DIVISION: Health Professions

COURSE: DLH 1200 Pre-Clinic

Date: Spring 2024

Credit Hours: 5

Prerequisite(s): Acceptance into the Dental Hygiene AAS Degree Program

Enrollment by assessment or other measure? □ Yes ☑ No
If yes, please describe:

Corequisite(s): None

Pre- or Corequisite(s): None

Consent of Instructor: □ Yes ☑ No

Delivery Method:
☑ Lecture 2 Contact Hours (1 contact = 1 credit hour)
☐ Seminar 0 Contact Hours (1 contact = 1 credit hour)
☑ Lab 6 Contact Hours (2-3 contact=1 credit hour)
☐ Clinical 0 Contact Hours (3 contact = 1 credit hour)

Offered: ☑ Fall ☑ Spring ☐ Summer

CATALOG DESCRIPTION and IAI NUMBER (if applicable): Introduction to the responsibilities and fundamental skills the dental hygienist uses in daily clinical practice; instrumentation, removing stains and deposits from tooth surfaces, instrument care, sterilization and disinfection, skills performed on mannequins and student/patients; designed to familiarize the beginning dental hygiene student with duties and responsibilities in the clinical aspect of the profession and the role the hygienist plays; intro to dental hygiene, oral inspection, dental hygiene diagnoses and care planning.
ACCREDITATION STATEMENTS AND COURSE NOTES:

Standard 2: Educational Program:

Curriculum:

2-8 The curriculum must include content in the following four areas: general education, biomedical sciences, dental sciences, and dental hygiene science. This content must be integrated and of sufficient depth, scope, sequence of instruction, quality and emphasis to ensure achievement of the curriculum's defined competencies. A curriculum document must be submitted for each course included in the dental hygiene program for all four content areas.

2-8b Biomedical science content must include content in anatomy, physiology, chemistry, biochemistry, microbiology, immunology, general pathology and/or pathophysiology, nutrition, and pharmacology.

2-8c Dental sciences content must include tooth morphology, head, neck and oral anatomy, oral embryology and histology, oral pathology, radiography, periodontology, pain management, and dental materials.

2-8d Dental hygiene science content must include oral health education and preventive counseling, health promotion, patient management, clinical dental hygiene, provision of services for and management of patients with special needs, community dental/oral health, medical and dental emergencies, legal and ethical aspects of dental hygiene practice, infection and hazard control management, and the provision of oral health care services to patients with bloodborne infectious diseases.

2-9 The basic clinical education aspect of the curriculum must include a formal course sequence in scientific principles of dental hygiene practice, which extends throughout the curriculum and is coordinated and integrated with clinical experience in providing dental hygiene services.

Patient Care Competencies:

2-12 Graduates must be competent in providing dental hygiene care for the child, adolescent, adult, and geriatric patient. Graduates must be competent in assessing the treatment needs of patients with special needs.

Patient Care Competencies:

2-13 Graduates must be competent in providing the dental hygiene process of care which includes:

a) Comprehensive collection of patient data to identify the physical and oral health status.

b) Analysis of assessment findings and use of critical thinking in order to address the patient’s dental hygiene treatment needs.

c) Establishment of a dental hygiene care plan that reflects the realistic goals and treatment strategies to facilitate optimal oral health.

d) Provision of patient-centered treatment and evidence-based care in a manner minimizing risk and optimizing oral health

2-14 Graduates must be competent in providing dental hygiene care for all types of classifications of periodontal disease including patients who exhibit moderate to severe periodontal disease.

2-15 Graduates must be competent in interpersonal and communication skills to effectively interact with diverse population groups and other members of the health care team.

2-16 Graduates must demonstrate competence in:
b) Planning an oral health program to include health promotion and disease prevention activities.

c) Implementing the planned program, and,

d) Evaluating the effectiveness of the implemented program.

2-18 Where graduates of a CODA accredited dental hygiene program are authorized to perform additional functions required for initial dental hygiene licensure as defined by the program’s state specific dental board or regulatory agency, program curriculum must include content at the level, depth, and scope required by the state. Further, curriculum content must include didactic and laboratory/preclinical/clinical objectives for the additional dental hygiene skills and functions. Students must demonstrate laboratory/preclinical/clinical competence in performing these skills.

Ethics and Professionalism:

2-19 Graduates must be competent in the application of the principles of ethical reasoning, ethical decision making and professional responsibility as they pertain to the academic environment, research, patient care, and practice management.

2-20 Graduates must be competent in applying legal and regulatory concepts to the provision and/or support of oral health care services.

Critical Thinking:

2-22 Graduates must be competent in the evaluation of current scientific literature.

2-23 Graduates must be competent in problem solving strategies related to comprehensive patient care and management of patients.

COURSE TOPICS AND CONTENT REQUIREMENTS:

I. The Professional Dental Hygienist
   a. Dental hygiene
   b. Dental hygienist
   c. Dental process of care
   d. Dental hygiene paradigm
   e. Dental hygiene conceptual modes
   f. Professional roles of the dental hygienist
   g. Professional regulation in dental hygiene
      i. Purpose of standards of practice
      ii. Accreditation
      iii. Practice acts
      iv. Licensure
   h. Dental hygiene associations
      i. Workforce models for dental hygienists

II. Infection Control Barriers for Patient and Clinician
   a. Standard precautions
   b. Basic infection-control concepts.
   c. Infection-control model compared to model of dental hygiene care
   d. Government agencies that play key roles in regulations of infection control standards.
   e. Standard of care
      i. Assessment of risk of disease transmission in oral healthcare
ii. Planning of appropriate control measures
f. Principles of infection control
   i. Appropriate protective attire for dental hygiene client care
   ii. The dental environment before and after client care
g. Strategies to prevent disease transmission
h. Healthcare personnel to stay healthy

III. Demonstrate principles of positioning
a. Positioning in the dental environment
b. Operation of the clinician stool and patient chair
c. Correct patient positioning relative to the clinician
   i. Supine
   ii. Semi-supine
   iii. Patient head position
   iv. Patient head adjustment
d. equipment position that enhances neutral positioning
   i. Overhead dental light
   ii. Instrument tray
e. Incorrect position.
   i. How to correct the problem.

IV. Demonstrate clock positions for instrumentation
a. Neutral seated position
   i. Mandibular arch
   ii. Maxillary arch
b. Traditional clock position
   i. Mandibular arch
   ii. Maxillary arch
c. Standing clinician position

V. Patient Reception and Ergonomic Practice
a. Ergonomic principles
   i. Environmental factors leading to repetitive strain injury (RSI)
   ii. Modifications in the work environment that minimize RSI and stress
   iii. Proper grasp and instrument factors to ergonomic principles
   iv. Proper hand stabilization to ergonomic principles
   v. Client positioning based on ergonomic principles and client needs
   vi. Neutral shoulder, elbow, forearm, and wrist positions
b. Strengthening and chairside stretching exercises
c. Common RSIs
   i. Symptoms
   ii. Risks
   iii. Prevention
   iv. Treatment

VI. Dental Mirror
a. Design
b. Use
c. Advantages and disadvantage
d. Functions
i. Indirect vision
ii. Indirect illumination
iii. Transillumination
iv. Retraction

VII. Instrument Grasps
   a. 4 different grasps
      i. Pen grasp
      ii. Modified pen grasp
      iii. Extended modified pen grasp
      iv. Palm-thumb grasp
   b. Fulcrum
      i. Intraoral
      ii. Extraoral
      iii. Pressure
      iv. Placement
   c. Finger rests

VIII. Air-water Syringe
   a. Use

IX. Dental Calculus
   a. Locations
      i. Supragingival
      ii. Subgingival
   b. Composition
      i. Inorganic
      ii. Organic
   c. Formation

X. Periodontal Probe
   a. Types
      i. Calibrated
      ii. Furcation
      iii. PSR
   b. Calibrated probe markings
   c. Uses
      i. Probing depth
      ii. Clinical attachment level (CAL)
      iii. Relative attachment level (RAL)
      iv. Bleeding upon probing (BOP)
      v. Amount of attached gingiva
      vi. Gingival recession
      vii. Furcation invasion or involvement
      viii. Size of atypical or pathologic lesions
      ix. Pathologic lesions
      x. Distance between teeth

XI. Explorers
   a. Design
      i. Shank
ii. Length
iii. Diameter

b. List 9 uses for an explorer
i. Dental caries
ii. Decalcification
iii. Irregularities in margins of restorations
iv. Secondary caries around restorations
v. Morphologic crown and root anomalies
vi. External root resorption
vii. Supragingival calculus
viii. Subgingival calculus
ix. Cemental irregularities

XII. Instrument Design, Use, and Classification
a. Instrument design
i. Shank length
ii. Curvature
iii. Flexibility
iv. Blade type
v. Blade-to-shank angulation
b. Classifications
i. Assessment instruments
   1. Design
   2. Uses
ii. Fulcrum placement
iii. Treatment instruments
   1. Design
   2. Uses
iv. Adaptation and angulation
v. Stroke principles
   1. Angulation
   2. Adaptation
   3. Activation
vi. Protective scaling strategies
vii. Reinforcement scaling
viii. Intraoral and extraoral fulcrums for periodontal instrumentation

XIII. Demonstrate hand-activated instruments in the anterior and posterior sextants
a. Optimum vision while managing neutral positioning
i. Anterior sextants
ii. Posterior sextants
b. Mirror use, grasp, and finger rest
i. Interior sextants
ii. Posterior sextants
c. Finger rests
d. Wrist position when using an intraoral finger rest
i. Maxillary arch
ii. Mandibular arch
XIV. Discuss anterior and posterior sickle scalers
   a. Design characteristics
      i. Cross section
      ii. Working end
      iii. Face
      iv. Application
      v. Primary functions
   b. Uses
      i. Remove calculus deposits from the crowns of teeth
   c. Limitations
      i. Use on enamel surfaces only, not on root surfaces
   d. List characteristics of a calculus removal stroke
      i. Stabilization
      ii. Adaption
      iii. Angulation
      iv. Lateral pressure
      v. Characteristics
      vi. Stroke directing
      vii. Stroke number

XV. Discuss universal curets
   a. Design characteristics
      i. Cross section
      ii. Working end
      iii. Face
      iv. Cutting edges
      v. Application
      vi. Primary functions
   b. Advantages
      i. Can be used both supragingivally and subgingivally
      ii. Can be used with both anterior and posterior teeth
   c. Limitations
   d. Uses
      i. Removal of small to medium size calculus deposits of crown and root surfaces

XVI. Medical and Dental History Review
   a. Purpose
   b. Decision making
      i. Implications of client health status for dental hygiene care
      ii. Rationale and indications for preprocedural prophylactic antibiotics
      iii. Consultation and collaboration with other healthcare professionals

XVII. Vital Signs
   a. Minimizing risk of a medical emergency
   b. Body temperature
   c. Pulse
   d. Respiration
   e. Blood pressure
XVIII. Emergency Procedures
   a. Signs and symptoms of specific medical emergencies
      i. Treatment
   b. Protocols for performing Basic Life Support
      i. Adults
      ii. Children
      iii. Infants

XIX. Extraoral and Intraoral Examination
   a. Clinical assessment
      i. Normal head and neck anatomic structures
      ii. Common signs of oral disease
      iii. Deviations from normal
   b. Extraoral clinical assessment
      i. Methods
      ii. Sequence.
   c. Intraoral clinical assessment
      i. Methods
      ii. Sequence

XX. Indices
   a. Individual assessment score
   b. Oral hygiene indices
      i. Plaque control record
      ii. Plaque-free score
      iii. Simplified oral hygiene index (OHI-S)
      iv. Plaque index
      v. Patient hygiene performance (PHP)
   c. Criteria for an effective oral hygiene index

XXI. Fluoride
   a. Fluoride application
      i. Profession
      ii. Self-applied
      iii. Clinical guidelines
   b. Fluoride application process
      i. Varnish
      ii. Gels
   c. Remineralization products
      i. Chlorhexidine mouth rinse
      ii. Calcium and phosphate
      iii. Xylitol
      iv. Sodium bicarbonate

XXII. Polishing: Extrinsic Stain
   a. Indications
      i. Extrinsic tooth stains
   b. Contraindications
      i. Absence of extrinsic stain
      ii. Newly erupted teeth
iii. Tooth decalcification, hypocalcification, hypoplasia, demineralization, rampant caries
iv. Areas of recession where cementum or dentin is exposed
v. Areas of dentinal hypersensitivity
vi. Acute gingival or periodontal inflammation
vii. Immediately after deep scaling, root planing, or curettage
viii. Restored tooth surfaces: composite, bonding, glass ionomer, porcelain, gold, titanium (unless special polishing agent for these materials is used).

c. Hand-activated stain removal system
   i. Hand-activated instruments
d. Power-driven system
   i. Rubber cup
   ii. Ultrasonic tip
   iii. Air polishing

XXIII. Dentifrices and Mouthrinses
   a. Basic components
      i. Powders
      ii. Liquid gels
      iii. Pastes
      iv. Foam
      v. Gel-past combinations
   b. Purpose
      i. Cosmetic
      ii. Hygienic
      iii. Therapeutic
   c. Ingredients
      i. Therapeutic agent
      ii. Sweet dye
      iii. Flavoring agent
      iv. Detergent
      v. Binder
      vi. Water
      vii. Humectant
      viii. Abrasive
d. ADA seal

XXIV. Toothbrushes and Toothbrushing
   a. Parts of a manual toothbrush
      i. Head
      ii. Handle
      iii. Shank
   b. Methods for manual tooth brushing
      i. Bass
      ii. Stillman
      iii. Charter
      iv. Rolls stroke
v. Modified Bass
vi. Modified Stillman
vii. Modified Charter
viii. Fones
c. Tongue care

XXV. Interdental Aids
   a. Gingival embrasures
      i. Type I
      ii. Type II
      iii. Type III
   b. Interdental aids
      i. Dental floss and tape
      ii. Floss holders and threaders
      iii. Toothpicks and wooden wedges
      iv. Rubber tip stimulators
      v. Interdental brushes and tips
      vi. End-tuft, single-tuft brushes
      vii. Tongue cleaners

XXVI. Dental Hygiene Care Plan
   a. Dental hygiene process of care
      i. Assessing
      ii. Diagnosing
      iii. Planning
      iv. Implementing
      v. Evaluating
      vi. Documenting
   b. Dental hygiene diagnosis
   c. Care Plan
      i. Link dental hygiene diagnoses to the care plan
      ii. Establish priorities
      iii. Set client-oriented goals and evaluate measures
      iv. Select evidence-based dental hygiene interventions
      v. Establish an appointment schedule
   d. Documentation
      i. Significance to the process of care
      ii. Practitioner liability.
      iii. Informed consent
      iv. Informed refusal

XXVII. Patient Sequence
XXVIII. Exposing, processing, and interpreting radiographs.
XXIX. Each student must complete competency skill evaluations for each of the following procedures:
   a. Periodontal probe
   b. Universal scaler
   c. Area specific
   d. Sickles: H6/7 and 204S

e. Vital signs
f. Explorer and mouth mirror
g. Patient operator positioning
h. Compressed air
i. Coronal polishing
j. Fluoride

INSTRUCTIONAL METHODS:
• Demonstration
• Visual aids
• Clinical practice of skills
• Clinical practical evaluation
• Traditional Lecture
• Flipped Classroom
• Slide Presentations
• Class discussion
• Demonstration
• Visual aids - videos, models, slides
• Exams and quizzes
• Problem solving exercises

EVALUATION OF STUDENT ACHIEVEMENT:
Demonstrations
Skill Competencies
Exams

A= 92-100
B= 83-91
C= 75-82
D= 68-74
F= 67 and below

INSTRUCTIONAL MATERIALS:
Textbooks


Resources
Navigate 2 Advantage Fundamentals of Periodontal Instrumentation & Advanced Root Instrumentation, Enhanced 8e.
LEARNING OUTCOMES AND GOALS:
Institutional Learning Outcomes
☒ 1) Communication – to communicate effectively.
☒ 2) Inquiry – to apply critical, logical, creative, aesthetic, or quantitative analytical reasoning to formulate a judgement or conclusion.
☐ 3) Social Consciousness – to understand what it means to be a socially conscious person, locally and globally.
☒ 4) Responsibility – to recognize how personal choices affect self and society.

Course Outcomes and Competencies
1. Demonstrate an understanding of the professional Dental Hygienist
   a. Define the discipline of dental hygiene, the dental hygienist, and the dental hygiene process of care.
   b. Explain the paradigm for the discipline of dental hygiene.
   c. Describe the different dental hygiene conceptual models.
   d. Describe the professional roles of the dental hygienist.
   e. Explain professional regulation in dental hygiene, including the purpose of standards of practice, accreditation, practice acts, and licensure.
   f. Explain the role and importance of professional dental hygiene associations.
   g. Describe the different workforce models for dental hygienists.
2. Demonstrate infection control for the dental hygienist
   a. Discuss standard precautions and basic infection-control concepts.
   b. Explain the similarities and differences between the infection-control model and model of dental hygiene care.
   c. Identify the government agencies that play key roles in regulations of infection control standards.
   d. Discuss the standard of care, including assessment of risk of disease transmission in oral healthcare, and planning of appropriate control measures.
   e. Explain the principles of infection control, including:
      i. Select appropriate protective attire for dental hygiene client care.
      ii. Prepare the dental environment before and after client care.
   f. Discuss strategies to prevent disease transmission, and how healthcare personnel can take action to stay healthy.
3. Demonstrate principles of positioning
   a. Develop an appreciation of evidence-based knowledge of positioning in the dental environment.
   b. Demonstrate operation of the clinician stool and patient chair.
   c. Demonstrate correct patient positioning relative to the clinician.
   d. Position the equipment so that it enhances neutral positioning.
   e. Recognize incorrect position and describe or demonstrate how to correct the problem.
4. Demonstrate clock positions for instrumentations
   a. Demonstrate and maintain neutral seated position for each of the mandibular and maxillary treatment areas.
b. Demonstrate the traditional clock position for each of the mandibular and maxillary treatment areas.

c. Demonstrate standing clinician position for the mandibular treatment areas.

5. Demonstrate patient reception and ergonomic practice
   a. Apply ergonomic principles in dental hygiene practice, including:
      i. Discuss environmental factors leading to repetitive strain injury (RSI).
      ii. Describe modifications in the work environment that minimize RSI and stress.
      iii. Relate proper grasp and instrument factors to ergonomic principles.
      iv. Relate proper hand stabilization to ergonomic principles.
      v. Modify client positioning based on ergonomic principles and client needs.
      vi. Demonstrate neutral shoulder, elbow, forearm, and wrist positions.
   b. Demonstrate strengthening and chairside stretching exercises.
   c. Describe common RSIs in terms of symptoms, risks, prevention, and treatment.

6. Demonstrate the uses of the mouth mirror
   a. Discuss mouth mirror design.
   b. Discuss mouth mirror use.
   c. List advantages and disadvantage.
   d. Explain the functions of the mouth mirror.

7. Demonstrate the various instrument grasps
   a. List the 4 different grasps.
   b. Explain the fulcrum.
   c. Demonstrate finger rests.

8. Discuss the air-water syringe
   a. Demonstrate proper use.

9. Describe dental calculus and its formation
   a. Describe different locations of calculus.
   b. List composition of calculus.
   c. Describe calculus formation.

10. Discuss the use of the periodontal probe
    a. Identify the types of probes.
    b. Discuss the uses of the 3 types of probes.
    c. Discuss the markings on a calibrated probe.
    d. List 10 uses of the periodontal probe.

11. Identify explorers used by the dental hygienist
    a. Discuss the design of the explorer.
    b. List 9 uses for an explorer.

12. Describe instrument design, use, and classification
    a. Discuss basic dental hygiene instrument design and classify an instrument and its use based upon variations in instrument shank length, curvature, flexibility, blade type, and blade-to-shank angulation.
    b. Discuss the classifications of instruments, including:
       i. Describe assessment instruments, their design, and uses.
       ii. Customize fulcrum placement for a tooth surface.
       iii. Describe treatment instruments, their design, and uses.
       iv. Explain proper instrument blade adaptation and angulation.
       v. Define the stroke principles of blade angulation, adaptation, and activation.
vi. Describe protective scaling strategies and reinforcement scaling.

vii. Identify intraoral and extraoral fulcums for periodontal instrumentation.

13. Demonstrate hand-activated instruments in the anterior and posterior sextants
   a. Demonstrate access to the anterior and posterior teeth with optimum vision while managing neutral positioning.
   b. Demonstrate correct mirror use, grasp, and finger rest in each of the anterior and posterior sextants while maintain neutral positioning.
   c. Demonstrate finger rests using precise finger placement on the handle of the periodontal instrument.
   d. Identify the correct wrist position when using an intraoral finger rest int eh maxillary and mandibular anterior and posterior treatment areas.
   e. Discuss anterior and posterior sickle scalers.
   f. Identify the design characteristics of a variety of sickle scaler instruments.
   g. List the uses and limitation of sickle scalers.
   h. List characteristics of a calculus removal stroke.

14. Discuss universal curets
   a. Discuss the design characteristics of a variety of universal curets.
   b. Discuss advantages and limitations of the design characteristics of universal curets.
   c. Name the uses of universal curets.

15. Demonstrate health and dental histories
   a. Explain the purpose of the health and dental histories.
      i. Discuss decision making after the health history is obtained, including:
         ii. Recognize implications of client health status for dental hygiene care.
         iii. Understand the rationale and indications for preprocedural prophylactic antibiotics.
         iv. Identify the need for consultation and collaboration with other healthcare professionals to develop an individualized dental hygiene care plan.

16. Demonstrate vital signs
   a. Discuss vital signs and the importance of minimizing risk of a medical emergency via vital signs assessment.
   b. Discuss the assessment of body temperature.
   c. Discuss the significance of the pulse.
   d. Discuss the assessment of respiration.
   e. Discuss the assessment of blood pressure.

17. Demonstrate emergency procedures
   a. Identify signs and symptoms of specific medical emergencies and appropriate treatment for each.
   b. Delineate protocols for performing Basic Life Support in adults, children, and infants.

18. Demonstrate the extraoral and intraoral examination
   a. Discuss the clinical assessment, including recognition of normal head and neck anatomic structures, common signs of oral disease, and deviations from normal.
   b. Conduct the extraoral clinical assessment, including proper methods and sequence.
c. Conduct the intraoral clinical assessment, including proper methods and sequence.

19. Describe dental indices
   a. Explain the purpose for an individual assessment score.
   b. Compare the available oral hygiene indices and list the criteria for an effective oral hygiene index.

20. Discuss dental fluoride
   a. Explain the purpose of fluoride application.
   b. List the steps in fluoride application.

21. Demonstrate coronal polishing of extrinsic stains
   a. State indications and contraindications for polishing.
   b. Compare and contrast hand-activated stain removal system and power-driven system.

22. Explain dentifrices and mouthrinses
   a. Identify forms, ingredients, and the purpose of a dentifrice.
   b. Identify the purpose of the ADA seal.

23. Discuss toothbrushes and toothbrushing
   a. List and describe the parts of a manual toothbrush.
   b. List and describe 8 different methods for manual tooth brushing.
   c. Discuss tongue care.

24. Discuss various interdental aids
   a. List 3 types of gingival embrasures.
   b. Identify different interdental aids for biofilm removal.

25. Explain the dental hygiene care plan
   a. Identify the 6 key steps of the dental hygiene process.
   b. Discuss the planning phase in the dental hygiene process of care, including:
      i. Explain the purpose of the planning phase and the client's role in care plan development.
      ii. Identify the sequence for developing a dental hygiene care plan and how each step relates to the dental hygiene diagnosis.
   c. Demonstrate the evaluation phase of client care:
      i. Explain the purpose of the evaluation phase and its significance to the process of care.
      ii. Formulate a client-centered care plan from a dental hygiene diagnosis.
      iii. Discuss documentation, including its significance to the process of care and practitioner liability.

26. Discuss patient sequence

27. Demonstrate competency exposing, processing, and interpreting radiographs