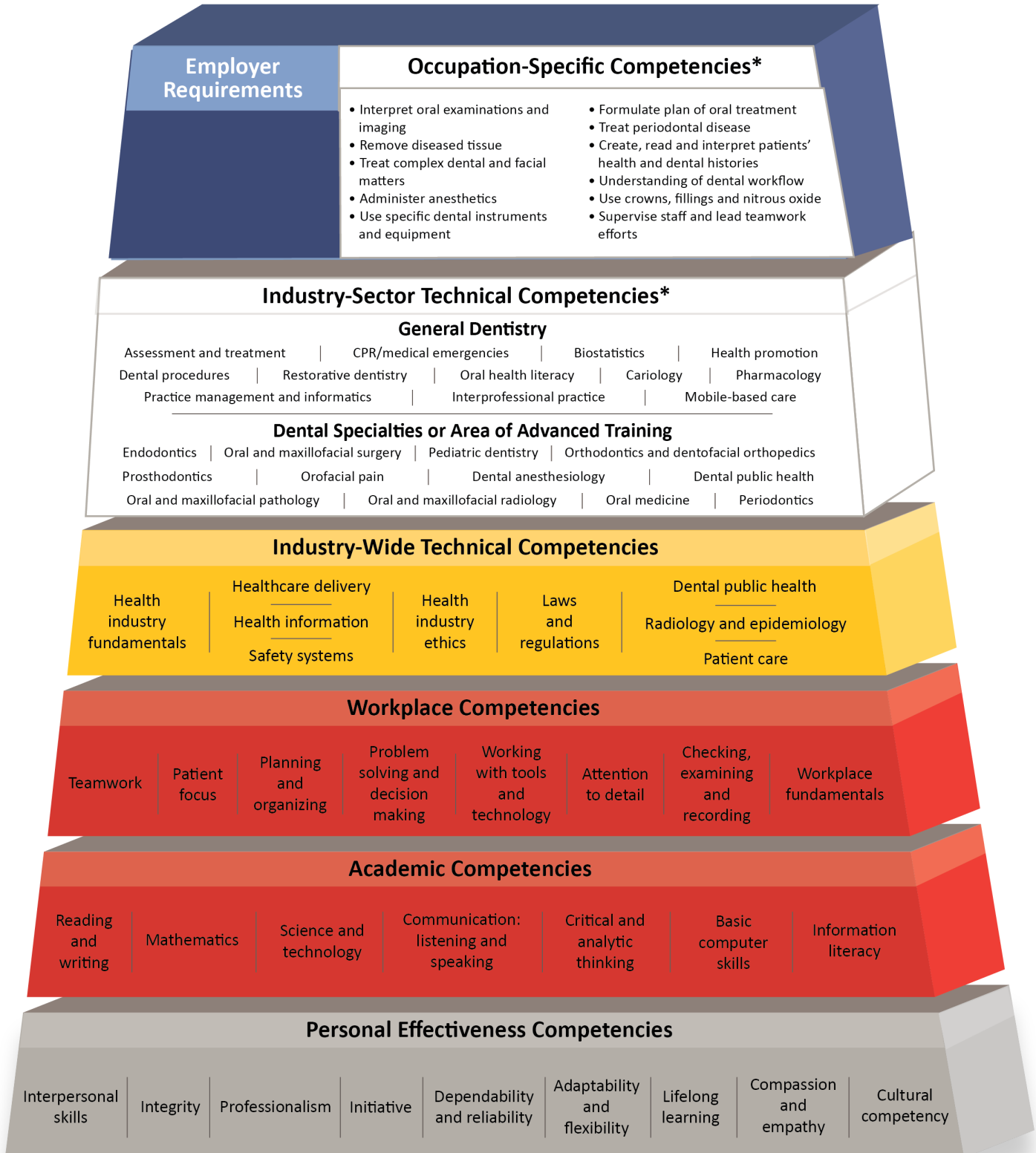


# Minnesota Dual-Training Pipeline

## Competency Model for Health Care Services

### Occupation: Dentist



#### Employer Requirements

#### Occupation-Specific Competencies\*

- Interpret oral examinations and imaging
- Remove diseased tissue
- Treat complex dental and facial matters
- Administer anesthetics
- Use specific dental instruments and equipment
- Formulate plan of oral treatment
- Treat periodontal disease
- Create, read and interpret patients' health and dental histories
- Understanding of dental workflow
- Use crowns, fillings and nitrous oxide
- Supervise staff and lead teamwork efforts

#### Industry-Sector Technical Competencies\*

##### General Dentistry

Assessment and treatment | CPR/medical emergencies | Biostatistics | Health promotion  
 Dental procedures | Restorative dentistry | Oral health literacy | Cariology | Pharmacology  
 Practice management and informatics | Interprofessional practice | Mobile-based care

##### Dental Specialties or Area of Advanced Training

Endodontics | Oral and maxillofacial surgery | Pediatric dentistry | Orthodontics and dentofacial orthopedics  
 Prosthodontics | Orofacial pain | Dental anesthesiology | Dental public health  
 Oral and maxillofacial pathology | Oral and maxillofacial radiology | Oral medicine | Periodontics

#### Industry-Wide Technical Competencies

Health industry fundamentals | Healthcare delivery | Health information | Safety systems | Health industry ethics | Laws and regulations | Dental public health | Radiology and epidemiology | Patient care

#### Workplace Competencies

Teamwork | Patient focus | Planning and organizing | Problem solving and decision making | Working with tools and technology | Attention to detail | Checking, examining and recording | Workplace fundamentals

#### Academic Competencies

Reading and writing | Mathematics | Science and technology | Communication: listening and speaking | Critical and analytic thinking | Basic computer skills | Information literacy

#### Personal Effectiveness Competencies

Interpersonal skills | Integrity | Professionalism | Initiative | Dependability and reliability | Adaptability and flexibility | Lifelong learning | Compassion and empathy | Cultural competency

Based on: Health: Allied Health Competency Model Employment and Training Administration, United States Department of Labor, December 2011.

\* Pipeline recommends the Industry-Sector Technical Competencies as formal training opportunities (provided through related instruction) and the Occupation-Specific Competencies as on-the-job training opportunities.



## Competency Model for Dentist

**Dentist** – A medical professional who specializes in dentistry which is the diagnosis, prevention, management, and treatment of diseases and conditions of the oral cavity and other aspects of the craniofacial complex. In addition to general dentistry, a variety of specialties and areas of advanced training are available. An individual in this role must follow the rules and requirements for becoming a licensed dentist as outlined in law and overseen by the Minnesota Board of Dentistry.

### Industry-Sector Technical Competencies

**Related Instruction** for dual training means the organized and systematic form of education resulting in the enhancement of skills and competencies related to the dual trainee's current or intended occupation.

#### General Dentistry

- **Assessment and treatment** – Know how to implement a comprehensive approach to clinical oral assessment and treatment. Focus on the effect of systemic and oral diseases related to care.
- **Pharmacology** – Understand the patient's medical/dental health status and pharmacological report to discern appropriate treatment and necessary interventions.
- **Biostatistics** – Understand that proficiency in medical statistics is considered a core element of community oral health.
- **Health promotion** – Understand how to participate with other dental team members in the prevention, intervention, and use of other educational strategies. Also be able to recognize the need to contribute to the improvement of oral health beyond those served in traditional dental settings.
- **Practice management and informatics** – Understand how to evaluate and apply contemporary and emerging information including clinical and practice management technology resources.
- **Mobile-based care** – Understand that a mobile dental clinic offers dental check-ups, cleanings, and simple restorative care to patients who have limited access to quality dental care.
- **Interprofessional practice** – Understand that collaboration between dentists and other health professionals improves access to comprehensive healthcare services.

- **Dental procedures** – Understand through training in dental classroom settings how to perform various dental procedures such as root canals, tissue removal, etc.
- **Restorative dentistry** – Understand dentistry techniques that restore form, function, and aesthetics to teeth with the purpose of contributing to both oral and general health.
- **Oral health literacy** – Understand oral health literacy and communication for individuals, families and communities representing diverse backgrounds with strategies to provide equitable care for populations that may have experienced barriers in the past.
- **Cariology** – Understand the branch of dentistry that consists not only of treating tooth decay, but also of interrupting and preventing this type of damage to the tissues of the teeth. These dental treatments aim to maintain tissue health while preventing dental damage.
- **CPR/medical emergencies** – Know how to perform cardiopulmonary resuscitation on adults, children and infants and perform medical emergency management.

### **Dental Specialties or Area of Advanced Training**

(as recognized by the National Commission on Recognition of Dental Specialties and Certifying Boards)

- **Endodontics** – Understand the dental specialty which is concerned with the morphology, biology, physiology, pathology, and regeneration of the human dental pulp and periradicular tissues. Its study and practice encompass the basic and clinical sciences including biology of the normal pulp, the etiology, diagnosis, prevention and treatment of diseases and injuries of the pulp and associated periradicular conditions.
- **Oral and maxillofacial surgery** – Understand the specialty of dentistry which includes the diagnosis, surgical, and adjunctive treatment of diseases, injuries, and defects involving both the functional and aesthetic aspects of the hard and soft tissues of the oral and maxillofacial region.
- **Orthodontics and dentofacial orthopedics** – Understand the dental specialty that includes the diagnosis, prevention, interception, and correction of malocclusion, as well as neuromuscular and skeletal abnormalities of the developing or mature orofacial structures.
- **Pediatric dentistry** – Understand the age-defined specialty that provides both primary and comprehensive preventive and therapeutic oral health care for infants and children through adolescence, including those with special health care needs.

- **Periodontics** – Understand the specialty of dentistry that encompasses the prevention, diagnosis, and treatment of diseases of the supporting and surrounding tissues of the teeth or their substitutes and the maintenance of the health, function and esthetics of these structures and tissues.
- **Orofacial pain** – Understand the specialty of dentistry that encompasses the diagnosis, management, and treatment of pain disorders of the jaw, mouth, face, head, and neck. The specialty is dedicated to the evidenced-based understanding of the underlying pathophysiology, etiology, prevention, and treatment of these disorders and improving access to interdisciplinary patient care.
- **Dental anesthesiology** – Understand the specialty of dentistry and discipline of anesthesiology encompassing the art and science of managing pain, anxiety, and overall patient health during dental, oral, maxillofacial, and adjunctive surgical or diagnostic procedures throughout the entire perioperative period. The specialty is dedicated to promoting patient safety as well as access to care for all dental patients, including the very young and patients with special health care needs.
- **Oral and maxillofacial pathology** – Understand the specialty of dentistry and discipline of pathology that deals with the nature, identification, and management of diseases affecting the oral and maxillofacial regions. It is a science that investigates the causes, processes, and effects of these diseases. The practice of oral pathology includes research and diagnosis of diseases using clinical, radiographic, microscopic, biochemical, or other examinations.
- **Oral and maxillofacial radiology** – Understand the specialty of dentistry and discipline of radiology concerned with the production and interpretation of images and data produced by all modalities of radiant energy that are used for the diagnosis and management of diseases, disorders, and conditions of the oral and maxillofacial region.
- **Dental public health** – Understand the science and art of preventing and controlling dental diseases and promoting dental health through organized community efforts. It is that form of dental practice which serves the community as a patient rather than the individual. It is concerned with the dental health education of the public, with applied dental research, and with the administration of group dental care programs as well as the prevention and control of dental diseases on a community basis.
- **Oral medicine** – Understand the specialty of dentistry responsible for the oral health care of medically complex patients and for the diagnosis and management of medically-related diseases, disorders and conditions affecting the oral and maxillofacial region.
- **Prosthodontics** – Understand the dental speciality related to the diagnosis, treatment planning, rehabilitation and maintenance of oral function for patients with conditions causing missing or deficient teeth and the need for biocompatible substitutes.

## Occupation-Specific Competencies

**On-the-Job Training (OJT)** is hands-on instruction completed at work to learn the core competencies necessary to succeed in an occupation. Common types of OJT include job shadowing, mentorship, cohort-based training, assignment-based project evaluation, and discussion-based training.

- **Interpret oral examinations and imaging** – Understand how to identify abnormalities in the mouth to prevent potential issues.
- **Remove diseased tissue** – Knowledgeable on dental and soft tissue surgery.
- **Treat complex dental and facial matters** – Knowledgeable on restoration and replacement of missing or damaged teeth with artificial devices.
- **Administer anesthetics** – Able to administer sedatives to control pain.
- **Use specific dental instruments and equipment** – Understand how to operate dental air turbines, diagnostic and therapeutic medical instruments, appliances and equipment.
- **Formulate plan of oral treatment** – Understand how to outline the dental services recommended, in the appropriate timeframe and at what cost for the patient.
- **Treat periodontal disease** – Understand the goal of periodontal treatment is to eliminate plaque, biofilm, and calculus, from the tooth surface and establish an environment that can be maintained in health.
- **Create, read and interpret a patients' health and dental histories** – Understand that the dentist is fully responsible for obtaining, maintaining, and reviewing patients' up-to-date health histories.
- **Understanding of dental workflow** – Understand a predefined set of work steps and ordering of these steps to achieve the expected outcome in a dental office setting.
- **Use crowns, fillings and nitrous oxide** – Understand the procedures to restore strength, function and aesthetics to a tooth and the most frequently used method for easing pain in a dental environment.
- **Supervise staff and lead teamwork efforts** – Ability to direct staff and work closely and collaboratively with peers to guide them to improve performance and lead to positive dental patient outcomes.