

**SOUTHEAST COMMUNITY COLLEGE**  
**HEALTH SCIENCES DIVISION**  
**DENTAL ASSISTING**  
**Revision Date: 8/22**

**I. CATALOG DESCRIPTION**

**Course Number:** DENT 1501  
**Course Title:** Advanced Dental Assisting Skills  
**Prerequisite(s):** Proof of Nebraska Licensed Dental Assistant status or by permission and Current Healthcare Provider CPR

**Catalog Description:** This course is to meet the structured education required by the State Board of Dentistry for licensed dental assistants (LDA) seeking expanded scope permit for Nitrous Oxide Administration, Pediatric Fixed Prosthodontic, Fixed Prosthodontics and Removable Prosthodontics. This advanced skills course follows state regulations with lecture, lab and competency testing.

**Credit Hours:** 2  
**Class Hours:** 23  
**Lab Hours:** 23  
**Total Contact Hours:** 46

**II. COURSE OBJECTIVES:** *Course will:*

1. Apply aseptic principles in the operatory and laboratory.
2. Apply knowledge and skills to: take and pour up preliminary impressions, take bite registrations, construct custom trays, apply moisture control techniques, utilize impression trays and materials to take final impressions for both fixed and removable protheses, take digital impressions, interpret accuracy of impressions, nomenclature of fixed and removable protheses, apply soft liners to removable protheses, and make extra oral adjustments to removable protheses.
3. Understand anatomy and morphology of the deciduous dentition, cavity classifications, types and uses of primary crowns, adapt/contour, and cement primary crowns.
4. Apply knowledge and skills to: understand physiological and psychological aspects of anxiety and pain, stages of drug-induced CNS depressions, respiratory and circulatory systems, taking/monitoring vital signs, pharmacology of nitrous oxide and oxygen, prevention, recognition and management of complications, equipment and proper records.

**III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES:**

**A. STUDENT LEARNING OUTCOMES:** *The student will be able to:*

1. Describe and demonstrate principals of infection control in the operatory and laboratory.
2. List and identify landmarks of the face and oral cavity (including the teeth, floor of mouth, and tongue).
3. Demonstrate the knowledge and skills necessary to take and pour up alginate, take bite registrations,

use of a dental articulator and face bow for dental casts, select and utilize impression trays, prepare elastomeric impression materials for use as a final impression, take a mandibular and maxillary final impression for a removable and fixed prosthesis, and take digital impressions.

4. Recognize common anomalies, uses and manipulation of impression materials for final impressions including, polyether, polysulfide, polyvinyl siloxane, and reversible hydrocolloid, demonstrate techniques for moisture control and isolation, demonstrate different systems for gingival deflection and retraction including homeostasis, demonstrate placing and removing gingival retraction cord and, assessment of final impressions.
5. Describe the types and nomenclature of the parts of various fixed and removable prostheses, demonstrate the placement of a soft liner in a removable prosthesis, and demonstrate extra oral adjustments to a removable prosthesis.
6. Describe patient management techniques for a child, including review of medical history and documentation.
7. Recognize anatomy and morphology of the deciduous dentition, identify cavity classifications, different types and uses of primary crowns, select and demonstrate adaption/ contour the primary crowns, and cementation of primary crowns.
8. Demonstrate knowledge and skills necessary to use a mirror directly and indirectly with a fulcrum, demonstrate skills necessary to use a low-speed handpiece extra-orally.
9. Describe composite application within a primary provisional crown.
10. Define and describe the physiological and psychological aspects of anxiety and pain, the stages of drug-induced central nervous system depression through all levels, function and structures of the respiratory and circulatory systems.
11. Describe and demonstrate taking/monitoring vital signs, describe the pharmacology of agents used in nitrous oxide and oxygen inhalation analgesia, including drug interactions and incompatibilities, and indications and contraindications for use of nitrous oxide and oxygen inhalation analgesia, demonstrate the prevention, recognition and management of complications and life-threatening situations.
12. Describe in detail and demonstrate the use of nitrous oxide and oxygen inhalation analgesia equipment, demonstrate the importance of maintaining proper records with accurate chart entries recording medical history, physical examination, vital signs, drugs and doses administered and patient response.

**B. GENERAL EDUCATION LEARNING OUTCOMES**

**GELO 3: Critical Thinking and Problem Solving**

1. Collect, identify, interpret and analyze data.

**IV. CONTENT/TOPICAL OUTLINE (*course outline may provide more detailed information*)**

The didactic hours of instruction must include, but not be limited to:

**UNIT 1**

**1. Review of related content**

- Anatomy/morphology/landmarks/surfaces of deciduous, permanent and edentulous dentitions
- Infection control for operator (Standard precautions, and aseptic)
- Infection control and safety for the lab
- Preliminary impressions/pouring up/trimming models

## **2. Bite registrations**

- Purpose of bite registration
- Materials used (PVS, Wax, ZOE, etc.)
- Equipment and supplies needed
- Centric occlusion
- Facebow/articulator

## **3. Retraction cord/material**

- Purpose of the retraction material
- Armamentarium, technique and instructions for retraction
- Understanding the pharmacology of hemostatic agents

## **4. Impression trays**

- Stock (selection criteria for stock trays, types of stock trays (full-arch, quadrant, section, metal, plastic, and triple trays)
- Custom trays (fabrication of custom trays, custom tray materials used (acrylic resin, light-cured resin, thermoplastic resin)
- Tray adaption (wax, border molding techniques)
- Tray adhesives

## **5. Final impression**

- Types of materials (reversible hydrocolloid, elastomeric-polysulfide, polyether, silicone, PVS)
- Technique for manipulation, chemical composition, working and setting times per material
- Armamentarium, technique, positioning and patient management for maxillary and mandibular impressions.
- Evaluating the impression
- Chart documentation

## **6. Digital impressions**

- Advantages and disadvantages
- Types of machines/systems (CAD/CAM)
- Techniques for taking scans of the teeth, evaluating the scans for accuracy, sending scans to the dental laboratory for model/restoration fabrication
- Record/retention for digital models

## **7. Removable prostheses, adjustments, soft liners**

- Types of full and partial removable prostheses and nomenclature of their parts
- Placement of temporary soft liners in removable prosthesis
- Extra-oral adjustments of removable prosthesis

## **UNIT 2**

### **1. Review of related content**

- Anatomy/morphology/landmarks/surfaces of the deciduous dentition
- Cavity classifications
- Types of primary crowns
- Infection control
- Isolation
- Armamentarium
- Fulcrum and mirror skills
- Extra-oral use of low-speed handpiece
- Composite application technique
- Cements application technique
- Identify and correct deficiencies on all types of primary crowns procedures

### **2. Stainless steelcrown:**

- Identify and demonstrate the correct size of the stainless-steel crown
- Armamentarium and technique
- Trimming and contouring
- Cementation and excess cement removal
- Check occlusion
- Post-operative instructions

### **3. Prefabricated Esthetic crown:**

- Identify and demonstrate the correct size of the polycarbonate crown
- Armamentarium and technique
- Cement application
- Check occlusion
- Post-operative instruction

### **4. Cements:**

- Recognize properties and indications for use of different dental materials
- Adapt, cement stainless steel and prefabricate esthetic crowns
- Remove excess cement from stainless steel and polycarbonate crowns

### **5. Documentation**

- Importance of maintaining proper records with accurate chart entries

## **UNIT 3**

### **1. Manage/Evaluate**

- Management of child, adult, mentally and physically compromised patients
- Patient evaluation and selection through review of medical history taking, physical diagnosis and psychological
- Considerations, definitions and descriptions of physiological and psychological aspects of anxiety and pain.

### **2. Description of the stages of drug-induced central nervous system depression**

- Levels of consciousness and unconsciousness, with special emphasis on the distinction between the conscious and unconscious state.

- Differentiate between Stage I and Stage II anesthesia.

### **3. Review of related content.**

- Respiratory anatomy and physiology
- Circulatory anatomy and physiology

### **4. Vitals: taking/monitoring vital signs**

- Respiratory rates and assessment techniques for patients
- Circulatory rates for child and adult patients
- Taking and recording the pulse rate
- Taking and recording blood pressure

### **5. Nitrous Oxide Analgesia**

- History of Nitrous use in dentistry
- Pharmacology of agents used in nitrous oxide and oxygen inhalation analgesia

### **6. Drug interactions and incompatibilities**

- Indications and contraindications for use of nitrous oxide and oxygen inhalation analgesia
- Patient safety including prevention, recognition and management of complications and life-threatening situations and discussion of abuse potential
- Operator safety including ADA and NIOSH recommendations

### **7. Equipment**

- Description of nitrous oxide and oxygen inhalation analgesia equipment
- Use of nitrous oxide and oxygen inhalation analgesia equipment
- Infection control for all nitrous equipment

### **8. Documentation**

- Importance of maintaining proper records with accurate chart entries
- Recording of medical history, physical examination, vital signs, drugs and doses administered and patient response

The laboratory course content includes, but is not limited to:

#### **UNIT 1:**

1. Bite registrations: preclinical participation to include a demonstration of both a proper wax and PVS bite registration.
2. Retraction cord: preclinical participation to include a demonstration of proper placement of retraction material on a typodonts.
3. Impression trays: construct custom tray.
4. Final impressions: preclinical participation to include a demonstration competency of taking final impressions for both fixed and removable prostheses using multiple types of final impression materials and trays.
5. Demonstrate competency of placement of temporary soft liners in removable prosthesis.
6. Demonstrate competency of extra-oral adjustments of removable prosthesis: to include making adjustments on prosthesis.

#### **UNIT 2:**

1. Application to fit primary crowns in both the anterior and posterior regions on a primary typodonts to competency.

2. Preclinical participation to include demonstrate competency of the proper placement and cementation of anterior and posterior primary stainless-steel crowns on a typodont.

### **UNIT 3:**

1. Taking and monitoring of vital signs.
2. Recording accurate chart entries.
3. Demonstrate knowledge of equipment.
4. Ability to competently administer and monitor nitrous oxide and oxygen.

## **V. INSTRUCTIONAL MATERIALS REQUIRED**

### **A. Required Text(s):**

No textbooks required. All materials provided.

## **VI. METHODS OF PRESENTATION/INSTRUCTION**

A. Methods of presentation typically include a combination of the following:

1. Online /class discussion
2. Demo Videos
3. Handout Materials
4. Demonstration/return Demonstration
5. Websites
6. Power Point slides and videos
7. Activities and tests
8. Games may be used to augment some of the units.

## **VII. METHODS OF EVALUATION**

A. Methods of evaluation typically include a combination of assignments, quizzes, exam, projects, skill checkoffs, etc. For grading expectations please see the course information document.

### **SCC STANDARD GRADING SCALE POLICY:**

|           |               |           |                 |
|-----------|---------------|-----------|-----------------|
| <b>A+</b> | <b>95-100</b> | <b>C+</b> | <b>75-79</b>    |
| <b>A</b>  | <b>90-94</b>  | <b>C</b>  | <b>70-74</b>    |
| <b>B+</b> | <b>85-89</b>  | <b>D+</b> | <b>65-69</b>    |
| <b>B</b>  | <b>80-84</b>  | <b>D</b>  | <b>60-64</b>    |
|           |               | <b>F</b>  | <b>Below 60</b> |

## **VIII. SPECIFIC COURSE REQUIREMENTS**

### **A. ATTENDANCE**

On campus lab attendance is crucial to the success of this course. The lab is mandatory, therefore it if missed, you will receive a failing grade.

B. Written test, Lab Practicums and Competencies must be passed at a minimum of a 75%.

Please see course information document for course policies related to grading, expectations, assignments, assessments, and participation.