in oral science. The following departments offer their certificate students the opportunity to earn MS degrees in oral science:

- Endodontics
- Prosthodontics
- Operative dentistry
- Periodontics
- Oral pathology, radiology, and medicine

### Programs

#### Graduate Programs of Study

**Majors**

- Master of Science in Oral Science
- Doctor of Philosophy in Oral Science

#### Courses

##### Oral Science Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ORSC:5200</td>
<td>Seminars in Dental Research</td>
<td>0-1 s.h.</td>
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<tr>
<td>ORSC:5210</td>
<td>Dental Sciences Research Methodology</td>
<td>0-2 s.h.</td>
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<tr>
<td>ORSC:5212</td>
<td>Statistical Methods for Dental Research</td>
<td>0-3 s.h.</td>
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<tr>
<td>ORSC:5215</td>
<td>Research Design in Dentistry</td>
<td>0-2 s.h.</td>
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<tr>
<td>ORSC:5240</td>
<td>Pathophysiology of the Pulp-Dentin Complex</td>
<td>0-3 s.h.</td>
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<tr>
<td>ORSC:5250</td>
<td>Current Concepts of Cariology</td>
<td>0-2 s.h.</td>
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<tr>
<td>ORSC:5260</td>
<td>Bone and Tooth Support Structure and Implants</td>
<td>0-2 s.h.</td>
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ORSC:5275 Oral Microbiology and Immunology 0-2 s.h.
Principles of microbiology and immunology, aspects of microbial community development in the oral cavity, basic concepts of host/parasite interactions related to development of oral diseases; biological, immunological, and clinical manifestations induced by major oral pathogens. Offered spring semesters of odd years. Requirements: microbiology, biochemistry, and biology. Recommendations: immunology.

ORSC:5280 Advanced Dental Therapeutics 0-1 s.h.
Antimicrobial, analgesic, related therapies; emphasis on drug/drug interactions, dental implications of chronic cardiovascular and central nervous system medications. Offered fall semesters.

ORSC:5300 Dental Management for Patients with Complex Medical History 0-1 s.h.
Risk assessment, treatment planning, medically compromised patients, systemic complications, medical emergency in dental offices. Offered fall semesters of odd years.

ORSC:5600 Research in Oral Science arr.
Thesis research. Requirements: oral science MS or PhD candidacy.

ORSC:5610 Independent Study 0-3 s.h.
Opportunity to pursue in-depth study in a particular area of interest; students meet with faculty member to design plan of study.

ORSC:5620 Oral Sciences Colloquium arr.
Presentations, seminars, and discussion sessions on research presentations; career and individual development plans for graduate and postdoctoral students in the oral sciences program.