

# DHYG - DENTAL HYGIENE/ HYGIENIST

## DHYG 110. Preclinical Dental Hygiene

### 3 Credits (3)

Basic scientific principles and current theory, prevention of disease transmission, ethical and professional treatment of patients, clinical learning preparation, and introduction to comprehensive patient care. Offered concurrently with DHYG 112 to provide dental hygiene students with introductory knowledge, skills and attitudes to function in the clinical setting.

### Learning Outcomes

1. Prevention of disease transmission: a. Asepsis protocol of recommended clinical guidelines for infection and hazard management prior, during and after the provision of dental hygiene services. b. Management of individuals with bloodborne infectious diseases based on standard precautions. c. Post-exposure guidelines as defined by the Centers for Disease Control and Prevention (CDC). d. Selection and use of effective methods of instrument and dental unit sterilization/disinfection. e. Valuing the dental hygienist's role in preventing disease transmission.
2. Patient/operator positioning: a. Positioning self and the patient to maximize accessibility and visibility to the field of operation. b. Selecting operator positioning strategies to prevent or lessen the risk of injury to self and/or the patient during implementation of dental hygiene care. c. Valuing the need for effective ergonomics and safe patient/operator positioning. d. Valuing the need for effective use of vision magnification for intraoral procedures.
3. Time and motion management: a. Selecting time and motion patterns for safe and efficient implementation of dental hygiene care. b. Valuing the need for efficient time and motion management.
4. Prevention and/or management of emergency situations: a. Developing a management plan for medical emergencies. b. Applying current methods for prevention of emergencies. c. Assessing the patient's need for emergency care. d. Implementing basic life support methods consistent with American Heart Association guidelines. e. Valuing maintaining skills in preventing and managing emergencies. f. Valuing the dental hygienist's role in preventing and managing emergencies.
5. Comprehensive patient assessment: a. Obtaining and recording a comprehensive medical, social, dental and nutrition health history. b. Recognizing conditions that necessitate special consideration prior to or during treatment. c. Obtaining, interpreting and monitoring vital signs according to American Heart Association guidelines. d. Performing and documenting an extraoral and intraoral examination that includes soft and hard tissue of the head, neck and oral cavity. e. Performing and documenting an examination of the dentition that includes dental charting, occlusion and assessment of hard and soft deposits. f. Performing and documenting an examination of the periodontium that includes gingival assessment, recession, bleeding upon probing, sulci and/or pocket measurements, clinical attachment level, furcation involvement, tooth mobility, fremitus, mucogingival conditions and radiographic findings. g. Evaluating patient risk factors for oral diseases. h. Discriminating pertinent and significant assessment findings from those that are not significant or within a range of normal. i. Assessing the need for exposing intraoral and/or extraoral radiographs/images to support the clinical examination. j. Assessing the need for exposing, developing and implementing intraoral photography. k. Using supplemental screening tools to support assessment strategies such as Periodontal Screening and Recording (PSR), alginate impressions and study models, indices and vitality testing. l. Assessing for the patient's oral health needs, beliefs, knowledge, skills and selfcare practices. m. Valuing the need for consistently performing patient assessment at professionally accepted standards of care.
6. Diagnosis and planning of dental hygiene care: a. Analyzing the patient's needs for preventive, educational, and therapeutic dental hygiene services. b. Synthesizing patient assessment findings and risk factors in formulating a patient centered dental hygiene treatment plan and case presentation. c. Formulating a dental hygiene diagnosis from comprehensive assessment findings or evidence. d. Proposing measurable patient outcome goals for oral health. e. Identifying factors contributing to the patient's preventive, educational and/or therapeutic oral health needs. f. Selecting dental hygiene intervention strategies that will guide the patient to achieving patient-centered oral health outcomes that include oral and systemic health education strategies. g. Appointment planning and sequencing of dental hygiene care to meet the patient's oral health goals. h. Obtaining informed consent by discussing with the patient his/her oral health findings, goals and treatment strategies. i. Value the importance of patient-centered care and concepts of health promotion.
7. Principles and methods of dental hygiene intervention: a. Implementing dental hygiene strategies and services that address the factors contributing to the patient's preventive, educational and/or therapeutic oral health needs. b. Implementing cognitive, psychomotor and affective strategies to manage barriers to oral self-care. c. Applying the principles of instrumentation that include grasp, fulcrum, adaptation, angulation, activation/stroke and lateral pressure to assure complete debridement. d. Applying the principles of instrument design that include shank, handle, working end/blade to support instrument selection for maximum effectiveness, safety and efficiency in debridement procedures. e. Applying preventive and therapeutic topical agents for disease management, including fluoride. f. Applying selective coronal polishing procedures that include polishing, and selection of polishing agent. g. Valuing the need for consistently performing preventive, educational and/or therapeutic dental hygiene services at professionally accepted standards of care.
8. Principles and methods of evaluating outcomes of dental hygiene care: a. Evaluating and documenting the results of preventive and/or therapeutic dental hygiene interventions in meeting the proposed treatment plan goals. b. Recommending a recare schedule for continued supportive care. c. Recommending referral for additional assessment and/or treatment. d. Valuing the importance of evaluation in monitoring patient oral health. e. Assessing overall patient satisfaction with care provided.
9. Health informatics and emerging technologies: a. Applying the principles for maintaining comprehensive and accurate records of all information and services offered to and provided to the patient. b. Documenting additional dental care needed by the patient. c. Valuing the need for maintenance of thorough and accurate records. 1
10. Professional ethics: a. Applying the principles of professional and ethical behavior when providing patient care. b. Self-assessing ability to perform dental hygiene services at a high standard of care. c. Valuing patient confidentiality and patient rights according to the guidelines of the Health Insurance Portability and Accountability Act of 1996 (HIPAA). d. Valuing the patient's right to dental hygiene care consistently provided at acceptable standards.

**DHYG 112. Preclinical Dental Hygiene Lab****3 Credits (3P)**

Clinical application to basic theories and procedures used in dental hygiene practice. Techniques of instrumentation used in performing diagnostic, preventive and therapeutic services utilized when providing comprehensive patient care. Student will practice these techniques on manikins and student partners in the clinic. May be repeated up to 3 credits.

**Learning Outcomes**

1. Prevention of disease transmission: a. Asepsis protocol of recommended clinical guidelines for infection and hazard management prior, during and after the provision of dental hygiene services. b. Management of individuals with bloodborne infectious diseases based on standard precautions. c. Post-exposure guidelines as defined by the Centers for Disease Control and Prevention (CDC). d. Selection and use of effective methods of instrument and dental unit sterilization/disinfection. e. Valuing the dental hygienist's role in preventing disease transmission.
2. Patient/operator positioning: a. Positioning self and the patient to maximize accessibility and visibility to the field of operation. b. Selecting operator positioning strategies to prevent or lessen the risk of injury to self and/or the patient during implementation of dental hygiene care. c. Valuing the need for effective ergonomics and safe patient/operator positioning. d. Valuing the need for effective use of vision magnification for intraoral procedures.
3. Time and motion management: a. Selecting time and motion patterns for safe and efficient implementation of dental hygiene care. b. Valuing the need for efficient time and motion management.
4. Prevention and/or management of emergency situations: a. Developing a management plan for medical emergencies. b. Applying current methods for prevention of emergencies. c. Assessing the patient's need for emergency care. d. Implementing basic life support methods consistent with American Heart Association guidelines. e. Valuing maintaining skills in preventing and managing emergencies. f. Valuing the dental hygienist's role in preventing and managing emergencies.
5. Comprehensive patient assessment: a. Obtaining and recording a comprehensive medical, social, dental and nutrition health history. b. Recognizing conditions that necessitate special consideration prior to or during treatment. c. Obtaining, interpreting and monitoring vital signs according to American Heart Association guidelines. d. Performing and documenting an extraoral and intraoral examination that includes soft and hard tissue of the head, neck and oral cavity. e. Performing and documenting an examination of the dentition that includes dental charting, occlusion and assessment of hard and soft deposits. f. Performing and documenting an examination of the periodontium that includes gingival assessment, recession, bleeding upon probing, sulci and/or pocket measurements, clinical attachment level, furcation involvement, tooth mobility, fremitus, mucogingival conditions and radiographic findings. g. Evaluating patient risk factors for oral diseases. h. Discriminating pertinent and significant assessment findings from those that are not significant or within a range of normal. i. Assessing the need for exposing intraoral and/or extraoral radiographs/images to support the clinical examination. j. Assessing the need for exposing, developing and implementing intraoral photography. k. Using supplemental screening tools to support assessment strategies such as Periodontal Screening and Recording (PSR), alginate impressions and study models, indices and vitality testing. l. Assessing for the patient's oral health needs, beliefs, knowledge, skills and selfcare practices. m. Valuing the need for consistently performing patient assessment at professionally accepted standards of care.
6. Diagnosis and planning of dental hygiene care: a. Analyzing the patient's needs for preventive, educational, and therapeutic dental hygiene services. b. Synthesizing patient assessment findings and risk factors in formulating a patient centered dental hygiene treatment plan and case presentation. c. Formulating a dental hygiene diagnosis from comprehensive assessment findings or evidence. d. Proposing measurable patient outcome goals for oral health. e. Identifying factors contributing to the patient's preventive, educational and/or therapeutic oral health needs. f. Selecting dental hygiene intervention strategies that will guide the patient to achieving patient-centered oral health outcomes that include oral and systemic health education strategies. g. Appointment planning and sequencing of dental hygiene care to meet the patient's oral health goals. h. Obtaining informed consent by discussing with the patient his/her oral health findings, goals and treatment strategies. i. Value the importance of patient-centered care and concepts of health promotion.
7. Principles and methods of dental hygiene intervention: a. Implementing dental hygiene strategies and services that address the factors contributing to the patient's preventive, educational and/or therapeutic oral health needs. b. Implementing cognitive, psychomotor and affective strategies to manage barriers to oral self-care. c. Applying the principles of instrumentation that include grasp, fulcrum, adaptation, angulation, activation/stroke and lateral pressure to assure complete debridement. d. Applying the principles of instrument design that include shank, handle, working end/blade to support instrument selection for maximum effectiveness, safety and efficiency in debridement procedures. e. Applying preventive and therapeutic topical agents for disease management, including fluoride. f. Applying selective coronal polishing procedures that include polishing, and selection of polishing agent. g. Valuing the need for consistently performing preventive, educational and/or therapeutic dental hygiene services at professionally accepted standards of care.
8. Principles and methods of evaluating outcomes of dental hygiene care: a. Evaluating and documenting the results of preventive and/or therapeutic dental hygiene interventions in meeting the proposed treatment plan goals. b. Recommending a recare schedule for continued supportive care. c. Recommending referral for additional assessment and/or treatment. d. Valuing the importance of evaluation in monitoring patient oral health. e. Assessing overall patient satisfaction with care provided.
9. Health informatics and emerging technologies: a. Applying the principles for maintaining comprehensive and accurate records of all information and services offered to and provided to the patient. b. Documenting additional dental care needed by the patient. c. Valuing the need for maintenance of thorough and accurate records. 1
10. Professional ethics: a. Applying the principles of professional and ethical behavior when providing patient care. b. Self-assessing ability to perform dental hygiene services at a high standard of care. c. Valuing patient confidentiality and patient rights according to the guidelines of the Health Insurance Portability and Accountability Act of 1996 (HIPAA). d. Valuing the patient's right to dental hygiene care consistently provided at acceptable standards.

**DHYG 114. Oral Histology and Embryology****2 Credits (2)**

Introduction and description of general histology and embryology with emphasis on the microscopic structures of enamel, dentin,

pulp, cementum, periodontal ligament, bone, oral mucosa, epithelial attachment and development of orofacial structures. May be repeated up to 2 credits.

**Learning Outcomes**

1. Describe the histology of all tissues and structures of the head and neck.
2. Describe the dental lamina, name when it begins to form and explain the embryonic germ layer from which it originates.
3. Describe the dental papilla and name the embryonic layer from which it develops.
4. Discuss the bud, cap and bell stages of tooth development.
5. Describe a mesenchymal cell and list at least two cells it can become.
6. Name what the inner enamel epithelial cells differentiate into in the bell stage.
7. Describe what the odontoblasts do when they come in contact with the preameloblasts.
8. Describe the stellate reticulum.
9. Describe matrix formation and crystallization of dentin (apposition and calcification). 1
10. Name which forms first—enamel or dentin. 1
11. Name where on the tooth that apposition and calcification begin. 1
12. Identify the location of succedaneous and nonsuccedaneous dental lamina. 1
13. Describe the percent organic and inorganic material in enamel and dentin. 1
14. Describe the alignment of enamel rod and dentinal tubule with respect to the DEJ or DCJ. 1
15. Explain the development of enamel. 1
16. Name the two stages of calcification of the enamel rod and describe the process of each. 1
17. Discuss hypocalcification and how it differs from demineralization. 1
18. Describe the composition of dentin. 1
19. Compare and contrast primary, secondary, reparative and sclerotic dentin. 2
20. Discuss the circumstances under which reparative dentin is made. 2
21. Describe what happens to odontoblasts in the area of a cavity preparation. 2
22. Describe where one would find odontoblasts in the pulp cavity. 2
23. Describe the sensations generated by the pulp. 2
24. Compare and contrast the young versus the old pulp.

**DHYG 116. Head and Neck Anatomy  
3 Credits (3)**

Comprehensive study of the anatomy of the head and neck regions, including skeletal, nervous, circulatory, lymphatic, and muscular systems. May be repeated up to 3 credits.

**Learning Outcomes**

1. Discuss the clinical applications of the study of head and neck anatomy by dental professionals.
2. Define and pronounce key words and anatomical terms.
3. Apply the correct anatomical nomenclature during the study of the head and neck anatomy.
4. Locate and identify the anatomical structures of the head and neck.
5. Discuss normal anatomic variation and how it applies to different structures of the head and neck.
6. Identify deviations from normal, and how it applies to different structures of the head and neck.

7. Integrate the knowledge of head and neck anatomy into clinical practice of patient examination, dental radiology, and the future use of local anesthetics.

**DHYG 117. Dental Anatomy  
2 Credits (2+1P)**

A detailed study of nomenclature, morphologic characteristics, and physiologic relationships of human primary and permanent teeth as related to the clinical practice of dental hygiene. Laboratory activities develop observation and dexterity skills. May be repeated up to 2 credits.

**Learning Outcomes**

1. Explain the relevance of dental anatomy to total head and neck anatomy and apply to dental hygiene practice including intra-oral and extra-oral exam findings and local anesthesia procedures.
2. Name and describe anatomical parts of a tooth and supporting periodontal tissues.
3. Describe the relationship between the form and function of teeth.
4. Examine and draw individual permanent teeth and describe their morphology characteristics and eruption patterns.
5. Examine and draw individual primary teeth and describe their tooth morphology characteristics and eruption/ exfoliation patterns.
6. Compare and contrast characteristics of deciduous and permanent teeth.
7. Recognize tooth anomalies.
8. Describe the anatomical determinants of occlusion, function, and malfunction of occlusal mechanisms.
9. Explain how the knowledge of dental anatomy may be applied to the practice of dental hygiene including the procedures of dental charting, dental and dental hygiene diagnosis, scaling and root planing procedures.

**DHYG 118. Dental Radiology  
4 Credits (3+1P)**

Study of radiation physics, hygiene and safety theories. Fundamentals of oral radiographic techniques and interpretation of radiographs. Includes exposure of intra-oral radiographs, quality assurance, radiographic interpretation, patient selection criteria, ancillary radiographic techniques and application to dental hygiene treatment. Restricted to Community College campuses.

**Learning Outcomes**

1. Explain the basic principles and concepts of radiation in general and x-radiation in particular.
2. Identify the component parts and workings of the dental x-ray machine and the production of x-rays.
3. Discuss the effects of ionizing radiation on living tissues including protective and recommended health and safety factors.
4. Use appropriate procedures for selecting films and exposure factors and for processing and evaluating radiographs in the production of quality radiographs.
5. Recognize the characteristics of an acceptable x-ray image, the factors that influence the image, and the importance of quality assurance in imaging.
6. Analyze the legal issues related to dental radiography and the role of the dental radiographer in patient education and patient relations.
7. Demonstrate effective patient management techniques for intraoral and extraoral radiographs, panoramic and alternate imaging modalities utilized in dental radiography.
8. Demonstrate competency in radiographic interpretation including normal radiographic landmarks and radiographic pathology.

9. Demonstrate the radiographic techniques of interproximal, paralleling, bisection, panoramic and occlusal radiography which meet SJC standards for acceptable radiographs. 1
10. Demonstrate acceptable radiographic processing, film duplication, evaluation of radiographs, and radiographic equipment maintenance utilizing radiation safety and infection control protocols.

### **DHYG 120. Dental Hygiene Theory I**

#### **3 Credits (3)**

Continuation of the theoretical basis for dental hygiene clinical practice. Emphasis on emergency care, planning dental hygiene care, health promotion and disease prevention, oral rehabilitation and care of appliances, modifications of dental hygiene care through the life-span, and an introduction to medically comprised patients. May be repeated up to 3 credits.

#### **Learning Outcomes**

1. Prevention of disease transmission: a. Asepsis protocol of recommended clinical guidelines for infection and hazard management prior, during and after the provision of dental hygiene services. b. Management of individuals with bloodborne infectious diseases based on standard precautions. c. Post-exposure guidelines as defined by the Centers for Disease Control and Prevention (CDC). d. Selection and use of effective methods of instrument and dental unit sterilization/disinfection. e. Valuing the dental hygienist's role in preventing disease transmission.
2. Patient/operator positioning: a. Positioning self and the patient to maximize accessibility and visibility to the field of operation. b. Selecting operator positioning strategies to prevent or lessen the risk of injury to self and/or the patient during implementation of dental hygiene care. c. Valuing the need for effective ergonomics and safe patient/operator positioning. d. Valuing the need for effective use of vision magnification for intraoral procedures.
3. Time and motion management: a. Selecting time and motion patterns for safe and efficient implementation of dental hygiene care.
4. Prevention and/or management of emergency situations: a. Developing a management plan for medical emergencies. b. Applying current methods for prevention of emergencies. c. Assessing the patient's need for emergency care. d. Implementing basic life support methods consistent with American Heart Association guidelines. e. Valuing maintaining skills in preventing and managing emergencies. f. Valuing the dental hygienist's role in preventing and managing emergencies.
5. Comprehensive patient assessment: Obtaining and recording a comprehensive medical, social, dental and nutrition health history. b. Recognizing conditions that necessitate special consideration prior to or during treatment. c. Obtaining, interpreting and monitoring vital signs according to American Heart Association guidelines. d. Performing and documenting an extraoral and intraoral examination that includes soft and hard tissue of the head, neck and oral cavity. e. Performing and documenting an examination of the dentition that includes dental charting, occlusion and assessment of hard and soft deposits. f. Performing and documenting an examination of the periodontium that includes gingival assessment, recession, bleeding upon probing, sulci and/or pocket measurements, clinical attachment level, furcation involvement, tooth mobility, fremitus, mucogingival conditions and radiographic findings. g. Evaluating patient risk factors for oral diseases. h. Discriminating pertinent and significant assessment findings from those that are not significant or within a range of normal. i. Assessing the need for exposing intraoral and/or extraoral radiographs/images to support the clinical examination. j. Exposing, developing, interpreting and evaluating intraoral and extraoral dental radiographs/images. k. Assessing the need for exposing, developing and implementing intraoral photography. l. Employing radiation safety principles in procedures requiring exposure to ionizing radiation. m. Using supplemental screening tools to support assessment strategies such as Periodontal Screening and Recording (PSR), alginate impressions and study models, indices and vitality testing. n. Assessing for the patient's oral health needs, beliefs, knowledge, skills and selfcare practices. o. Valuing the need for consistently performing patient assessment at professionally accepted standards of care.
6. Diagnosis and planning of dental hygiene care: a. Analyzing the patient's needs for preventive, educational, and therapeutic dental hygiene services. b. Synthesizing patient assessment findings and risk factors in formulating a patient centered dental hygiene treatment plan and case presentation. c. Formulating a dental hygiene diagnosis from comprehensive assessment findings or evidence. d. Proposing measurable patient outcome goals for oral health. e. Identifying factors contributing to the patient's preventive, educational and/or therapeutic oral health needs. f. Selecting dental hygiene intervention strategies that will guide the patient to achieving patient-centered oral health outcomes that include oral and systemic health education strategies. g. Appointment planning and sequencing of dental hygiene care to meet the patient's oral health goals. h. Obtaining informed consent by discussing with the patient his/her oral health findings, goals and treatment strategies. i. Value the importance of patient-centered care and concepts of health promotion.
7. Principles and methods of dental hygiene intervention. a. Implementing dental hygiene strategies and services that address the factors contributing to the patient's preventive, educational and/or therapeutic oral health needs. b. Implementing cognitive, psychomotor and affective strategies to manage barriers to oral self-care. c. Performing nutritional and tobacco cessation counseling for oral health management. d. Performing initial and supportive periodontal therapies. e. Implementing nonsurgical therapeutic periodontal debridement procedures supportive of the patient's oral health condition. f. Applying the principles of instrumentation that include grasp, fulcrum, adaptation, angulation, activation/stroke and lateral pressure to assure complete debridement. g. Applying the principles of instrument design that include shank, handle, working end/blade to support instrument selection for maximum effectiveness, safety and efficiency in debridement procedures. h. Applying principles of therapeutic ultrasonic periodontal debridement. i. Maintaining instrument sharpness. j. Using pain and anxiety management strategies that include applying topical anesthetics, applying hard tissue topical desensitizing agents, administering or assisting in the administration of block and infiltration anesthesia and administering or monitoring of nitrous oxide/oxygen analgesia. k. Applying preventive and therapeutic topical agents for disease management, including fluoride. l. Applying selective coronal polishing procedures that include polishing, airpowder polishing and selection of polishing agent. m. Performing and evaluating the placement of pit and fissure sealants. n. Valuing the need for consistently performing preventive, educational and/or therapeutic dental hygiene services at professionally accepted standards of care.
8. Principles and methods of evaluating outcomes of dental hygiene care: a. Evaluating and documenting the results of preventive and/or therapeutic dental hygiene interventions in meeting the proposed treatment plan goals. b. Recommending a recare schedule for continued supportive care. c. Recommending referral for

additional assessment and/or treatment. d. Valuing the importance of evaluation in monitoring patient oral health. e. Assessing overall patient satisfaction with care provided.

9. Health informatics and emerging technologies: a. Applying the principles for maintaining comprehensive and accurate records of all information and services offered to and provided to the patient. b. Documenting additional dental care needed by the patient. c. Valuing the need for maintenance of thorough and accurate records. 1
10. Professional ethics: a. Applying the principles of professional and ethical behavior when providing patient care. b. Self-assessing ability to perform dental hygiene services at a high standard of care. c. Valuing patient confidentiality and patient rights according to the guidelines of the Health Insurance Portability and Accountability Act of 1996 (HIPAA). d. Valuing the patient's right to dental hygiene care consistently provided at acceptable standards.

**DHYG 122. Clinical Dental Hygiene I**  
**4 Credits (4P)**

Application of dental hygiene procedures on a variety of clinical patients under direct supervision of faculty. Emphasis on patient assessment and diagnosis, treatment procedures, appointment planning and prevention techniques. Theory is simultaneously related to practical experience. Offered concurrently with DHYG 120. May be repeated up to 4 credits.

**Learning Outcomes**

1. Prevention of disease transmission: a. Asepsis protocol of recommended clinical guidelines for infection and hazard management prior, during and after the provision of dental hygiene services. b. Management of individuals with bloodborne infectious diseases based on standard precautions. c. Post-exposure guidelines as defined by the Centers for Disease Control and Prevention (CDC). d. Selection and use of effective methods of instrument and dental unit sterilization/disinfection. e. Valuing the dental hygienist's role in preventing disease transmission.
2. Patient/operator positioning: a. Positioning self and the patient to maximize accessibility and visibility to the field of operation. b. Selecting operator positioning strategies to prevent or lessen the risk of injury to self and/or the patient during implementation of dental hygiene care. c. Valuing the need for effective ergonomics and safe patient/operator positioning. d. Valuing the need for effective use of vision magnification for intraoral procedures.
3. Time and motion management: a. Selecting time and motion patterns for safe and efficient implementation of dental hygiene care. b. Valuing the need for efficient time and motion management.
4. Prevention and/or management of emergency situations: a. Developing a management plan for medical emergencies. b. Applying current methods for prevention of emergencies. c. Assessing the patient's need for emergency care. d. Implementing basic life support methods consistent with American Heart Association guidelines. e. Valuing maintaining skills in preventing and managing emergencies. f. Valuing the dental hygienist's role in preventing and managing emergencies.
5. Comprehensive patient assessment: a. Obtaining and recording a comprehensive medical, social, dental and nutrition health history. b. Recognizing conditions that necessitate special consideration prior to or during treatment. c. Obtaining, interpreting and monitoring vital signs according to American Heart Association guidelines. d. Performing and documenting an extraoral and intraoral examination that includes soft and hard tissue of the head, neck and oral cavity. e. Performing and documenting an examination of the dentition that includes dental charting, occlusion and assessment of hard and soft deposits. f. Performing and documenting an examination of the

periodontium that includes gingival assessment, recession, bleeding upon probing, sulci and/or pocket measurements, clinical attachment level, furcation involvement, tooth mobility, fremitus, mucogingival conditions and radiographic findings. g. Evaluating patient risk factors for oral diseases. h. Discriminating pertinent and significant assessment findings from those that are not significant or within a range of normal. i. Assessing the need for exposing intraoral and/or extraoral radiographs/images to support the clinical examination. j. Exposing, developing, interpreting and evaluating intraoral and extraoral dental radiographs/images. k. Assessing the need for exposing, developing and implementing intraoral photography. l. Employing radiation safety principles in procedures requiring exposure to ionizing radiation. m. Using supplemental screening tools to support assessment strategies such as Periodontal Screening and Recording (PSR), alginate impressions and study models, indices and vitality testing. n. Assessing for the patient's oral health needs, beliefs, knowledge, skills and selfcare practices. o. Valuing the need for consistently performing patient assessment at professionally accepted standards of care.

6. Diagnosis and planning of dental hygiene care: a. Analyzing the patient's needs for preventive, educational, and therapeutic dental hygiene services. b. Synthesizing patient assessment findings and risk factors in formulating a patient centered dental hygiene treatment plan and case presentation. c. Formulating a dental hygiene diagnosis from comprehensive assessment findings or evidence. d. Proposing measurable patient outcome goals for oral health. e. Identifying factors contributing to the patient's preventive, educational and/or therapeutic oral health needs. f. Selecting dental hygiene intervention strategies that will guide the patient to achieving patient-centered oral health outcomes that include oral and systemic health education strategies. g. Appointment planning and sequencing of dental hygiene care to meet the patient's oral health goals. h. Obtaining informed consent by discussing with the patient his/her oral health findings, goals and treatment strategies. i. Value the importance of patient-centered care and concepts of health promotion.
7. Principles and methods of dental hygiene intervention: a. Implementing dental hygiene strategies and services that address the factors contributing to the patient's preventive, educational and/or therapeutic oral health needs. b. Implementing cognitive, psychomotor and affective strategies to manage barriers to oral self-care. c. Performing nutritional and tobacco cessation counseling for oral health management. d. Performing initial and supportive periodontal therapies. e. Implementing nonsurgical therapeutic periodontal debridement procedures supportive of the patient's oral health condition. f. Applying the principles of instrumentation that include grasp, fulcrum, adaptation, angulation, activation/ stroke and lateral pressure to assure complete debridement. g. Applying the principles of instrument design that include shank, handle, working end/blade to support instrument selection for maximum effectiveness, safety and efficiency in debridement procedures. h. Applying principles of therapeutic ultrasonic periodontal debridement. i. Maintaining instrument sharpness. j. Using pain and anxiety management strategies that include applying topical anesthetics, applying hard tissue topical desensitizing agents, administering or assisting in the administration of block and infiltration anesthesia and administering or monitoring of nitrous oxide/oxygen analgesia. k. Applying preventive and therapeutic topical agents for disease management, including fluoride. l. Applying selective coronal polishing procedures that include polishing, airpowder polishing and selection of polishing agent. m. Performing

- and evaluating the placement of pit and fissure sealants. n. Valuing the need for consistently performing preventive, educational and/or therapeutic dental hygiene services at professionally accepted standards of care.
8. Principles and methods of evaluating outcomes of dental hygiene care: a. Evaluating and documenting the results of preventive and/or therapeutic dental hygiene interventions in meeting the proposed treatment plan goals. b. Recommending a recare schedule for continued supportive care. c. Recommending referral for additional assessment and/or treatment. d. Valuing the importance of evaluation in monitoring patient oral health. e. Assessing overall patient satisfaction with care provided.
  9. Health informatics and emerging technologies: a. Applying the principles for maintaining comprehensive and accurate records of all information and services offered to and provided to the patient. b. Documenting additional dental care needed by the patient. c. Valuing the need for maintenance of thorough and accurate records. 1
  10. Professional ethics: a. Applying the principles of professional and ethical behavior when providing patient care. b. Self-assessing ability to perform dental hygiene services at a high standard of care. c. Valuing patient confidentiality and patient rights according to the guidelines of the Health Insurance Portability and Accountability Act of 1996 (HIPAA). d. Valuing the patient's right to dental hygiene care consistently provided at acceptable standards.
  12. Describe the management of medical and surgical complications of periodontal therapy. 1
  13. Apply the principles of nonsurgical periodontal instrumentation to include instruction, monitoring plaque-control procedures and professional mechanical instrumentation in a clinical situation. 1
  14. List the indications and contraindications, methods, and material for occlusal therapy, splinting, tooth movement and iatrogenic factors of periodontal therapy. 1
  15. Describe the indications, contraindications, objectives and methodology for the most commonly performed periodontal surgical procedures. 1
  16. Discuss patient education methods and the use of antimicrobial therapeutic agents used in the treatment of periodontal therapy patients. 1
  17. Explain the role of the dental hygienist in the providing nonsurgical periodontal therapy or supportive periodontal therapy. 1
  18. Discuss the epidemiology and classification of periodontal disease. 1
  19. Relate current literature to the role of periodontal disease to health-related issues. 2
  20. Actively and independently acquire, apply and adapt skills and knowledge to develop expertise and a broader understanding of the world as lifelong learners.

#### **DHYG 124. General and Oral Pathology**

##### **3 Credits (3)**

Introduction to general pathology with focused study of diseases and disorders of the oral cavity and their interrelationship with body systems; developmental anomalies of the teeth and jaws; manifestations of disease in the oral cavity, head and neck. May be repeated up to 3 credits.

##### **Learning Outcomes**

1. List and recognize the structural, clinical, histologic, and radiographic features of periodontal health and disease.
2. Describe the functions of the periodontium, including the gingiva, dentinogingival junction, and attachment apparatus.
3. List and recognize factors related to dental-implant management.
4. Describe the relationship of systemic factors and their contribution to periodontal disease.
5. Recognize and describe clinical, radiographic, microbiological, and histopathological features of various periodontal diseases and differentiate among these diseases.
6. Describe, discuss, and illustrate current knowledge of the etiology and pathogenesis of periodontal diseases.
7. Discuss and differentiate between the diseases of the periodontium to include: a. Gingivitis b. Necrotizing and ulcerative periodontal diseases c. Periodontitis.
8. Apply in a clinical situation, the use of periodontal assessments to describe correctly a patient's periodontal condition, including the extent and severity of any of the periodontal disease prior to and after treatment.
9. Enumerate on those factors that affect treatment modalities, progression of disease and anticipated response to treatment. 1
10. Describe the rationale for developing a sequence of treatment and explain how specific treatment objectives influence treatment planning. 1
11. Discuss the concepts, goals, techniques and medications that apply to periodontal therapy. 1
12. Apply the principles of nonsurgical periodontal instrumentation to include instruction, monitoring plaque-control procedures and professional mechanical instrumentation in a clinical situation. 1
13. List the indications and contraindications, methods, and material for occlusal therapy, splinting, tooth movement and iatrogenic factors of periodontal therapy. 1
14. Describe the indications, contraindications, objectives and methodology for the most commonly performed periodontal surgical procedures. 1
15. Discuss patient education methods and the use of antimicrobial therapeutic agents used in the treatment of periodontal therapy patients. 1
16. Explain the role of the dental hygienist in the providing nonsurgical periodontal therapy or supportive periodontal therapy. 1
17. Discuss the epidemiology and classification of periodontal disease. 1
18. Relate current literature to the role of periodontal disease to health-related issues. 2
19. Actively and independently acquire, apply and adapt skills and knowledge to develop expertise and a broader understanding of the world as lifelong learners.

#### **DHYG 126. Periodontology**

##### **3 Credits (3)**

Study of normal and diseased periodontium to include the structural, functional and environmental factors. Emphasis on etiology, pathology, evaluation of disease, treatment modalities, and therapeutic and preventative periodontics relative to the hygienist's role as a co-therapist in a contemporary practice setting. May be repeated up to 3 credits.

##### **Learning Outcomes**

1. List and recognize the structural, clinical, histologic, and radiographic features of periodontal health and disease.
2. Recognize the periodontal classification system(s).
3. Recognize the different periodontal staging and grading.
4. Describe the functions of the periodontium, including the gingiva, dentinogingival junction, and attachment apparatus.
5. Describe the inflammatory process in the periodontium.
6. Recognize mucogingival conditions of the periodontium.
7. List and recognize factors related to dental-implant management.
8. Describe the relationship of systemic factors and their contribution to periodontal disease.
9. Recognize and describe clinical, radiographic, microbiological, and histopathological features of various periodontal diseases and differentiate among these diseases. 1
10. Describe, discuss, and illustrate current knowledge of the etiology and pathogenesis of periodontal diseases. 1
11. Discuss and differentiate between the diseases of the periodontium to include: a. Gingivitis b. Necrotizing and ulcerative periodontal diseases c. Periodontitis. 1
12. Apply in a clinical situation, the use of periodontal assessments to describe correctly a patient's periodontal condition, including the extent and severity of any of the periodontal disease prior to and after treatment. 1
13. Enumerate on those factors that affect treatment modalities, progression of disease and anticipated response to treatment. 1

14. Describe the rationale for developing a sequence of treatment and explain how specific treatment objectives influence treatment planning. 1
  15. Discuss Treatment options for different populations affected by periodontal disease. 1
  16. Discuss the concepts, goals, techniques and medications that apply to periodontal therapy. 1
  17. Describe the management of medical and surgical complications of periodontal therapy. 1
  18. Apply the principles of nonsurgical periodontal instrumentation to include instruction, monitoring plaque-control procedures and professional mechanical instrumentation in a clinical situation. 1
  19. List the indications and contraindications, methods, and material for occlusal therapy, splinting, tooth movement and iatrogenic factors of periodontal therapy. 2
  20. Discuss instruments and techniques for periodontal therapy. 2
  21. Describe the indications, contraindications, objectives and methodology for the most commonly performed periodontal surgical procedures. 2
  22. Discuss patient education methods and the use of antimicrobial therapeutic agents used in the treatment of periodontal therapy patients. 2
  23. Discuss the epidemiology and classification of periodontal disease. 2
  24. Relate current literature to the role of periodontal disease to health-related issues. 2
  25. Discuss the importance of instrument sharpening for periodontal therapy.
5. Comprehensive patient assessment: a. Obtaining and recording a comprehensive medical, social, dental and nutrition health history. b. Recognizing conditions that necessitate special consideration prior to or during treatment. c. Obtaining, interpreting and monitoring vital signs according to American Heart Association guidelines. d. Performing and documenting an extraoral and intraoral examination that includes soft and hard tissue of the head, neck and oral cavity. e. Performing and documenting an examination of the dentition that includes dental charting, occlusion and assessment of hard and soft deposits. f. Performing and documenting an examination of the periodontium that includes gingival assessment, recession, bleeding upon probing, sulci and/or pocket measurements, clinical attachment level, furcation involvement, tooth mobility, fremitus, mucogingival conditions and radiographic findings. g. Evaluating patient risk factors for oral diseases. h. Discriminating pertinent and significant assessment findings from those that are not significant or within a range of normal. i. Assessing the need for exposing intraoral and/or extraoral radiographs/images to support the clinical examination. j. Exposing, developing, interpreting and evaluating intraoral and extraoral dental radiographs/images. k. Assessing the need for exposing, developing and implementing intraoral photography. l. Employing radiation safety principles in procedures requiring exposure to ionizing radiation. m. Using supplemental screening tools to support assessment strategies such as Periodontal Screening and Recording (PSR), alginate impressions and study models, indices and vitality testing. n. Assessing for the patient's oral health needs, beliefs, knowledge, skills and selfcare practices. o. Valuing the need for consistently performing patient assessment at professionally accepted standards of care.
  6. Diagnosis and planning of dental hygiene care: a. Analyzing the patient's needs for preventive, educational, and therapeutic dental hygiene services. b. Synthesizing patient assessment findings and risk factors in formulating a patient centered dental hygiene treatment plan and case presentation. c. Formulating a dental hygiene diagnosis from comprehensive assessment findings or evidence. d. Proposing measurable patient outcome goals for oral health. e. Identifying factors contributing to the patient's preventive, educational and/or therapeutic oral health needs. f. Selecting dental hygiene intervention strategies that will guide the patient to achieving patient-centered oral health outcomes that include oral and systemic health education strategies. g. Appointment planning and sequencing of dental hygiene care to meet the patient's oral health goals. h. Obtaining informed consent by discussing with the patient his/her oral health findings, goals and treatment strategies. i. Value the importance of patient-centered care and concepts of health promotion.
  7. Principles and methods of dental hygiene intervention: a. Implementing dental hygiene strategies and services that address the factors contributing to the patient's preventive, educational and/or therapeutic oral health needs. b. Implementing cognitive, psychomotor and affective strategies to manage barriers to oral self-care. c. Performing nutritional and tobacco cessation counseling for oral health management. d. Performing initial and supportive periodontal therapies. e. Implementing nonsurgical therapeutic periodontal debridement procedures supportive of the patient's oral health condition. f. Applying the principles of instrumentation

**DHYG 132. Clinical Dental Hygiene II**

**2 Credits (2)**

Continuation of clinical skills, patient assessment and diagnosis, treatment and appointment planning, preventive techniques and application of dental hygiene procedures at an intermediate level under the direct supervision of faculty. Clinical-based instruction helps students synthesize new knowledge, apply previous knowledge, and gain experience managing the workflow. Theory is simultaneously related to practical experience. May be repeated up to 2 credits.

**Learning Outcomes**

1. Prevention of disease transmission: a. Asepsis protocol of recommended clinical guidelines for infection and hazard management prior, during and after the provision of dental hygiene services. b. Management of individuals with bloodborne infectious diseases based on standard precautions. c. Post-exposure guidelines as defined by the Centers for Disease Control and Prevention (CDC). d. Selection and use of effective methods of instrument and dental unit sterilization/disinfection.
2. Patient/operator positioning: a. Positioning self and the patient to maximize accessibility and visibility to the field of operation. b. Selecting operator positioning strategies to prevent or lessen the risk of injury to self and/or the patient during implementation of dental hygiene care. c. Valuing the need for effective ergonomics and safe patient/operator positioning. d. Valuing the need for effective use of vision magnification for intraoral procedures.
3. Time and motion management: a. Selecting time and motion patterns for safe and efficient implementation of dental hygiene care. b. Valuing the need for efficient time and motion management.
4. Prevention and/or management of emergency situations: a. Developing a management plan for medical emergencies. b. Applying current methods for prevention of emergencies. c. Assessing the

that include grasp, fulcrum, adaptation, angulation, activation/stroke and lateral pressure to assure complete debridement. g. Applying the principles of instrument design that include shank, handle, working end/blade to support instrument selection for maximum effectiveness, safety and efficiency in debridement procedures. h. Applying principles of therapeutic ultrasonic periodontal debridement. i. Maintaining instrument sharpness. j. Using pain and anxiety management strategies that include applying topical anesthetics, applying hard tissue topical desensitizing agents, administering or assisting in the administration of block and infiltration anesthesia and administering or monitoring of nitrous oxide/oxygen analgesia. k. Applying preventive and therapeutic topical agents for disease management, including fluoride, antimicrobial agents and local delivery/controlled released agents. l. Applying selective coronal polishing procedures that include polishing, airpowder polishing and selection of polishing agent. m. Performing and evaluating the placement of pit and fissure sealants. n. Performing and evaluating the finishing and polishing of existing restorations. o. Valuing the need for consistently performing preventive, educational and/or therapeutic dental hygiene services at professionally accepted standards of care.

8. Principles and methods of evaluating outcomes of dental hygiene care: a. Evaluating and documenting the results of preventive and/or therapeutic dental hygiene interventions in meeting the proposed treatment plan goals. b. Recommending a recare schedule for continued supportive care. c. Recommending referral for additional assessment and/or treatment. d. Valuing the importance of evaluation in monitoring patient oral health. e. Assessing overall patient satisfaction with care provided.
9. Health informatics and emerging technologies: a. Applying the principles for maintaining comprehensive and accurate records of all information and services offered to and provided to the patient. b. Documenting additional dental care needed by the patient. c. Valuing the need for maintenance of thorough and accurate records. 1
10. Professional ethics: a. Applying the principles of professional and ethical behavior when providing patient care. b. Self-assessing ability to perform dental hygiene services at a high standard of care. c. Valuing patient confidentiality and patient rights according to the guidelines of the Health Insurance Portability and Accountability Act of 1996 (HIPAA). d. Valuing the patient's right to dental hygiene care consistently provided at acceptable standards.

#### **DHYG 134. Dental Materials**

##### **3 Credits (2+1P)**

Study of the composition, chemical and physical properties, manipulations, and uses of dental materials. Emphasis on materials and procedures for which the dental hygienist is directly responsible. Laboratory experiences include application and manipulation of various materials used in dentistry. Restricted to Community College Campuses only. May be repeated up to 3 credits.

##### **Learning Outcomes**

1. Recognize general rules for handling dental materials.
2. Recognize and identify materials science and dentistry.
3. Implement proper infection control and safety in the dental office.
4. Recognize the properties and uses of impression materials.
5. Demonstrate proper disinfection of impressions, dentures and other appliances and materials.
6. Understand the process and demonstrate the technique for taking of alginate impressions and elastomeric impressions.
7. Recognize the properties and demonstrate the use of gypsum materials.
8. Demonstrate the fabrication and trimming of study models.
9. Recognize the properties and demonstrate the use of Adhesive materials, Direct polymeric restorative materials, Amalgam and other direct metallic restorative materials, Polishing materials and abrasion, and Dental cements. 1
10. Demonstrate the steps for fabricating and delivery protocol of an oral appliance. 1
11. Recognize and apply the concepts of vital tooth whitening.

#### **DHYG 210. Dental Hygiene Theory III**

##### **2 Credits (2)**

Advanced theory of dental hygiene and information on periodontal therapies relative to the hygienist's role as a co-therapist in clinical practice. Continuation of the study of dental hygiene care for medically comprised patients and an introduction to special needs patients. May be repeated up to 2 credits.

##### **Learning Outcomes**

1. Value the importance of properly sharpened instruments in clinical practice.
2. Create a smooth, stain free tooth surface with the use of air powder polishing.
3. Utilize diagnostic equipment to aid in patient assessments.
4. Use power driven instruments to remove disease causing agents from the gingiva and tooth surface.
5. Practice advanced root surface debridement techniques using extraoral, facilitated, and alternative fulcrums/finger rest.
6. Incorporate specialty instruments into the dental hygiene armamentarium for root assessment and debridement.
7. Correlate the relationship between the inflammatory response and periodontal disease.
8. Modify dental hygiene care based on the specific risks and needs of the medically compromised patient.
9. Problem solve using clinical case studies. 1
10. Integrate current research and evidence-based practices into the delivery of patient care and education.

#### **DHYG 212. Clinical Dental Hygiene III**

##### **5 Credits (5P)**

Continuation of clinical skills, patient assessment and diagnosis, treatment and appointment planning, preventive techniques and applications of dental hygiene procedures at the intermediate to competent level under supervision of faculty. Emphasis on dental hygiene treatment for the medically compromised and periodontally involved patients. Theory is simultaneously related to practical experience. Offered concurrently with DHYG 210. May be repeated up to 5 credits.

##### **Learning Outcomes**

1. Prevention of disease transmission: a. Asepsis protocol of recommended clinical guidelines for infection and hazard management prior, during and after the provision of dental hygiene services. b. Management of individuals with bloodborne infectious diseases based on standard precautions. c. Post-exposure guidelines as defined by the Centers for Disease Control and Prevention (CDC). d. Selection and use of effective methods of instrument and dental unit sterilization/disinfection. e. Valuing the dental hygienist's role in preventing disease transmission.
2. Patient/operator positioning: a. Positioning self and the patient to maximize accessibility and visibility to the field of operation. b. Selecting operator positioning strategies to prevent or lessen the risk



- of injury to self and/or the patient during implementation of dental hygiene care. c. Valuing the need for effective ergonomics and safe patient/operator positioning. d. Valuing the need for effective use of vision magnification for intraoral procedures.
3. Time and motion management: a. Selecting time and motion patterns for safe and efficient implementation of dental hygiene care. b. Valuing the need for efficient time and motion management.
  4. Prevention and/or management of emergency situations: a. Developing a management plan for medical emergencies. b. Applying current methods for prevention of emergencies. c. Assessing the patient's need for emergency care. d. Implementing basic life support methods consistent with American Heart Association guidelines. e. Valuing maintaining skills in preventing and managing emergencies. f. Valuing the dental hygienist's role in preventing and managing emergencies.
  5. Comprehensive patient assessment: a. Obtaining and recording a comprehensive medical, social, dental and nutrition health history. b. Recognizing conditions that necessitate special consideration prior to or during treatment. c. Obtaining, interpreting and monitoring vital signs according to American Heart Association guidelines. d. Performing and documenting an extraoral and intraoral examination that includes soft and hard tissue of the head, neck and oral cavity. e. Performing and documenting an examination of the dentition that includes dental charting, occlusion and assessment of hard and soft deposits. f. Performing and documenting an examination of the periodontium that includes gingival assessment, recession, bleeding upon probing, sulci and/or pocket measurements, clinical attachment level, furcation involvement, tooth mobility, fremitus, mucogingival conditions and radiographic findings. g. Evaluating patient risk factors for oral diseases. h. Discriminating pertinent and significant assessment findings from those that are not significant or within a range of normal. i. Assessing the need for exposing intraoral and/or extraoral radiographs/images to support the clinical examination. j. Exposing, developing, interpreting and evaluating intraoral and extraoral dental radiographs/images. k. Assessing the need for exposing, developing and implementing intraoral photography. l. Employing radiation safety principles in procedures requiring exposure to ionizing radiation. m. Using supplemental screening tools to support assessment strategies such as Periodontal Screening and Recording (PSR), alginate impressions and study models, indices and vitality testing. n. Assessing for the patient's oral health needs, beliefs, knowledge, skills and selfcare practices. o. Valuing the need for consistently performing patient assessment at professionally accepted standards of care.
  6. Diagnosis and planning of dental hygiene care: a. Analyzing the patient's needs for preventive, educational, and therapeutic dental hygiene services. b. Synthesizing patient assessment findings and risk factors in formulating a patient centered dental hygiene treatment plan and case presentation. c. Formulating a dental hygiene diagnosis from comprehensive assessment findings or evidence. d. Proposing measurable patient outcome goals for oral health. e. Identifying factors contributing to the patient's preventive, educational and/or therapeutic oral health needs. f. Selecting dental hygiene intervention strategies that will guide the patient to achieving patient-centered oral health outcomes that include oral and systemic health education strategies. g. Appointment planning and sequencing of dental hygiene care to meet the patient's oral health goals. h. Obtaining informed consent by discussing with the patient his/her oral health findings, goals and treatment strategies. i. Value the importance of patient-centered care and concepts of health promotion.
  7. Principles and methods of dental hygiene intervention: a. Implementing dental hygiene strategies and services that address the factors contributing to the patient's preventive, educational and/or therapeutic oral health needs. b. Implementing cognitive, psychomotor and affective strategies to manage barriers to oral self-care. c. Performing nutritional and tobacco cessation counseling for oral health management. d. Performing initial and supportive periodontal therapies. e. Implementing nonsurgical therapeutic periodontal debridement procedures supportive of the patient's oral health condition. f. Applying the principles of instrumentation that include grasp, fulcrum, adaptation, angulation, activation/stroke and lateral pressure to assure complete debridement. g. Applying the principles of instrument design that include shank, handle, working end/blade to support instrument selection for maximum effectiveness, safety and efficiency in debridement procedures. h. Applying principles of therapeutic ultrasonic periodontal debridement. i. Maintaining instrument sharpness. j. Using pain and anxiety management strategies that include applying topical anesthetics, applying hard tissue topical desensitizing agents, administering or assisting in the administration of block and infiltration anesthesia and administering or monitoring of nitrous oxide/oxygen analgesia. k. Applying preventive and therapeutic topical agents for disease management, including fluoride, antimicrobial agents and local delivery/controlled released agents. l. Applying selective coronal polishing procedures that include polishing, airpowder polishing and selection of polishing agent. m. Performing and evaluating the placement of pit and fissure sealants. n. Performing and evaluating the finishing and polishing of existing restorations. o. Valuing the need for consistently performing preventive, educational and/or therapeutic dental hygiene services at professionally accepted standards of care.
  8. Principles and methods of evaluating outcomes of dental hygiene care: a. Evaluating and documenting the results of preventive and/or therapeutic dental hygiene interventions in meeting the proposed treatment plan goals. b. Recommending a recare schedule for continued supportive care. c. Recommending referral for additional assessment and/or treatment. d. Valuing the importance of evaluation in monitoring patient oral health. e. Assessing overall patient satisfaction with care provided.
  9. Health informatics and emerging technologies: a. Applying the principles for maintaining comprehensive and accurate records of all information and services offered to and provided to the patient. b. Documenting additional dental care needed by the patient. c. Valuing the need for maintenance of thorough and accurate records. 1
  10. Professional ethics: a. Applying the principles of professional and ethical behavior when providing patient care. b. Self-assessing ability to perform dental hygiene services at a high standard of care. c. Valuing patient confidentiality and patient rights according to the guidelines of the Health Insurance Portability and Accountability Act of 1996 (HIPAA). d. Valuing the patient's right to dental hygiene care consistently provided at acceptable standards.

#### **DHYG 214. Dental Pharmacology 3 Credits (3)**

Study of the pharmacologic aspects of drugs and drug groups with which the dentist and dental hygienist are directly and indirectly concerned. Emphasis is placed on nomenclature, origin, physical and chemical properties, preparation, modes of administration and effects of drugs upon the body systems. May be repeated up to 3 credits.

**Learning Outcomes**

1. Utilize pharmacological terminology, sources of drug information (including regulating agencies), basic principles related to pharmacology and recognize the symbols and format used to write legal prescriptions.
2. Describe general principles of pharmacology to include basic physiological and biochemical mechanisms through which different drug forms exert their actions.
3. Explain adverse reactions (including toxicity, hypersensitivity, teratogenic, and idiosyncratic reactions), and general methods of drug toxicity evaluation.
4. Review the physiology of the autonomic nervous system; analyze the therapeutic uses of autonomic drugs; mechanisms of action; variables affecting the medication including drug interactions; possible oral manifestations and implications related to dental treatment, and dental uses of autonomic drugs.
5. Learn the concepts of pain reaction vs. pain perception; analyze the therapeutic uses of nonopioid (nonnarcotic) analgesics; common doses; pharmacokinetics; mechanisms of action; variables affecting the medication including drug interactions; possible oral manifestations and implications related to dental treatment.
6. Analyze the therapeutic uses of opioid (narcotic) analgesics and antagonists; the physiology of opioid receptors; common doses; pharmacokinetics; mechanisms of action; variables affecting the medication including drug interactions; possible oral manifestations and implications related to dental treatment.
7. Discuss the concepts of dental infections, as well as the concepts of infection evolution, and resistance; analyze the therapeutic uses of anti-infective agents; common doses; pharmacokinetics; mechanisms of action; variables affecting the medication including drug interactions; possible oral manifestations and implications related to dental treatment.
8. Analyze the therapeutic uses of antifungal and antiviral agents; common doses; pharmacokinetics; mechanisms of action; variables affecting the medication including drug interactions; possible oral manifestations and implications related to dental treatment; know concepts of antiretroviral combinations.
9. Analyze the therapeutic uses of local anesthetic agents; chemistry; nerve fiber physiology; common doses; variables affecting the medication including drug interactions; possible oral manifestations and implications related to dental treatment; vasoconstrictors and topical anesthetics used in dentistry. 1
10. Analyze the therapeutic uses of general anesthetics; pharmacokinetics; mechanisms of action; variables affecting the medication including drug interactions; implications related to dental treatment; stages and planes of anesthesia; methods of administration and side effects of nitrous oxide; concept of balanced anesthesia. 1
11. Analyze the therapeutic uses of anti-anxiety agents; common doses; pharmacokinetics; mechanisms of action; variables affecting the medication including drug interactions; possible oral manifestations and implications related to dental treatment; dental uses of anti-anxiety agents. 1
12. Analyze the effects of deficiencies of vitamins and minerals; variables affecting the pharmacokinetics of vitamins and minerals; possible oral manifestations and implications related to dental treatment and systemic health. 1
13. Know the presentations and causes of common oral conditions; analyze drugs used to treat those conditions; common doses; pharmacokinetics; mechanisms of action; variables affecting the medications including drug interactions; possible oral manifestations and implications related to dental treatment. 1
14. Know causes and prevention of hygiene-related disorders; analyze drugs used to treat hygiene-related oral disorders; common doses; pharmacokinetics; mechanisms of action; variables affecting the medication including drug interactions; possible oral manifestations and implications related to dental treatment. 1
15. Know dental implications of cardiovascular disease, including contraindications, vasoconstrictor limitations, and prevention of infective endocarditis; analyze the therapeutic uses of cardiovascular drugs; pharmacokinetics; mechanisms of action; variables affecting the medication including drug interactions; the six categories of cardiovascular drugs. 1
16. Know the physiology of seizures; analyze the therapeutic uses of anticonvulsants; pharmacokinetics; mechanisms of action; variables affecting the medication including drug interactions; possible oral manifestations and implications related to dental treatment; dental treatment of patients with seizure disorders. 1
17. Know theories and categories of psychiatric disorders; analyze the therapeutic uses of psychotherapeutic agents; pharmacokinetics; mechanisms of action; variables affecting the medication including drug interactions; possible oral manifestations and implications related to dental treatment. 1
18. Analyze the therapeutic uses of autocoids and antihistamines; pharmacokinetics; mechanisms of action; variables affecting the medication including drug interactions; possible oral manifestations and implications related to dental treatment. 1
19. Know the physiology of the adrenal system; analyze the therapeutic uses of adrenocorticosteroids; pharmacokinetics; mechanisms of action; variables affecting the medication including drug interactions; possible oral manifestations and implications related to dental treatment, including needs and methods of steroid supplementation. 2
20. Analyze the therapeutic uses of other hormones, including pituitary, thyroid, and sex hormones; pharmacokinetics; mechanisms of action; variables affecting the medication including drug interactions; know the effects of pituitary, thyroid, and sex hormone diseases; possible oral manifestations and implications related to dental treatment. 2
21. Analyze the therapeutic uses of antineoplastic drugs; pharmacokinetics; mechanisms of action; variables affecting the medication including drug interactions and possible adverse drug effects; possible oral manifestations and implications related to dental treatment. 2
22. Analyze the therapeutic uses of respiratory and gastrointestinal drugs, including drug categories and types of diseases; pharmacokinetics; mechanisms of action; variables affecting the medication including drug interactions; possible oral manifestations and implications related to dental treatment. 2
23. Recognize emergencies and their causes, and the drugs commonly used to manage emergencies in the dental environment; common doses; interactions with other drugs; possible side effects; commonly used emergency equipment and supplies. 2
24. Recognize the implications of using various drugs during pregnancy or breast feeding; FDA drug categories. 2
25. Describe the implications of alcohol and drug abuse to dental practice; concepts of dependence, tolerance, addiction, habituation; some of the treatments for alcohol and drug abuse; the side effects and interactions of drugs used to treat abuse; categories of abused drugs. 2

26. Analyze the therapeutic uses of natural and herbal products as well as dietary supplements; side effects and drug interactions; possible oral manifestations and implications related to dental treatment; laws and regulations governing natural and herbal products.

- c. Compare predisposing factors. d. Discuss possible prevention strategies.

### **DHYG 215. Medical and Dental Emergencies**

#### **2 Credits (2)**

This course provides an overview of medical and dental emergencies encountered most frequently in the dental setting. It also provides the student with knowledge and techniques on how to address those emergencies should they occur. Restricted to: DHYG majors. Restricted to Community College campuses only.

#### **Learning Outcomes**

1. Describe significant emergency preventive measures.
2. Differentiate the goals or pretreatment physical and psychological evaluation of the patient.
3. For each question on the medical and dental histories, develop follow-up questions to assess the patient's risk of an emergency or need for treatment modification.
4. Discuss the relationship of various vital signs to potential emergency situations.
5. Describe methods for evaluating patients' anxiety levels and methods to reduce patient anxiety.
6. Relate ASA classifications to potential medical emergencies.
7. Describe activities and equipment needed to prepare for dental office emergencies.
8. Maintain current CPR certification.
9. Discuss various aspects of an adequate emergency kit and emergency equipment. 1
10. List items that might be considered "critical" or "secondary." 1
11. Recognize other drugs and types of equipment that could be included in an emergency kit. 1
12. Differentiate the use of various drugs and equipment that might be found in the emergency kit. 1
13. Demonstrate effective methods for drawing and presenting drugs. 1
14. Describe and demonstrate effective methods for using and delivering oxygen. 1
15. Demonstrate effective method for using an automatic external defibrillator (AED). 1
16. Demonstrate team assignments in response to emergency situations. 1
17. Describe the medicolegal implications of medical emergencies. 1
18. Define and discuss: standard of care, duty to act, consent, abandonment, negligence. 1
19. Differentiate appropriate responses to the following emergencies: unconsciousness, syncope, postural hypotension, acute adrenal insufficiency, respiratory distress, airway obstruction, hyperventilation, asthma, Allergic reactions, Altered consciousness, diabetes mellitus: insulin shock and diabetic coma, cerebrovascular accident, seizures, generalized tonic clonic, generalized absence, drug-related emergencies, drug overdose, local anesthetic toxicity, epinephrine toxicity, chest pain and cardiac arrest, angina, acute myocardial infarction, cardiac arrest, heart failure, hemorrhage, shock, burns, foreign body in the eye, chemical solution in the eye, dislocated jaw (due to trauma/fracture, subluxation, etc.), broken instrument, avulsed tooth. 2
20. For any emergency situation that should occur. a. Recognize that an emergency situation exists. b. Discuss the general considerations.

### **DHYG 217. Research Methodology**

#### **2 Credits (2)**

This course provides an introduction to the principles and application of research methods in social, behavioral and medical research. Restricted to: DHYG majors. Restricted to Community College campuses only.

#### **Learning Outcomes**

1. Explain how oral health research and the process of scientific inquiry knowledge development and daily practice.
2. Explain how an evidence-based decision-making approach enhances critical thinking and professional decision-making regarding patient care.
3. Describe the scientific method and research process.
4. Use the Internet and electronic resources in research and understand how they relate to dental hygiene education, practice and research.
5. Conduct an effective literature search using electronic databases (such as PubMed, MEDLINE, and CINAHL), professional journals, government documents, product literature and other print publications, video and other forms of multimedia.
6. Develop a PICO (or equivalent) research question to address an identified practice problem.
7. Discuss different research designs and when each is appropriate to use.
8. Explain the elements necessary to obtain valid and reliable results for observational, exploratory and experimental research.
9. Evaluate oral health research articles applying concepts of research design and methodology. 1
10. Interpret oral health data by proper application of statistical principles and tests. 1
11. Critically analyze different print and electronic information sources and apply to the practice of dental hygiene. 1
12. Gain an appreciation for the role of research in evidence-based dental hygiene practice.

### **DHYG 218. Pain and Anxiety Management**

#### **2 Credits (2)**

Study of the application of various physical, chemical, and psychological modalities to the prevention and treatment of preoperative and postoperative patient anxiety and pain. Emphasis on administration of local anesthesia and nitrous oxide.

#### **Learning Outcomes**

1. Explain pain/impulse conduction related to nerve anatomy and physiology.
2. Discuss the modalities of pain and mechanisms used to control pain.
3. Discuss the different types of nerve fibers and their functions.
4. Describe the pharmacological properties, actions, considerations, and contraindications to local anesthetic agents, vasoconstrictors, and nitrous oxide.
5. Evaluate and describe the relationship between pKa and pH as well as the clinical relevance of both.
6. Evaluate and discuss the signs, symptoms, and effects of local anesthetics in the central nervous system (CNS).
7. Evaluate and discuss the signs, symptoms, and effects of local anesthetics in the cardiovascular system (CVS).
8. Outline and discuss the biotransformation of esters and amides and the half-life concept.

9. Identify and discuss vasoconstrictors. Similarities/differences between epinephrine and levonordefrin. 1
10. Describe and distinguish between clinical signs and symptoms of vasoconstrictors vs. local anesthetics. 1
11. Define and discuss what a maximum recommended dose is. 1
12. List maximum recommended doses for anesthetics and vasoconstrictors. 1
13. Calculate and explain maximum recommended doses of local anesthetic drugs and vasoconstrictors when one or multiple drugs with differing concentrations are administered on children, adults and those with compromised health systems. 1
14. Discuss the topical anesthetics available in dentistry and determine their potency. 1
15. Describe signs, symptoms, and adverse reactions, of topical anesthetics. 1
16. Assess the client's medico-dental history as it relates to choice of technique and agents used in the administration of local anesthetic and nitrous oxide-oxygen analgesia. 1
17. Demonstrate competence in administering selected local anesthetic injections and nitrous oxide-oxygen analgesia. 1
18. Determine the appropriate pain control armamentarium, agents and techniques need to ensure patient safety and comfort during the administration of local anesthesia and nitrous oxide-oxygen analgesia. 1
19. Identify and describe intraoral landmarks implicated in the administration of local anesthetics. 2
20. List and explain the use and purpose for each armamentarium item required for the administration of local anesthesia. 2
21. Explain the different types of needles used for the delivery of local anesthesia and the rationale for using each needle. 2
22. Explain the proper sharps management to be used when handling local anesthetics and needles. 2
23. Explain proper protocols to manage adverse reactions to local anesthetics and vasoconstrictors in the dental office. 2
24. List and describe adverse reactions of local anesthetics in the CNS and CVS. 2
25. Evaluate and explain situations that require medical consultation before the administration of local anesthetics. 2
26. Describe signs and symptoms of undiagnosed medical conditions that can affect local anesthetic administration. 2
27. Determine ways to prevent and manage potential emergencies associated with dental anesthetics and nitrous oxide. 2
28. Describe the basic technique for administration of the following injections: Infiltrations, ASA nerve block, MSA nerve block, IO nerve block, PSA nerve block, IA nerve block, lingual nerver block, Buccal nerve block, Mental nerve block, Incisive nerve block, Gow- Gates nerve block, Vazirani-Akinosi (Akinosi) nerve block.
2. Determine the appropriate pain control armamentarium, agents and techniques need to ensure patient safety and comfort during the administration of local anesthesia and nitrous oxide-oxygen analgesia.
3. Identify and describe intraoral landmarks implicated in the administration of local anesthetics.
4. List and explain the use and purpose for each armamentarium item required for the administration of local anesthesia.
5. Explain the different types of needles used for the delivery of local anesthesia and the rationale for using each needle.
6. Explain the proper sharps management to be used when handling local anesthetics and needles.
7. Explain proper protocols to manage adverse reactions to local anesthetics and vasoconstrictors in the dental office.
8. List and describe adverse reactions of local anesthetics in the CNS and CVS.
9. Evaluate and explain situations that require medical consultation before the administration of local anesthetics. 1
10. Describe signs and symptoms of undiagnosed medical conditions that can affect local anesthetic administration. 1
11. Determine ways to prevent and manage potential emergencies associated with dental anesthetics and nitrous oxide. 1
12. Practice pain control techniques according to legal and ethical standards. 1
13. Describe the basic technique for administration of the following injections: Infiltrations, ASA nerve block, MSA nerve block, IO nerve block, PSA nerve block, IA nerve block, lingual nerver block, Buccal nerve block, Mental nerve block, Incisive nerve block, Gow- Gates nerve block, Vazirani-Akinosi (Akinosi) nerve block.

#### **DHYG 220. Dental Hygiene Theory IV**

##### **3 Credits (3)**

Theoretical preparation for advanced clinical practice. In-depth study of dental hygiene care for patients with special needs. Case Study presentations and a Board Review are utilized to demonstrate the synthesis of comprehensive dental hygiene knowledge, skills and attitudes. The most current dental and dental hygiene technology will be reviewed as it related to clinical practice.

##### **Learning Outcomes**

1. Value the importance of properly sharpened instruments in clinical practice.
2. Create a smooth, stain free tooth surface with the use of air powder polishing.
3. Utilize diagnostic equipment to aid in patient assessments.
4. Use power driven instruments to remove disease causing agents from the gingiva and tooth surface.
5. Practice advanced root surface debridement techniques using extraoral, facilitated, and alternative fulcrums/finger rest.
6. Incorporate specialty instruments into the dental hygiene armamentarium for root assessment and debridement.
7. Correlate the relationship between the inflammatory response and periodontal disease.
8. Modify dental hygiene care based on the specific risks and needs of the medically compromised patient.
9. Problem solve using clinical case studies. 1
10. Integrate current research and evidence-based practices into the delivery of patient care and education.

#### **DHYG 219. Pain and Anxiety Management Clinical**

##### **1 Credit**

Clinical application of concepts learned in DHYG 218. Emphasis on the administration and techniques of local anesthesia and monitoring nitrous oxide. Restricted to: DHYG majors.

**Prerequisite:** C or better in DHYG 218.

##### **Learning Outcomes**

1. Demonstrate competence in administering selected local anesthetic injections and nitrous oxide-oxygen analgesia.

**DHYG 222. Clinical Dental Hygiene IV****5 Credits (16P)**

Clinical sessions combine basic and advanced dental hygiene skills with time management techniques essential for private practice. Comprehensive patient care to include assessment, dental hygiene diagnosis, treatment planning, implementation and evaluation of dental care, nonsurgical periodontal therapy, adjunct clinical procedures, ultrasonic instrumentation, patient management, sealants, and comprehensive programs for control of oral diseases will be emphasized. Theory is simultaneously related to practical experience. Students are encouraged to develop independent decision-making with minimal faculty supervision.

**Learning Outcomes**

1. Prevention of disease transmission.
2. Patient/operator positioning.
3. Time and motion management.
4. Prevention and/or management of emergency situations.
5. Comprehensive patient assessment.
6. Diagnosis and planning of dental hygiene care.
7. Principles and methods of dental hygiene intervention.
8. Principles and methods of evaluating outcomes of dental hygiene care.
9. Health informatics and emerging technologies. 1
10. Professional ethics.

**DHYG 224. Principles of Practice****2 Credits (2)**

Examination of the dental hygienist's role in both traditional and non-traditional employment settings. Career planning, resume preparation and interviewing are practices. An understanding of the law, professional ethics of dental hygiene and the need for lifelong learning are emphasized. Future roles of the dental hygienist and emerging issues in dental hygiene will be explored. May be repeated up to 2 credits.

**Learning Outcomes**

1. Define the terms "ethics," "morality" and "the law."
2. Describe worldview and discuss how every individual's worldview is unique.
3. Reflect on individual worldview and the role it plays in how other people and circumstances are interpreted.
4. Acknowledge that everyone has a view of the world based on a variety of experiences and sources and thus views the world differently, and that all worldviews embody some truths and have roots in reality.
5. Communicate one's own worldview regarding basic questions that all worldviews answer.
6. Describe the role of the dental hygienist in health care and the impact that respect for people has on that role.
7. Explain the professional relationship between the health care provider and the patient, specifically in terms of competence, fairness, integrity, responsibility, respect and service-mindedness.
8. Distinguish between the theories of utilitarianism, deontology and virtue ethics.
9. Identify the core values found in the Codes of Ethics of the American Dental Hygienists' Association, American Dental Assistants' Association, International Federation of Dental Hygienists, National Association of Dental Laboratories and additional codes highlighted.

1

10. Define the terms autonomy, confidentiality, societal trust, nonmaleficence, beneficence, justice, social justice, veracity and fidelity. 1
11. Discuss the criteria for informed consent and informed refusal. 1
12. Describe the purpose and common elements in a patient bill of rights. 1
13. Describe what creates an ethical dilemma. 1
14. Describe an ethical decision-making framework that can be applied to an ethical dilemma. 1
15. Apply an ethical decision-making framework to a case-based situation and be able to defend the choice of action. 1
16. Compare the concepts of civil law with criminal law, using examples found in allied dental health practices. 1
17. List the types and circumstances of supervision (or absence of supervision) found in the Dental Practice Act. 1
18. Describe scope of practice for members of the dental team. 1
19. Define and distinguish common legal concepts/terms, including malpractice, torts, contracts, felony and fraud. 2
20. Discuss the rights of patients protected by law and duties of providers regulated by law from the ethical, legal and professional perspectives. 2
21. Discuss the ethical and legal obligations to identify and report the signs of abuse (child, spouse and elderly). 2
22. Discuss the concept of justice and apply the common good to the delivery of and access to dental services. 2
23. Describe federal and state laws that impact the delivery of care and surrounding ethical issues. 2
24. Describe federal and state laws that impact the employer-employee relationship. 2
25. Describe cultural sensitivity and cultural competence and provide examples pertinent to patient care delivery. 2
26. List the steps necessary to attain cultural competence. 2
27. Define health literacy and provide examples of assisting patients with health literacy challenges. 2
28. Discuss ethical and legal protocols to protect information in the age of computers, social media and other technical advances. 2
29. Review the changes in the practice of allied dental professions focusing on educational requirements and credentialing as a profession. 3
30. Identify frequently encountered ethical or illegal challenges in the delivery of dental care and resources to address the challenges identified.

**DHYG 225. Dental Public Health Education****3 Credits (3)**

Study of principles and concepts of community public health and dental health education. Emphasis on dental epidemiology and statistical methods, community assessment, educational planning, implementation, and evaluation, scientific review of literature, and classroom presentation. Restricted to: DHYG majors. Restricted to Community College campuses only.

**Learning Outcomes**

1. Providing health education and preventive counseling to a variety of population groups.
2. Promoting the values of good oral and general health and wellness to the public and organizations within and outside the professions.
3. Identifying services that promote oral health and prevent oral disease and related conditions.

4. Advocating for consumer groups, businesses, and government agencies to support health care issues.
5. Assessing, planning, implementing, and evaluating community-based oral health programs.
6. Using screening, referral, and education to bring consumers into the health care delivery system.
7. Providing dental hygiene services in a variety of settings, including offices, hospitals, clinics, extended care facilities, community programs and schools.
8. Employing current infection prevention and control resources in community-focused health care settings.
9. Evaluating reimbursement mechanisms and their impact on the patient's access to dental care. 1
10. Recognizing and using written and electronic sources of information. 1
11. Evaluating the credibility and potential hazards of dental products and techniques. 1
12. Evaluating published clinical and basic science research and integrating this information to improve the oral health of the patient. 1
13. Recognizing the responsibility and demonstrating the ability to communicate professional knowledge verbally and in writing. 1
14. Accepting responsibility for solving problems and making decisions based on accepted scientific principles. 1
15. Expanding and contributing to the knowledge base of dental hygiene.

**DHYG 255. Special Topics in Dental Hygiene**

**1 Credit (4P)**

Study of special topics related to the advanced practice of dental hygiene. May include educational methodology as well as applications in clinical practice, research, or community service. Restricted to DHYG majors. May be repeated up to 2 credits.

**Learning Outcomes**

1. Use evidence-based decision making to expand and refine their skills working with a diversity of patients.
2. Provide dental hygiene services within a variety of settings.
3. Analyze assessments and implement appropriate treatment plans that aligns to accepted standard of care.
4. Communicate effectively with diverse individuals and serving all persons without discrimination by acknowledging and appreciating diversity.
5. Advocate for effective oral health care for underserved populations.
6. Analyze the needs of individuals who lack adequate access to oral health services in our communities.
7. Provide dental hygiene services to patients of different levels of periodontal classification, ages and special needs.