Indiana Department of Education
Academic Standards Course Framework

DENTAL CAREERS I

Dental Careers I prepares the student for an entry level dental assisting position. Emphasis is placed on the clinical environment, chair-side assisting, equipment/instrument identification, tray set-ups, sterilization, and characteristics of microorganisms and disease control. In addition, oral, head and neck anatomy, basic embryology, histology, tooth morphology, charting dental surfaces, and illness are all introduced. Simulated in-school laboratories and/or extended laboratory experiences are also included to provide opportunities for students to further develop clinical skills and the appropriate ethical behavior. Leadership skills are developed and community service provided through HOSA. Students have the opportunity to compete in a number of competitive events at both the state and national level.

Course Specifications

- DOE Code: 5203
- Recommended Grade Level: Grade 11-12
- Recommended Prerequisites: None
- Credits: 3 credits per semester, maximum of 6 credits
- Counts as a Directed Elective or Elective for the General, Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas
- This course is aligned with postsecondary courses for Dual Credit
    - Ivy Tech
        - DENT 102 Dental Materials & Laboratory
        - DENT 115 Preclinical Practice I
        - DENT 116 Dental Emergencies/Pharmacology
        - DENT 122 Clinical Practicum I*
        - DENT 123 Dental Anatomy DENT 124 Preventive Dentistry/Diet & Nutrition
        - DENT 124 Preventive Dentistry/Diet & Nutrition*
        - *only available in fully-articulated Dental programs
        - DENT 171 Dental Terminology

Dual Credit

This course provides the opportunity for dual credit for students who meet postsecondary requirements for earning dual credit and successfully complete the dual credit requirements of this course.

Application of Content and Multiple Hour Offerings

Intensive laboratory applications are a component of this course and may be either school based or work based or a combination of the two. Work-based learning experiences should be in a closely related industry setting. Instructors shall have a standards-based training plan for students participating in work-based learning experiences. When a course is offered for multiple hours per semester, the amount of laboratory application or work-based learning needs to be increased proportionally.

Career and Technical Student Organizations (CTSOs)

Career and Technical Student Organizations are considered a powerful instructional tool when integrated into Career and Technical Education programs. They enhance the knowledge and skills students learn in a course by allowing a student to participate in a unique program of career and leadership development. Students should be encouraged to participate HOSA Health Occupations Student Association the CTSO for this area.

Content Standards

Domain – Dental Anatomy

Core Standard 1 Students verify parts of the teeth to properly identify potential problem areas for patients.

Standards

DCI-1.1 Analyze the parts, surfaces, composition, types, function and anatomical features of the teeth

DCI-1.2 Select location in the normal, complete permanent dentition, name all 32 teeth by dentition, arch, quadrant, class, and type

DCI-1.3 Evaluate the early development of the oral cavity and teeth

DCI-1.4 Establish the normal eruption dates for the permanent teeth.

DCI-1.5 Choose the function of the bones, muscles, sinuses, vascular and lymph supply, nerve supply and the surrounding supporting structures of the oral cavity that are of interest to the field of dentistry

DCI-1.6 Select the foramen of the nerves and arteries that supply the teeth and oral cavity

DCI-1.7 Choose five symptoms and means of treating patients with TMJ disorders

DCI-1.8 Evaluate various dental pathological conditions and anomalies

Domain – Dental Materials and Laboratory

Core Standard 2 Students evaluate dental/laboratory materials and programs to determine patient's needs.

Standards

DCI-2.1 Evaluate specific conditions within the oral cavity that make it such a demanding environment for the placement and long-term performance of dental materials

DCI-2.2 Analyze the programs that are in place to insure that quality control is maintained during the manufacture of dental devices and those materials for intraoral use are safe and effective

DCI-2.3 Choose the types and uses of gypsum, impression materials, cements, resin and into metal

DCI-2.4 Connect preventive and restorative dental materials

DCI-2.5 Select the different types of liner and bases and explain the difference in intent when placing a liner rather than a base

DCI-2.6 Connect the composition, setting behavior, and uses of the various impression materials

DCI-2.7 Establish manipulation of impression materials, cements, gypsum materials, and resin materials that would be clinically useable to the dentist

DCI-2.8 Create impressions, trimmed casts, and quad-custom-made trays that are acceptable in a dentist office

DCI-2.9 Integrate the bite registrations technique on typodont using ZOE and elastomeric impression materials

Domain – Dental Emergencies/Pharmacology

Core Standard 3 Students synthesize dental emergency procedures to ensure patient safety.

Standards

DCI-3.1 Choose medical conditions (or) health changes in the dental office setting

DCI-3.2 Verify the ABC's of Emergency Care

DCI-3.3 Apply and adapt the appropriate dental emergency management procedures via scenario role-play

DCI-3.4 Verify all aspects of cardiopulmonary resuscitation and automatic external defibrillation according to the guidelines of the American Heart Association/American Red Cross for the health care provider

DCI-3.5 Choose common pharmacological agents as they relate to dental practice

DCI-3.6 Describe the parts of prescription

DCI-3.7 Confirm the use of most common emergency drugs used in dental practice

DCI-3.8 Validate controlled substance laws

DCI-3.9 Apply and adapt appropriate airway obstruction management as it pertains to specific emergency situations

Domain – Preventative Dentistry/Diet and Nutrition

Core Standard 4 Students connect the importance of Diet & Nutrition in Preventative Dentistry to determine its role in patient care.

Standards

DCI-4.1 Evaluate dental plaque and cariogenic foods, and their relationship in dental disease

DCI-4.2 Analyze the use of disclosing tablets or solution, floss, brushing techniques and auxiliary dental aids

DCI-4.3 Connect personal oral hygiene and its role in patient care

DCI-4.4 Select the major factors that influence nutrition and dental health

DCI-4.5 Rate malnutrition, under nutrition, and dental health

DCI-4.6 Select dietary guidelines for each stage of life

DCI-4.7 Design and display components of the Food Guide Pyramid

DCI-4.8 Choose major functions of vitamins and minerals in human nutrition

DCI-4.9 Establish the major function of protein, fats and water, as they relate to total body wellness

DCI-4.10 Select the information gained about gingival health through periodontal examination

Domain – Pre-Clinical

Core Standard 5 Students apply and adapt pre-clinical procedures to determine instruments needed to properly access patient needs.

Standards

DCI-5.1 Connect the role of a modern dental assistant within the profession of dentistry

DCI-5.2 Select major historical events and changes within the profession of dentistry

DCI-5.3 Establish his or her personal conduct in accordance with the legal and ethical standards of the profession

DCI-5.4 Analyze psychological aspects of patient care in a variety of dental situations

DCI-5.5 Choose instruments and equipment used in patient treatment

DCI-5.6 Apply and adapt general office maintenance and high-level sterilization and disinfection procedures

DCI-5.7 Select microorganisms and describe disease transmission and infection control

guidelines

DCI-5.8 Integrate entry level clinical skills

DCI-5.9 Choose relevant terminology and acronyms as related to subject areas stressed in this course

DCI-5.10 Select the scope of the OSHA Blood borne/Hazardous Materials Standard

DCI-5.11 Verify the use of colors and numbers used for hazardous chemical identification

DCI-5.12 Verify the acquisition and use of information relative to a course objective

Domain – Clinical Practicum

Core Standard 6 Students integrate clinical knowledge to determine patient outcomes.

Standards

DCI-6.1 Manage operatory and patients for visual and restorative procedures

DCI-6.2 Synthesize with visual and restorative procedures on clinical patients

DCI-6.3 Recommend oral physiotherapy procedures on select clinical patients

DCI-6.4 Connect dental office business procedures using Eagle Software computerized system

DCI-6.5 Apply and adapt instruments, disinfect equipment and utilize barrier per OHSA guidelines

Process Standards

Common Core Literacy Standards for Technical Subjects

Reading Standards for Literacy in Technical Subjects 11-12

The standards below begin at grade 11 and define what students should understand and be able to do by the end of grade 12. The CCR anchor standards and high school standards in literacy work in tandem to define college and career readiness expectations – the former providing broad standards, the latter providing additional specificity.

Key Ideas and Details

11-12.RT.1 Cite specific textual evidence to support analysis of technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.

11-12.RT.2 Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.

11-12.RT.3 Follow precisely a complex multistep procedure when performing technical tasks; analyze the specific results based on explanations in the text.

Craft and Structure

11-12.RT.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific context relevant to *grades 11-12 texts and topics*.

11-12.RT.5 Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.

11-12.RT.6 Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved.

Integration of Knowledge and Idea

11-12.RT.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.

11-12.RT.8 Evaluate the hypotheses, data, analysis, and conclusions in a technical subject, verifying the data when possible and corroborating or challenging conclusions with other sources of information.

11-12.RT.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

Range of Reading and Level of Text Complexity

11-12.RT.10 By the end of grade 12, read and comprehend technical texts in the grades 11-CCR text complexity band independently and proficiently.

Writing Standards for Literacy in Technical Subjects 11-12

The standards below begin at grade 11 and define what students should understand and be able to do by the end of grade 12. The CCR anchor standards and high school standards in literacy work in tandem to define college and career readiness expectations – the former providing broad standards, the latter providing additional specificity.

Text Types and Purposes

11-12.WT.1 Write arguments focused on *discipline-specific content*.

11-12.WT.2 Write informative/explanatory texts, including technical processes.

11-12.WT.3 Students will not write narratives in technical subjects. *Note: Students' narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In technical, students must be able to write precise enough descriptions of the step-by-step procedures they use in their technical work that others can replicate them and (possibly) reach the same results.*

Production and Distribution of Writing

11-12.WT.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

11-12.WT.5 Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.

11-12.WT.6 Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.

Research to Build and Present Knowledge

11-12.WT.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

11-12.WT.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectivity to maintain the flow of ideas, avoiding plagiarism and following a standard format for

citation

11-12.WT.9 Draw evidence from informational texts to support analysis, reflection, and research.

Range of Writing

11-12.WT.10 Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.