

# Operative Dentistry

## Head

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**Professional certificate:** operative dentistry

**Faculty:** <https://dentistry.uiowa.edu/directory>

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

## Courses

### Operative Dentistry Courses

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

**OPER:5127 Introduction to Operative Dentistry Advanced Education** arr.

Broad introduction to key operative dentistry concepts in preparation for clinical patient care and teaching; overriding objectives are to reinforce fundamental principles of operative dentistry, refine clinical skills, enhance/add approaches of clinical problem solving, establish concepts of acceptable clinical performance levels, and preparation for resident instructors in predoctoral simulation clinic courses.

**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:5240 Advanced Operative Dental Implants and Digital Dentistry** 0-1 s.h.  
Treatment of partially edentulous area with implant therapy for single tooth replacement; builds on operative dentistry knowledge base with emphasis on fundamental biomechanical principles, materials, and techniques required to rehabilitate form and function of a single tooth implant; demonstration of successful implant treatment predicated upon a sound diagnosis, appropriate treatment plan, precise prosthetically driven placement of implant, logical sequence of treatment, appropriate abutment selection, appropriate materials selection, routine prosthodontic maintenance, and patient education.

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

**OPER:6225 Graduate Restorative Materials** 0,2 s.h.  
Dental materials science; mechanical, physical, and chemical properties of restorative materials; selection and manipulation. Same as PROS:6224.

**OPER:6226 Applied Dental Restorative Materials** 1 s.h.  
Addresses materials properties, characterization, and testing; review important concepts that influence materials' properties and degradation behavior and the latest laboratory techniques for materials characterization, including mechanical assays, chemical and surface analysis of materials, and thermal analysis; discuss the importance of regulatory agencies such as the International Organization for Standardization (ISO) and the American Dental Association (ADA). Prerequisites: OPER:6225.

**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 Introduction to Operative Dentistry** 1 s.h.  
Introduction to basic didactic knowledge and psychomotor skills in the practice of operative dentistry in a preclinical setting with simulated scenarios; for first-year dental students.

**OPER:8124 Operative Dentistry I** 5 s.h.  
Basic didactic knowledge and psychomotor skills of principles, terminology, instruments, materials, and techniques utilized in the practice of operative dentistry in a preclinical setting with simulated scenarios; for first-year dental students. Prerequisites: OPER:8120.

**OPER:8240 Operative Dentistry II** 3 s.h.  
Principles of cavity preparation and digital workflow for designing and fabrication of partial cuspal coverage restorations using CAD/CAM; dental material properties and applications; principles of esthetic restorations and peer exercises on basic clinical concepts. Prerequisites: OPER:8120 and OPER:8122 and OPER:8124.

**OPER:8243 Introduction to Clinical Operative Dentistry** 3 s.h.  
Students provide clinical care from diagnosis and treatment planning to caries and non-carious lesion management in patients; clinical experience in restoring teeth with small to moderate lesions or defects; demonstration of effective patient management skills including pain control, professionalism, and critical thinking; esthetic dentistry including tooth bleaching. Prerequisites: OPER:8120 and OPER:8122 and OPER:8124 and OPER:8240.

**OPER:8370 Operative Dentistry III** arr.  
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. Prerequisites: OPER:8120 and OPER:8122 and OPER:8124 and OPER:8240 and OPER:8243.