

# Operative Dentistry

## Head

- Steven Armstrong

**Professional certificate:** operative dentistry

**Faculty:** <https://www.dentistry.uiowa.edu/operative-faculty>

**Website:** <https://www.dentistry.uiowa.edu/operative>

The Department of Operative Dentistry teaches the foundational concepts of dentistry to predoctoral dental students in caries diagnosis, prevention, repair, and restorative techniques. The primary departmental focus is to provide the knowledge, technical skills, critical thinking and judgment for the diagnosis, prevention, and management of dental caries, non-caries dental defects (attrition, abrasion, erosion, abfraction, developmental abnormalities, discoloration, and trauma), and elective esthetic smile enhancements. It also serves an equally important position to provide national leadership in dental research and advanced restorative technology in its collective faculty efforts and through the professional Certificate in Operative Dentistry.

## D.D.S. Student Training

Course work and clinical experiences in operative dentistry are fundamental to the overall education of Doctor of Dental Surgery students. Operative dentistry course work covers roughly one quarter of curriculum time during the first three years of dental school as students progress toward competency in operative dentistry. The department's primary goal is to educate dental students, using best available evidence, to achieve and maintain optimal patient oral comfort, function, and aesthetics through risk-based diagnosis, prevention, and minimally-invasive treatment of caries and hard tissue lesions of the teeth.

## Programs

### Professional Program of Study Certificate

- Certificate in Operative Dentistry

## Courses

### Operative Dentistry Courses

**OPER:5126 Operative Dentistry Seminar** 0-1 s.h.  
Review and critical analysis of operative dentistry literature.

**OPER:5140 Operative Dentistry Advanced Clinic** 0-3 s.h.  
Medical and surgical clinical management of dental disease; special emphasis on minimally invasive dentistry using advanced aesthetic principles.

**OPER:5234 Selected Applications of Operative Dentistry** 0-3 s.h.  
Advanced techniques completed on simulated patients.

**OPER:5245 Pre-Clinical Teaching** 0-3 s.h.  
Teaching predoctoral dental students on simulated patients.

**OPER:6246 Clinical Teaching** 0,2 s.h.  
Clinical teaching instruction in operative dentistry clinics.

**OPER:8120 Dental Anatomy** 3 s.h.  
Basic dental terminology and nomenclature, human tooth morphology, creation of tooth crowns with wax.

**OPER:8122 Operative Dentistry I** 6 s.h.  
Principles and design of cavity preparations; placement of restorative materials using simulated patients.

**OPER:8240 Operative Dentistry II** 5 s.h.  
Principles of caries and non-caries lesion management, design of cavity preparations, restoration of teeth, patient management, pain control; esthetic dentistry; tooth bleaching, tooth recontouring, esthetic buildups with dental composite; exercises on mannequins in simulation clinic and procedures performed on patients in operative clinic. Prerequisites: OPER:8122.

**OPER:8370 Operative Dentistry III** 4 s.h.  
Combination of didactic and clinical aspects of operative dentistry; medical and surgical management of dental disease; emphasis on minimally invasive dentistry with advanced aesthetic principles.