

# DENT-1400: PREVENTIVE ORAL HEALTH SERVICES II

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## Cuyahoga Community College

**Viewing: DENT-1400 : Preventive Oral Health Services II**

**Board of Trustees:**

December 2023

**Academic Term:**

Fall 2024

**Subject Code**

DENT - Dental Hygiene

**Course Number:**

1400

**Title:**

Preventive Oral Health Services II

**Catalog Description:**

Implementation of preventative oral health services. Students provide oral health treatment to patients in the dental hygiene clinic. Emphasis is on organizational skills in preparation for patient treatment, implementation of the study and clinical application of the principles involved in periodontal treatment, acquiring of dental images, application of preventive therapeutics and the development of individualized self-care education plans. Topics include treatment of medically compromised and special needs patients, tobacco use and smoking cessation, methods of oral pain management and care of dental prostheses.

**Credit Hour(s):**

5

**Lecture Hour(s):**

1

**Lab Hour(s):**

0

**Other Hour(s):**

12

**Other Hour Details:**

Clinical Lab Hours: 12 hours per week in the Dental Hygiene Clinic

## Requisites

**Prerequisite and Corequisite**

DENT-1300 Preventive Oral Health Services I.

## Outcomes

**Course Outcome(s):**

Provide comprehensive dental hygiene treatment to all patients.

**Objective(s):**

1. Complete a huddle sheet for each patient to be treated including identification of medical concerns, medications, and required treatment modifications.
2. Complete the Assessment, Diagnosis, Planning, Implementation, Evaluation, and Documentation (ADPIED) of patient treatment.
3. Develop individualized oral self-care plans based on patients' oral assessments. Each student must present orally to all patients and one under direct faculty observation.
4. Identify appropriate oral physiotherapy aids based on individual oral health care needs of the patient.
5. Document patient treatment utilizing a Services, Assessment, Recommendations, and Plan (SARP) format.
6. Develop a Dental Hygiene Care Plan for each patient treated based on a patient's individual needs.
7. Modify patient treatment, as needed, during the evaluation phases of treatment and throughout subsequent appointments within the sequence of patient treatment.

8. Demonstrate proper instrumentation techniques by successfully passing Instrument Competencies on different instruments at 83% competency level for each instrument.
9. Demonstrate the proper application techniques during a Fluoride Tray and a Fluoride Varnish competency.
10. Complete debridement requirements on patients who meet the specific criteria outlined in the course syllabus.
11. Complete comprehensive dental hygiene treatment on seven patients.
12. Complete a pharmacology consultation with the Supervising Dentist on one patient taking a minimum of three prescription medications.
13. Demonstrate successful completion of a polish observation competency on one patient.
14. Acquire the following types of images on patients after a comprehensive examination and completion of risk assessments: bitewing, complete mouth series, and panoramic images.
15. Perform commonly used indices to analyze patient data.
16. Complete a removable prosthesis/appliance competency during a clinic session following the guidelines on the competency form and outlined in the Clinic Manual.
17. Complete the Management of Client Care category and Time Management category of the Daily Performance Evaluation at 75% or greater competency level.
18. Complete the Professional Development and Environmental Management category of the Daily Performance Evaluation at 83% or greater competency level.
19. Complete a topical anesthetic competency following the guidelines outlined in the Clinic Manual.
20. Complete one Calculus Detection and Removal Observation on four teeth under direct observation of faculty.
21. Complete one Calculus Quadrant Detection requirement.
22. Perform proper impression-taking techniques as well as fabrication of an upper or lower arch impression.
23. Fabricate a whitening tray using an upper or lower arch impression.
24. Correctly seat a whitening tray on a clinic patient as well as evaluate the proper fit in the patient's mouth.
25. Obtain Supervising Dentist approval regarding fit of the whitening tray on a patient.
26. Apply pit and fissure sealants to teeth following successful application and evaluation of pit and fissure sealants in DENT 1410: Current Concepts in Dental Materials, following the guidelines provided in the course.
27. Complete one Scale Competency (one-half mouth) on a patient without instructor assistance, following the guidelines outlined in the syllabus.
28. Complete one Mounting Competency at 100% competency level.
29. Complete one Periodontal Screening and Recording (PSR) as an exit requirement by the end of Preventive Oral Health Service IV (POHS IV).

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**Course Outcome(s):**

Initiate the emergency medical protocol for all possible emergency situations.

**Objective(s):**

1. Explain the management of medical emergencies that may occur in a dental office.
2. Identify the location in the Dental Hygiene Clinic of the emergency medical equipment.
3. Demonstrate correct operation of the oxygen tank according to instructions in the Clinic Manual.
4. Review the Tri-C team approach to medical emergency management.

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**Course Outcome(s):**

Utilize proper infection prevention and hazard communication practices during all dental hygiene activities.

**Objective(s):**

1. Complete the Professional Development and Environmental Management categories of the Daily Performance Evaluation at 83% or greater competency level.
2. Identify the location of Safety Central and the contents of the safety manuals.

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**Course Outcome(s):**

Identify specific implementation strategies when treating patients with a variety of preventive and restorative needs and specific appliances present in the oral cavity.

**Objective(s):**

1. Describe the specific methods of instrumentation and maintenance when providing dental hygiene treatment to patients with fixed and removable appliances and edentulous patients wearing removable appliances.
2. Identify the actions and methods of desensitization of hypersensitive teeth.
3. Discuss the advantages, disadvantages, indications, and contraindications of topical pain control.
4. Demonstrate proper use of various types of topical anesthesia according to competency guidelines.

**Course Outcome(s):**

Describe the specific approach and necessary modifications to treatment when providing care to patients with special needs.

**Essential Learning Outcome Mapping:**

Cultural Sensitivity: Demonstrate sensitivity to the beliefs, views, values, and practices of cultures within and beyond the United States.

**Objective(s):**

1. Demonstrate an understanding of the diversity of populations and apply the concepts to patient care.
2. Describe treatment considerations for older adult patients.
3. Explain appropriate treatment strategies to utilize when providing care to patients with physical, sensory, and mental health disorders.
4. Describe specific aspects of patient care and treatment strategies necessary to utilize when providing care to patients with substance-abuse related disorders.
5. Implement tobacco cessation knowledge during patient care.
6. Participate in an Interprofessional Education and Collaboration experience. Dental hygiene students will work collaboratively with students in other health career programs to analyze case studies and discuss treatment modalities.

**Course Outcome(s):**

Explain treatment strategies and modifications to treatment necessary when treating patients that are medically compromised.

**Objective(s):**

1. Describe a dental hygiene treatment plan for patients with cardiovascular disease.
2. Explain the effects of diabetes mellitus including classification of types, action of insulin, treatment and dental hygiene care.

**Course Outcome(s):**

Choose a Poster Presentation topic and create a topical outline and annotated bibliography with a group of classmates.

**Objective(s):**

1. Research dental and medical topics relevant to the provision of dental hygiene services.
2. Develop a topical outline based upon research findings.
3. Develop an annotated bibliography based upon research findings.

**Course Outcome(s):**

Discuss the fundamentals of advanced periodontal instrumentation.

**Objective(s):**

1. Explain the specific design characteristics of periodontal files and how these characteristics are applied to debridement.
2. Define the goal of root (planing) debridement.
3. Compare and contrast assessment, scaling (calculus removal strokes) and root debridement strokes.
4. Define the primary functions of periodontal files.
5. Define and demonstrate stroke patterns including zones/channels, the multidirectional strokes utilized with root debridement (planing) and discuss the significance of these types of strokes.
6. List, define and utilize the Furcation, Grade and Mobility Classification system and identify the associated symbols used with some charting systems.

7. Begin to identify clinically, the location of furcations present in maxillary and mandibular teeth and relate this information to instrumentation.
8. Define cervical enamel projection and its significance to periodontal disease and treatment.
9. Explain the procedure for sharpening of instruments.
10. Identify and demonstrate the correct use of the Gracey 13/14 After Five Rigid Curette and the Gracey 15/16 Mini Flve Rigid Curette
11. Implement the different types of advanced fulcrums.
12. Assess clinical attachment loss in clinic patients.

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**Course Outcome(s):**

Perform essential selective polishing techniques.

**Objective(s):**

1. List the contraindications for motor-driven polishing on all teeth.
2. Differentiate between removable and non-removable stains on teeth.
3. Remove stains and biofilm using a toothbrush and/or motor-driven equipment.
4. Perform the proper care and cleaning of equipment used in the clinic for polishing.
5. Identify the types of polishing agents available for use during essential selective polishing as well as the specific dental tissues and restorative materials appropriate for use.

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**Course Outcome(s):**

Utilize proper sharpening techniques to preserve the original shape of the instrument blade and identify methods used to determine sharp instruments.

**Objective(s):**

1. Identify the benefits of using sharp instruments as well as the consequences of using dull instruments.
2. Identify the specific areas to be sharpened on area-specific curets, universal curets, and universal sickle scalers.
3. Differentiate between the different types of sharpening stones, their advantages, and disadvantages.
4. Describe the 2 tests used to identify dull instruments and to test for instrument sharpness.
5. Describe and apply the technique of a stationary instrument and moving flat stone.
6. Describe and apply the technique of a stationary flat stone and moving instrument.
7. Describe in detail the techniques used to sharpen area-specific curets, universal curets, and universals sickle scalers; including clock positions, handle positions, and positions of the face.
8. Identify the specific portion of the instrument that should be sharpened first, second, and last.
9. Explain the specific protocol that must be followed when sterilizing stones and plastic test sticks.
10. Explain the process and technique utilized when using the Premier Disc Sharpening Device, Sidekick Sharpening Device, and Gleason Guide.

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**Methods of Evaluation:**

1. Examinations
2. Written Assignments
3. Poster Presentation topic, annotated bibliography and topical outline
4. Interprofessional Education and Collaboration Assignment
5. Clinical evaluation

**Course Content Outline:**

1. Comprehensive, preventive oral health care
  - a. Clinical requirements
    - i. Oral self-care
      1. Physiotherapy aids
    - ii. Calculus Detection and Removal
    - iii. Calculus Quadrant Detection
    - iv. Diagnostic study models
    - v. Pit and fissure sealants

- vi. Dental Images
  - 1. Exposure of bitewing, complete mouth series (CMX) and panoramic images
  - 2. Imaging Consultation
  - 3. Imaging Interpretation
- vii. Pharmacology Consultation
- viii. Fluoride Tray Competency
- ix. Fluoride Varnish Competency
- x. Polish Observation Competency
- xi. Instrument Competencies
- xii. Removable Prosthesis Competency
- xiii. Scale Competency
- xiv. Debridement Requirements
- xv. Completion of seven patients
- xvi. Topical Anesthetic Competency
- xvii. Indices
  - 1. Plaque Index (PLI)
  - 2. Oral Hygiene Index-Simplified (OHI-S)
  - 3. Periodontal Screening and Recording
- xviii. Huddle
  - xix. Mounting Competency
- b. Assessment, diagnosis, planning, implementation, evaluation, documentation (ADPIED)
- c. Ultrasonic instrumentation
- d. Daily Performance Evaluation
- e. Dental Hygiene Care Plan
- f. Documentation
  - i. Services, Assessment, Documentation, Plan (SARP)
- 2. Time Management
  - a. Time management evaluation
  - b. Organizational Skills
    - i. Scheduling strategies
    - ii. Requirement Charts
    - iii. Term Summary of Clinical Requirements (Blue Tally)
    - iv. Spreadsheet verification
- 3. Emergency Medicine
  - a. Medical emergency quiz
- 4. Infection Prevention and Hazard Communication
  - a. Occupational Safety & Health Administration (OSHA) Interpretation Session
  - b. Centers for Disease Control (CDC) Interpretation Session
- 5. Dental Conditions and Applications for Clinical Treatment
  - a. Edentulous and Partially Edentulous Patient
  - b. Fixed appliances
    - i. Fixed bridge
      - 1. Pontic
      - 2. Abutment
      - 3. Care and maintenance
      - 4. Instrumentation principles
  - c. Removable appliances
    - i. Partial dentures
    - ii. Complete dentures
    - iii. Overdentures
    - iv. Care and maintenance
  - d. Tooth hypersensitivity
    - i. Pain stimuli
    - ii. Characteristics
    - iii. Etiology
    - iv. Contributing factors
    - v. Methods of desensitization
      - 1. Fluoride
      - 2. Potassium-based products

3. Strontium Chloride
  4. Amorphous Calcium Phosphate
  5. Sodium calcium phosphosilicate
  - vi. Pain Control
    1. Pain sources
      - a. Tooth
        - i. Dentin
        - ii. Dental caries
        - iii. Tooth fractures
      - b. Temporomandibular joint
      - c. Muscles
      - d. Gingival tissues
  - vii. Methods to control pain
    1. Topical anesthetics
      - a. Benzocaine
      - b. Prilocaine, lidocaine
6. Care of Special Needs Patients
  - a. Older Adult Patients
    - i. Systemic Changes
      1. Cardiovascular
      2. Musculoskeletal
      3. Endocrine
      4. Immune
      5. Gastrointestinal
    - ii. Diseases and conditions
      1. Osteoporosis
      2. Alzheimer's disease
      3. Effect of medications
      4. Oral findings
  - b. Disabilities
    - i. Oral manifestations
    - ii. Dental care and dental hygiene care
    - iii. Appointment scheduling
    - iv. Barrier-free environment
    - v. Wheelchair transfer
    - vi. Additional assists
    - vii. Client positioning and stabilization
    - viii. Specialized physiotherapy aids
  - c. Sensory Disabilities
    - i. Visual impairment
    - ii. Hearing impairment
  - d. Physical Disabilities
    - i. Spinal cord dysfunction and injuries
    - ii. Cerebrovascular accident
    - iii. Muscular dystrophies
    - iv. Myasthenia Gravis
    - v. Multiple Sclerosis
    - vi. Cerebral Palsy
    - vii. Bell's Palsy
    - viii. Parkinson's disease
    - ix. Arthritis
      1. Osteoarthritis
      2. Juvenile
      3. Degenerative
      4. Rheumatoid
    - x. Scleroderma
    - xi. Kidney disease
    - xii. Amyotrophic Lateral Sclerosis (ALS)
  - e. Mental Health Issues

- i. Schizophrenia
- ii. Bipolar disease
- iii. Major depressive disorder
- iv. Post-partum mood disturbances
- v. Anxiety disorders
  - 1. Panic disorder
  - 2. Agoraphobia
  - 3. Phobic disorder
  - 4. Obsessive-compulsive disorder
  - 5. Post-traumatic stress disorder
  - 6. Generalized anxiety disorder
- vi. Eating disorders
  - 1. Anorexia nervosa
  - 2. Bulimia nervosa
- vii. Somatoform disorders
- f. Substance Abuse
  - i. Alcoholism
    - 1. Fetal alcohol syndrome
  - ii. Prescription and street drugs
    - 1. Central Nervous System Depressants
    - 2. Stimulants
    - 3. Barbiturates
    - 4. Benzodiazepines
    - 5. Cocaine
    - 6. Amphetamines
    - 7. Methamphetamines
    - 8. Heroin
    - 9. Tobacco
  - iii. Diversity
    - 1. Cultural
    - 2. Cross-cultural
    - 3. Race
    - 4. Ethnicity
    - 5. Communication
    - 6. Physical Contact
- 7. Care of Medically Compromised Patients
  - a. Diabetes
    - i. Type I
    - ii. Type II
    - iii. Gestational
    - iv. Complications
    - v. Treatment
    - vi. Oral relationships
    - vii. Oral manifestations
    - viii. Dental hygiene care
    - ix. Blood glucose testing
    - x. Glycosylated Hemoglobin Assay (HbA1C)
    - xi. Emergencies
      - 1. Diabetic Coma
      - 2. Insulin Shock
  - b. Cardiovascular Disease
    - i. Congenital heart diseases
      - 1. Ventricular septal defect
      - 2. Patent ductus arteriosus
      - 3. Rheumatic heart disease
      - 4. Rheumatic fever
    - ii. Mitral valve prolapse
    - iii. Infective endocarditis

1. Premedication guidelines
2. Hypertension
3. Ischemic heart disease
4. Angina
5. Congestive heart failure
6. Myocardial infarction
7. Cardiovascular surgical treatment
  - a. Percutaneous transluminal coronary angioplasty
  - b. Coronary stent
  - c. Coronary bypass
  - d. Cardiac pacemakers
8. Medications
9. Oral-systemic link
8. Design Characteristics of Periodontal Files
  - a. Series of Cutting Edges
  - b. Angles of Cutting Edges
  - c. Face
  - d. Rounded Back
  - e. Rigid Shank
  - f. Area-Specific Use
9. Adaptation of Periodontal Files
  - a. Two-Point Contact
    - i. Point One
    - ii. Point two
  - b. Mesial Surface
  - c. Distal Surface
  - d. Facial Surface
  - e. Lingual Surface
10. Application of the Cutting Edges
  - a. Anterior Teeth
  - b. Posterior Teeth
11. Functions of Periodontal Files
  - a. Crush large deposits
  - b. Roughen burnished calculus
  - c. Smooth overhanging amalgam restorations
12. Classification of Furcations
  - a. Class I
  - b. Class II
  - c. Class III
  - d. Class IV
  - e. Charting Symbols
13. Root Furcation Morphology
  - a. Mandibular Molars
  - b. Maxillary First Premolars
  - c. Maxillary Molars
    - i. Buccal
    - ii. Proximal
14. Classification of Mobility
  - a. Class I
  - b. Class II
  - c. Class III
15. Stroke Types
  - a. Assessment
  - b. Root Debridement
  - c. Calculus Removal
16. Stroke Patterns
  - a. Zones
  - b. Channels
  - c. Multidirectional



17. Instruments Used to Assess Furcations
  - a. 11/12 Explorer
  - b. Nabers Probe
18. Instrument Sharpening
  - a. Devices
    - i. File sharpening device
    - ii. Premier Disc
    - iii. Gleason Guide
    - iv. Sidekick Device
    - v. Arkansas Stone
    - vi. Advantages and disadvantages
  - b. Tests to identify sharpness
    - i. Visual or glare
    - ii. Plastic test stick
  - c. Types of instruments to be sharpened
    - i. Area-Specific curets
    - ii. Universal curets
    - iii. Universal sickle scalers
  - d. Techniques
    - i. Stationary stone moving instrument
    - ii. Stationary instrument moving stone
  - e. Benefits
  - f. Areas of instruments requiring sharpening
  - g. Sterilization of Equipment
19. Polishing
  - a. Indications
  - b. Contraindications
  - c. Commercial Preparations
  - d. Technique
  - e. Equipment
  - f. Use of disclosant
20. Poster Presentations
  - a. Topic Selection
  - b. Topical Outline
  - c. Annotated Bibliography

## Resources

Nield-Gehrig, Jill. (2020) *Fundamentals of Periodontal Instrumentation*, Baltimore: Lippincott, Williams and Wilkins.

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Bowen, Denise M., Pieren, Jennifer A. . (2020) *Dental Hygiene Theory and Practice*, Philadelphia: Elsevier.

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Langlais, R. , Miller, C. & Neild-Gehrig, J. (2020) *Color Atlas of Common Oral Diseases*, Philadelphia, Lippincott, Williams & Wilkins.

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Crossley, H. (2023-2024) *Drug Information Handbook for Dentistry*, Hudson, Lexi-Comp.

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Grimes, Ellen B. (2014) *Medical Emergencies: Essentials for the Dental Professional*, Upper Saddle River: Pearson.

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**Resources Other**

1. [www.ada.org](http://www.ada.org) (<http://www.ada.org>) American Dental Association
2. [www.adha.org](http://www.adha.org) (<http://www.adha.org>) American Dental Hygienists' Association
3. [www.rxmed.com](http://www.rxmed.com) (<http://www.rxmed.com>) Comprehensive drug database
4. [www.osap.org](http://www.osap.org) (<http://www.osap.org>) Organization for Safety and Asepsis Procedures
5. [www.osha.gov](http://www.osha.gov) (<http://www.osha.gov>) Occupational Safety and Health Administration
6. *Cuyahoga Community College Dental Hygiene Clinic Manual- Current version.*

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