



ILLINOIS VALLEY COMMUNITY COLLEGE

COURSE OUTLINE

DIVISION: Workforce Development

COURSE: DLH 1205 Dental Hygiene I

Date: Spring 2021

Credit Hours: 1

Prerequisite(s): Acceptance into the Dental Hygiene A.A.S. Degree

Delivery Method: **Lecture** **1 Contact Hours** (1 contact = 1 credit hour)
 Seminar **0 Contact Hours** (1 contact = 1 credit hour)
 Lab **0 Contact Hours** (2-3 contact = 1 credit hour)
 Clinical **0 Contact Hours** (3 contact = 1 credit hour)
 Online
 Blended

Offered: **Fall** **Spring** **Summer**

IAI Equivalent –**Only for Transfer Courses**-go to <http://www.itransfer.org>:

CATALOG DESCRIPTION:

This course is a continuation of the Preclinic course with importance on discussion of supplemental procedures, i.e. drug investigation, significance of the oral examination, agents used to desensitize teeth, appointment sequencing, post-operative instructions, and the use of ultrasonic scaling devices, and air polishing.

GENERAL EDUCATION GOALS ADDRESSED

[See last page for Course Competency/Assessment Methods Matrix.]

Upon completion of the course, the student will be able:

[Choose up to three goals that will be formally assessed in this course.]

- To apply analytical and problem solving skills to personal, social, and professional issues and situations.
- To communicate successfully, both orally and in writing, to a variety of audiences.
- To construct a critical awareness of and appreciation for diversity.
- To understand and use technology effectively and to understand its impact on the individual and society.
- To develop interpersonal capacity.
- To recognize what it means to act ethically and responsibly as an individual and as a member of society.
- To recognize what it means to develop and maintain a healthy lifestyle in terms of mind, body, and spirit.
- To connect learning to life.

EXPECTED LEARNING OUTCOMES AND RELATED COMPETENCIES:

[Outcomes related to course specific goals. See last page for more information.]

Upon completion of the course, the student will be able to:

1. Explain Dental Hygiene Diagnosis
 - 1.1. Define diagnosis and differentiate between a dental hygiene diagnosis and a dental diagnosis.
 - 1.2. Explain the dental hygiene diagnostic process
 - 1.3. Identify interventions that support various dental hygiene diagnoses.
 - 1.4. Apply human needs theory to diagnostic decision making.
 - 1.5. Discuss formulating and validating dental hygiene diagnoses,
 - 1.6. Write dental hygiene diagnostic statements.
 - 1.7. Explain how to validate a dental hygiene diagnosis.
 - 1.8. Discuss the outcomes of dental hygiene diagnoses.
2. Explain Dental Hygiene Care Plan, Evaluation, and Documentation
 - 2.1. Explain the purpose of the planning phase and the client's role in care plan development.
 - 2.2. Identify the sequence for developing a dental hygiene care plan and how each step relates to the dental hygiene diagnosis.
 - 2.3. Explain the purpose of the evaluation phase and its significance to the process of care.
 - 2.4. Formulate a client-centered care plan from a dental hygiene diagnosis.
 - 2.5. Discuss documentation, including its significance to the process of care and practitioner liability.
3. Identify health conditions that influence dental procedures
 - 3.1. Recognize implications of client health status for dental hygiene care.
 - 3.2. Understand the rationale and indications for preprocedure prophylactic antibiotics.
 - 3.3. Identify the need for consultation and collaboration with other healthcare professionals in order to develop an individualized dental hygiene care plan.
4. Obtain appropriate information about the patients' pharmacologic history

- 4.1. Discuss the importance of taking a comprehensive pharmacologic history and explain the first step of compiling the medication list.
- 4.2. Identify fundamental questions to gather a comprehensive pharmacologic history
5. Explain the significance of oral conditions found during an extra- and intra-oral inspection
 - 5.1. Describe and document significant findings in the client's record using precise descriptive terms, including appropriate follow-up and referral when atypical or abnormal tissue changes warrant further medical or dental evaluation.
 - 5.2. Discuss cancers affecting the head and neck
 - 5.3. Explain oral self-examination techniques to the client.
 - 5.4. Explain the use of biopsy as well as other methods for early detection of oral cancer.
6. Discuss dental caries management by risk assessment (CAMBRA)
 - 6.1. Explain the team approach in integrating CAMBRA into an oral healthcare practice.
 - 6.2. Define the disease of dental caries.
 - 6.3. Explain the dental caries process
 - 6.4. Explain the process of demineralization and remineralization that occurs in the oral environment.
 - 6.5. List saliva's beneficial actions.
 - 6.6. Explain the dental caries balance.
 - 6.7. Discuss dental caries risk assessment for clients age 6 through adult
 - 6.8. Discuss dental caries risk assessment for children 0 to 5 years of age
 - 6.9. Discuss caries management and identify clinical guidelines for caries management by risk assessment by age.
 - 6.10. Explain, based on level of dental caries risk, when the following are indicated:
 - 6.10.1. Professionally applied and self-applied topical fluorides, which are used to enhance remineralization.
 - 6.10.2. Antimicrobial therapy (e.g., chlorhexidine, xylitol, iodine), which is used to reduce levels of pathogenic organisms.
 - 6.10.3. Buffering products (e.g., sodium bicarbonate), which are needed to neutralize acid attacks.
 - 6.10.4. Calcium and phosphate products, which are needed to replace minerals missing in saliva.
7. Discuss whitening agents and patient education
 - 7.1. Identify the advantages and disadvantages of each method of whitening.
 - 7.2. Describe side effects of tooth whitening.
 - 7.3. Explain restorative procedures to manage stained teeth.
 - 7.4. Discuss ethical and legal aspects of tooth whitening.
8. Discuss tobacco cessation and patient education
 - 8.1. Describe systemic effects and oral health effects of tobacco use.
 - 8.2. Explain the challenges to successful tobacco cessation.
 - 8.3. Discuss how to help clients to become tobacco-free, including:
 - 8.3.1. Apply the National Cancer Institute's Five A's approach to tobacco cessation.
 - 8.3.2. Assist clients with tobacco cessation based on their readiness to quit.
 - 8.3.3. Describe three characteristics of patient-centered communication.
 - 8.4. For clients who are not ready to quit, describe the following:
 - 8.4.1. The brief intervention.
 - 8.4.2. Motivational interviewing and its four "opening strategies" to elicit change talk.
 - 8.5. For clients who are ready to quit, describe the following:

- 8.5.1. The initial Elicit-Provide-Elicit Model for brief assistance.
- 8.5.2. The Ask, Advise, Refer (AAR) approach to tobacco cessation.
- 8.6. Discuss the key elements of intensive tobacco cessation treatment programs, including coping strategies to prevent relapse.
- 8.7. Name the U.S. Food and Drug Administration–approved pharmacologic products to facilitate tobacco cessation.
- 8.8. Explain the key elements of an intensive, multiple-session tobacco cessation program.
- 8.9. Explain the dental hygienist's role related to tobacco in the community.
- 9. Discuss dentinal hypersensitivity management
 - 9.1. Describe dentinal hypersensitivity and its etiology.
 - 9.2. Explain the hydrodynamic theory.
 - 9.3. Explain the prevalence of dentinal hypersensitivity and list teeth most likely to experience it.
 - 9.4. Distinguish between dentinal hypersensitivity and other sources of tooth pain.
 - 9.5. Discuss the management of dentinal hypersensitivity
 - 9.6. Identify risk factors contributing to dentinal hypersensitivity.
 - 9.7. Explain factors that reduce dentinal hypersensitivity.
 - 9.8. Describe active ingredients available to treat hypersensitivity and mechanisms of action.
 - 9.9. Identify self-applied and professional (in-office) interventions for dentinal hypersensitivity.
- 10. Discuss Ultrasonic instrumentation
 - 10.1. Discuss power-driven instrumentation used in oral prophylaxis, nonsurgical periodontal therapy, and periodontal maintenance therapy
 - 10.2. Discuss strategies for appropriate insert or tip selection based on client needs.
 - 10.3. Apply correct procedures for ultrasonic instrumentation using standard and thin designs.
 - 10.4. Compare and contrast magnetostrictive and piezoelectric instrumentation.
 - 10.5. Explain health-related outcomes of using ultrasonic instrumentation.
 - 10.6. Discuss ultrasonic instrumentation in practice, including indications, precautions, and contraindications for ultrasonic instrumentation.
 - 10.7. Demonstrate proper instrumentation technique.
- 11. Discuss Decision Making Related to Nonsurgical Periodontal Therapy
 - 11.1. Discuss basic concepts of nonsurgical periodontal therapy, including:
 - 11.2. Explain similarities and differences between disease activity and disease severity.
 - 11.3. Differentiate among nonsurgical periodontal therapy, oral prophylaxis, and periodontal maintenance therapy.
 - 11.4. Discuss implementation of nonsurgical periodontal therapy.
 - 11.5. Describe optimal clinical and therapeutic outcomes from nonsurgical periodontal therapy.
 - 11.6. Explain how dental benefit plans influence nonsurgical periodontal therapy.
 - 11.7. Explain the rationale for periodontal maintenance therapy and suggest appropriate intervals based on individual client needs.
 - 11.8. Explain the dental hygienist's role after periodontal surgery.
- 12. Discuss Air polishing
 - 12.1. Describe effects of air polishing on teeth, gingiva, restorative materials, and implants.
 - 12.2. Describe indications, contraindications, precautions, and techniques for air polishing.

- 12.3. Describe selection, maintenance, and infection control for instruments, devices, and armamentaria used for air polishing.
- 13. Explain instrument sharpening concepts
 - 13.1. Discuss the benefits of using instruments with sharp cutting edges
 - 13.2. Distinguish between those with sharp cutting edges and those with dull cutting edges
 - 13.3. Demonstrate two methods for determining if a cutting edge is sharp
 - 13.4. Describe important design characteristics to be maintained when sickle scalers and universal and are-specific curets are sharpened
 - 13.5. Discuss different sharpening stones
 - 13.6. Demonstrate the correct care of a sharpening stone
 - 13.7. Describe common sharpening errors
 - 13.8. Describe and demonstrate the proper relationship of the instruments working end to the sharpening stone
 - 13.9. Describe the methods, techniques, and importance of instrument sharpening.
 - 13.10. Discuss how to prevent and manage instrument tip breakage.
- 14. Explain sutures and dressings
 - 14.1. State the functions and purposes for sutures and periodontal dressings
 - 14.2. Describe the differences between absorbable and nonabsorbable sutures
 - 14.3. Describe the procedure for suture removal
 - 14.4. Describe the procedure for periodontal dressing placement and periodontal dressing removal
 - 14.5. Explain approaches for managing biofilm with the periodontal dressing in place and upon removal
- 15. Explain dental hygiene appointment sequencing
 - 15.1. Determine appointment intervals based on an individual patient's risk factors, compliance, and oral health history
 - 15.2. List steps in a continuing care appointment including assessment, care plan, and therapy

MAPPING LEARNING OUTCOMES TO GENERAL EDUCATION GOALS

[For each of the goals selected above, indicate which outcomes align with the goal.]

| Goals | Outcomes |
|---|--|
| First Goal | |
| To communicate successfully, both orally and in writing, to a variety of audiences. | 2.1. Explain the purpose of the planning phase and the client's role in care plan development. 2.2. Identify the sequence for developing a dental hygiene care plan and how each step relates to the dental hygiene diagnosis. 2.3. Explain the purpose of the evaluation phase and its significance to the process of care. 2.4. Formulate a client-centered care plan from a dental hygiene diagnosis. 2.5. Discuss documentation, including its significance to the process of care and practitioner liability. |

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| Second Goal | |
| To recognize what it means to develop and maintain a healthy lifestyle in terms of mind, body, and spirit. | 8.8. Explain the key elements of an intensive, multiple-session tobacco cessation program. 8.9. Explain the dental hygienist's role related to tobacco in the community. |
| Third Goal | |
| To connect learning to life. | 15.1. Determine appointment intervals based on an individual patient's risk factors, compliance, and oral health history 15.2. List steps in a continuing care appointment including assessment, care plan, and therapy |

COURSE TOPICS AND CONTENT REQUIREMENTS:

I. Dental Hygiene Diagnosis

- a. Definition
 - i. Dental hygiene
 - ii. Dental
- b. dental hygiene diagnostic process
- c. human needs theory to diagnostic decision making
- d. formulate and validate dental hygiene diagnoses
- e. dental hygiene diagnostic statements
 - i. statement of problem
 - ii. statement of cause/etiology
 - iii. statement of signs and symptoms
- f. validate a dental hygiene diagnosis
- g. outcomes of dental hygiene diagnoses

II. Dental Hygiene Care Plan, Evaluation, and Documentation

- a. planning phase
 - i. client's role in care plan development
- b. sequence for developing a dental hygiene care plan
 - i. link dental hygiene diagnoses to the care plan
 - ii. establish priorities
 - iii. set client-oriented goals and evaluative measures
 - iv. select evidence-base dental hygiene interventions
 - v. establish an appointment schedule
- c. evaluation phase
 - i. significance to the process of care
- d. client-centered care plan from a dental hygiene diagnosis
- e. documentation
 - i. informed consent
 - ii. informed consent

III. Health conditions that influence dental procedures

- a. implications of client health status for dental hygiene care
 - i. ASA classification system
- b. rationale and indications for preprocedure prophylactic antibiotics
 - i. infective endocarditis
 - ii. prosthetic joint infections

- iii. dosage regimen guidelines
 - c. consultation and collaboration with other healthcare professionals in order to develop an individualized dental hygiene care plan.
- IV. Appropriate information about the patients' pharmacologic history
 - a. comprehensive pharmacologic history
 - i. medication list
 - b. fundamental questions to gather a comprehensive pharmacologic history
 - i. Why is the client taking medication?
 - ii. What are the adverse effects of this drug?
 - iii. Are there potential drug interactions?
 - iv. Is there a problem with drug dosage?
 - v. How is the client managing his/her medications?
 - vi. Will any oral side effects of this medication require intervention?
 - vii. Are the client's symptoms caused by a known or unknown condition, or are the symptoms possible side effects of a drug that the client is taking?
 - viii. Given the pharmacologic history and other assessment data, what are the risks of treating this client?
- V. Significance of oral conditions found during an extra- and intra-oral inspection
 - a. Document significant findings in the client's record using precise descriptive terms, including appropriate follow-up and referral when atypical or abnormal tissue changes warrant further medical or dental evaluation
 - i. Location and distribution
 - ii. Size and shape
 - iii. Color
 - iv. Texture
 - v. Attachment and depth
 - vi. Consistency
 - vii. Mobility
 - viii. Symptomatology
 - b. Cancers affecting the head and neck
 - i. Skin cancer
 - ii. Oral and oropharyngeal cancer
 - c. Oral self-examination techniques to the client
 - i. Early detection discussion
 - d. Biopsy use as well as other methods for early detection of oral cancer
 - i. Oral and Transepithelial Cytology
 - ii. Tissue Reflectance and Autofluorescence for Identification of Abnormal Oral Tissue
 - iii. Toluidine Blue Dye
 - iv. Biopsy
- VI. Dental caries management by risk assessment (CAMBRA)
 - a. team approach in integrating CAMBRA into an oral healthcare practice.
 - b. disease of dental caries.
 - i. Definition
 - c. dental caries process
 - i. demineralization
 - ii. remineralization
 - iii. white spot lesion
 - d. saliva beneficial actions.

- e. dental caries balance
 - i. pathologic factors
 - ii. protective factors
 - f. dental caries risk assessment for clients age 6 through adult
 - g. dental caries risk assessment for children 0 to 5 years of age
 - h. clinical guidelines for caries management by risk assessment by age.
 - i. Professionally applied and self-applied topical fluorides
 - j. Antimicrobial therapy
 - i. chlorhexidine,
 - ii. xylitol
 - iii. iodine
 - k. Buffering products
 - i. sodium bicarbonate
 - l. Calcium and phosphate products
- VII. Whitening agents and patient education
- a. Methods of whitening
 - i. Over-the-counter whitening products
 - 1. Advantages
 - 2. Disadvantages
 - ii. Professional dispensed whitening systems for home use
 - 1. Advantages
 - 2. Disadvantages
 - b. side effects of tooth whitening
 - i. contraindications
 - c. In-office bleaching procedures for vital teeth
 - i. Laser-assisted bleaching
 - ii. Power and combination bleaching
 - iii. Intracoronal bleaching
 - iv. Microabrasion
 - d. restorative procedures to manage stained teeth
 - i. veneers
 - ii. full-coverage crowns
 - e. ethical and legal aspects of tooth whitening.
- VIII. Tobacco cessation and patient education
- a. systemic effects
 - b. oral health effects
 - c. challenges to successful tobacco cessation.
 - d. helping clients to become tobacco-free
 - i. National Cancer Institute's Five A's
 - ii. tobacco cessation based on their readiness to quit.
 - iii. three characteristics of patient-centered communication
 - 1. collaborating, not persuading
 - 2. eliciting information, not imparting information
 - 3. emphasizing the clients autonomy, not the authority of the expert
 - e. For clients who are not ready to quit
 - i. The brief intervention.
 - ii. Motivational interviewing and its four "opening strategies" to elicit change talk.
 - f. For clients who are ready to quit
 - i. The initial Elicit-Provide-Elicit Model for brief assistance.

- ii. The Ask, Advise, Refer (AAR) approach to tobacco cessation.
 - g. intensive tobacco cessation treatment programs
 - i. key elements
 - ii. coping strategies to prevent relapse
 - h. U.S. Food and Drug Administration–approved pharmacologic products to facilitate tobacco cessation
 - i. Nicotine replacement therapy
 - ii. Transdermal Nicotine Replacement Therapy (Patch)
 - iii. Nicotine Polacrilex (Gum)
 - iv. Nicotine lozenge
 - v. Nicotine spray
 - vi. nicotine oral inhaler
 - vii. Combination Nicotine Replacement Therapy
 - viii. Sustained-Release Bupropion (Zyban)
 - ix. Varenicline (Chantix)
 - i. dental hygienist's role related to tobacco in the community.
- IX. Dentinal hypersensitivity management
- a. Definition
 - b. Etiology
 - c. hydrodynamic theory
 - d. prevalence of dentinal hypersensitivity
 - i. buccal cervical regions
 - e. dentinal hypersensitivity and other sources of tooth pain
 - f. management
 - i. risk factors
 - ii. factors that reduce dentinal hypersensitivity
 - iii. active ingredients available
 - iv. self-applied and professional (in-office) interventions f
- X. Ultrasonic instrumentation
- a. Periodontal debridement
 - i. Ultrasonic instruments
 - 1. Manual and autotuned units
 - 2. Magnetostrictive units
 - a. Insert selection
 - b. Insert design
 - c. Functions of inserts
 - d. Care and maintenance
 - 3. Piezoelectric units
 - b. Health-related outcomes
 - c. Ultrasonic instruments in practice
 - i. advantages
 - ii. disadvantages
 - iii. indications
 - iv. precautions
 - v. contraindications
 - d. instrumentation technique
 - i. positioning
 - ii. suction and retracting
 - iii. gasp

- iv. fulcrum
- v. dental mirror use
- vi. adaption
- vii. activation

XI. Decision Making Related to Nonsurgical Periodontal Therapy

- a. Define nonsurgical periodontal therapy
 - i. Disease activity
 - ii. Disease severity
- b. Nonsurgical periodontal therapy purpose
- c. Oral prophylaxis
- d. Periodontal maintenance therapy
- e. Implementation of nonsurgical periodontal therapy
 - i. mechanical nonsurgical pocket therapy
 - ii. chemotherapy for periodontal disease
- f. clinical outcomes of periodontal debridement
- g. clinical and therapeutic endpoints
- h. Evaluation
 - i. Dental benefit plans and nonsurgical periodontal therapy
 - j. Rationale for periodontal maintenance therapy
 - i. appropriate intervals based on individual client needs
- k. Dental hygienist's role after periodontal surgery

XII. Air polishing

- a. Effects on oral and dental tissues
- b. Effects on restorations and titanium implants
- c. Safety issues
- d. Indications and contraindications
- e. Precautions
- f. Techniques
- g. Procedure
 - i. Selection
 - ii. Maintenance
 - iii. infection control for instruments, devices, and armamentaria

XIII. Instrument sharpening concepts

- a. Benefits of using instruments with sharp cutting edges
- b. Compare sharp cutting edges and those with dull cutting edges
- c. Two methods for determining if a cutting edge is sharp
 - i. Visual
 - ii. Tactile
- d. Important design characteristics to be maintained when sickle scalers and universal and are-specific curets are sharpened
- e. Different sharpening stones
- f. Care of a sharpening stone
- g. Common sharpening errors
- h. Proper relationship of the instruments working end to the sharpening stone
- i. Describe the methods, techniques, and importance of instrument sharpening.
- j. Prevention and management instrument tip breakage

XIV. Sutures and dressings

- a. Functions
- b. Purposes

- c. Differences between absorbable and nonabsorbable sutures
 - d. Suture removal procedure
 - e. Periodontal dressing placement procedure
 - f. Periodontal dressing removal procedure
 - g. Management of biofilm upon placement and removal
- XV. Dental hygiene appointment sequencing
- a. Appointment intervals
 - i. patient's risk factors
 - ii. compliance
 - iii. oral health history
 - b. Steps in a continuing care appointment
 - i. Assessment
 - ii. Care plan
 - iii. Therapy

INSTRUCTIONAL METHODS:

- Lecture
- Power Points
- Class discussion
- Demonstration
- Visual aids - videos, models, slides
- Exams and quizzes
- Problem solving exercises

INSTRUCTIONAL MATERIALS:

Bowen, D. M., & Pieren, J. A. (2019). *Darby and Walsh Dental Hygiene: Theory and Practice*, (5th ed.). Elsevier Inc.

Nield-Gehrig, J. (2012). *Fundamentals of Periodontal Instrumentation & Advanced Root Instrumentation* (7th ed.). Jones & Bartlett Learning.

STUDENT REQUIREMENTS AND METHODS OF EVALUATION:

The following grading scale will be used as a guide in determining the final grade for this course:

A= 92-100

B= 83-91

C= 75-82

D= 68-74

F= 67 and below

OTHER REFERENCES

Blue, C. M. (2017). *Darby's Comprehensive Review of Dental Hygiene* (8th ed.). Elsevier Inc.