



NEW YORK CITY COLLEGE OF TECHNOLOGY

DENTAL HYGIENE DEPARTMENT

**COURSE OUTLINE AND OBJECTIVES**

|                                    |   |
|------------------------------------|---|
| <b>COURSE CODE AND TITLE:</b>      | DEN 1112 ORAL ANATOMY   |
| <b>TERM:</b>                       | FALL 2016   |
| <b>INSTRUCTOR:</b>                 | ANNA MATTHEWS, RDH, MS<br><a href="mailto:amatthews@citytech.cuny.edu">amatthews@citytech.cuny.edu</a>  |
| <b>OFFICE HOURS:</b>               | Wednesdays and Thursdays, 11:30-12:30, P-201  |
| <b>CLASS HOURS:</b>                | 1 PER WEEK  |
| <b>LABORATORY HOURS:</b>           | 3 PER WEEK  |
| <b>CREDITS:</b>                    | 2   |
| <b>PREREQUISITES:</b>              | CUNY PROFICIENCY IN READING, WRITING,<br>AND MATHEMATICS  |
| <b>COREQUISITES:</b>               | DEN 1110  |
| <b>TEXT (REQUIRED):</b>            | Illustrated Dental Embryology, Histology, and Anatomy<br>ISBN: 978-1-4557-7685-6 (NOTE: this textbook will<br>also be used for DEN 1114)<br><br>Illustrated Anatomy of the Head and Neck<br>ISBN 978-1-4377-2419-6  |
| <b>ADDITIONAL STUDY RESOURCES:</b> | <b>3D Anatomy for Dental Hygiene DVD</b> is available for your<br>use in the Library's Media Center – Room A-434. You will be<br>required to sign in and provide your NYCCT ID card while<br>you use the disk. The hours are MON-FRI 10 am – 6 pm<br>(subject to change by the Library)<br><br>This educational software is also available for purchase<br>individually (disk or web-access) at<br><a href="https://www.primalpictures.com/dental-hygiene.aspx">https://www.primalpictures.com/dental-hygiene.aspx</a> (price is<br>lower for students, please ask Prof. Matthews if you are<br>interested) |

## **COURSE DESCRIPTION:**

A study of head and neck anatomy with an emphasis on the structures of the oral cavity. The Dental Hygiene Oral Anatomy course integrates the basic science curriculum and applies this unified foundational knowledge to the clinical evaluation of the oral cavity, including the teeth and their supporting apparatus, and the structures of the head and neck. The course consists of the Dental Anatomy part which focuses on the anatomy of the teeth and their supporting structures, and the Head and Neck Anatomy part, which focuses on the anatomy and topography of the structures of the oral cavity, head and neck. Variations in the normal anatomy of the teeth and oral structures and common abnormalities of the teeth and the head and neck region are discussed. The course provides the necessary knowledge for the clinical extra-oral and intra-oral, dental and periodontal assessments, and serves as a foundation for the study of Dental Pathology, Dental Radiology, Dental Pharmacology, and Dental Hygiene provision of care II, III, and IV, and the Pain Management in dental hygiene.

## **EVALUATION PROCEDURES:**

### **Grading scale:**

|    |          |
|----|----------|
| A  | 93-100   |
| A- | 90-92.9  |
| B+ | 87-89.9  |
| B  | 83-86.9  |
| B- | 80-82.9  |
| C+ | 77-79.9  |
| C  | 70-76.9  |
| D  | 60-69.9  |
| F  | Below 60 |

### **Course assessment method:**

A minimum grade of **70** is required to pass DEN 1112. Final grade break-down:

- Exams (4) – 60%
- Daily quizzes (8) – 24%
- Term paper/project – 10%
- Homework – 4%
- Classroom and online participation – 2%

## **Examination policies:**

Dental Hygiene Dept. Policy on Retesting: no student in any Dental Hygiene course will be retested in any examination for any reason. A failing grade on a quiz/examination will remain and be averaged with all other course grades.

All DEN 1112 students are:

- 1) Expected to take the examination (tests and quizzes) at the scheduled times.
  - 2) In the event of an unforeseen emergency, the student is to e-mail the instructor and upon returning to school provide medical or legal documentation to support the absence from the examination. Students who provide documentation deemed acceptable by the course instructor will be scheduled to take a “make-up” examination.
  - 3) Students who arrive late to examinations (tests), will not be given extended time and will be expected to complete the exam in the remaining scheduled exam time. Students who arrive late for daily quizzes will not be allowed to participate in the quiz and should meet with the instructor to make alternative arrangements.
  - 4) Students who miss and do not provide acceptable documentation will have a score of Zero (0) entered for that examination.
- **Attendance:** NYCCT policy allows you to be absent for no more than 10% of the class time (two sessions).
  - **Lateness:** Attendance will be taken at the beginning of class, and lateness will be recorded. Lateness: up to 15 min after class starts. If more than 15 min late = absence; 3 times late = 1 absence. Students are responsible for work/assignments/announcements missed due to absence or lateness. Excessive lateness will be reflected in calculation of the final grade (Professionalism)
  - **Homework assignments:** will be announced/posted in advance with the due date/time indicated. Late assignments will not be accepted and missed/late assignments will result in a grade of zero.
  - **Academic Integrity:** Academic dishonesty is prohibited in The City University of New York. Penalties for academic dishonesty include academic sanctions, such as failing or otherwise reduced grades, and/or disciplinary sanctions, including suspension or expulsion. Please see CUNY Policy on Academic Integrity here  
[http://www.citytech.cuny.edu/aboutus/docs/policies/CUNY\\_ACADEMIC\\_INTEGRITY\\_6-2011.pdf](http://www.citytech.cuny.edu/aboutus/docs/policies/CUNY_ACADEMIC_INTEGRITY_6-2011.pdf)
  - **Professionalism:** (Reference: NYCCT Department of DH Student Manual): Deficiencies in the professional comportment may result in a lowering of the final grade by up to 10 points. Refer to the department Student Manual and College catalog for a description of professional and academic criteria. The following will be taken into consideration: rapport with instructors, peers; punctuality; attendance; proper care and use of equipment; ethical behavior; adherence to established procedures. Ten (10) points will be deducted from the final grade for noncompliance with the above standards of professionalism.

- **Americans with Disabilities Act (ADA):** The ADA Act of 1992 requires that all students with documented disabilities be guaranteed a learning environment that provides for reasonable accommodations of their disability. If you believe that you have a disability requiring an accommodation, please contact the Dental Hygiene Program Chair Prof. Joycelyn Dillon or your instructor Prof. Anna Matthews as soon as possible to determine the need and specific accommodations.

**Learning Experience:** This course will utilize several approaches to teaching including but not limited to OpenLab, BlackBoard, PowerPoint, group discussions in class and online, lecture, utilizing SRS (student response system) and additional readings and documentaries in order to accomplish the stated objectives.

### **DEN 1112 General Education Student Learning Outcomes (SLO):**

By the completion of this course the dental hygiene student will be able to:

1. Integrate and correlate the knowledge of the anatomy and topography of the structures of the oral cavity, including the teeth and their supporting apparatus, and the structures of the head and neck with the basic and clinical science disciplines.
2. Identify and describe the basic principles and concepts of Dental and Head and Neck Anatomy.
3. Identify and apply the professional terminology applied to the dentitions, teeth and their supporting apparatus, structures of the oral cavity, and structures of the head and neck, and relate the professional language to the patient communication
4. Analyze the clinical findings related to the dental and head and neck anatomy and differentiate between the variations of normal anatomy and the common abnormalities of the teeth and their supporting structures.
5. Recognize and discuss the variations of the normal anatomy and the common abnormalities of the teeth and their surrounding structures as they relate to the societal, ethical, and legal concepts from diverse perspectives.

### **DH Core Competencies (*Journal of Dental Hygiene, 2003*):**

#### **Core competencies:**

**C.9:** communicate effectively with individuals or groups from diverse populations both verbally and in writing

**C.10:** provide accurate, consistent and complete documentation for assessment, diagnosis, planning, implementation and evaluation of DH services

**Patient/Client Care:**

**PC.1:** systematically collect, analyze and record data on the general, oral, and psychological health status of patients/clients using methods consistent with medico-legal principles

**Health promotion and disease prevention:**

**HP.2:** respect the goals, values, beliefs and preferences of the patient/client while promoting optimal oral and general health

**COURSE OUTLINE: Head and Neck Anatomy**

**UNIT I Introduction to Head and Neck Anatomy**

- A. Orientation to DEN 1112
- B. Rationale for the study of Head and Neck Anatomy
- C. General nomenclature

**UNIT II Surface Anatomy/ Regions of the head and neck**

- A. Surface anatomy
- B. Regions of the head
- C. Regions of the Neck

**UNIT III Skeletal System**

- A. Overview of the Skeletal System
- B. Cranial and facial bones
- C. Anatomy of the maxilla and the mandible
- D. Abnormalities of Bone

**UNIT IV Muscular System**

- A. Overview of the Muscular System
- B. Muscles of facial expression
- C. Muscles of mastication
- D. Muscles of the tongue and the floor of the mouth
- E. Muscles of the neck

**UNIT V Temporomandibular Joint**

- A. Overview of the temporomandibular Joint
- B. Jaw Movements with muscle relationships
- C. Palpation of the joint
- D. Disorders of the joint
- E. Subluxation and its management

## **UNIT VI Glandular Tissue**

- A. Overview of glandular tissue
- B. Glands of the head and neck region
- C. Major and minor salivary glands
- D. Thyroid, parathyroid and thymus glands
- E. Lesions of glandular tissues

## **UNIT VII Lymphatic System**

- A. Overview of the lymphatic system
- B. Lymph nodes of the Head and Neck
- C. Tonsils
- D. Lymphadenopathy
- E. Metastasis and cancer

## **UNIT VIII Nervous System**

- A. Overview of the Nervous System
- B. CNS and the brain
- C. Peripheral nervous system (somatic and autonomic)
- D. Sympathetic and parasympathetic innervation
- E. Cranial nerves and the innervation of the oral cavity and associated structures
- F. Nerve Lesions of the Head and Neck

## **UNIT IX Vascular System**

- A. Outline of the Vascular System
- B. Arterial Blood Supply to the Head and Neck
- C. Venous Drainage of the Head and Neck
- D. Venous anastomoses, sinuses and their role in the spread of infection
- E. Vascular Lesions

## **UNIT X Fascia and Spaces**

- A. Overview of the fascia of the head and neck
- B. Fascial spaces and their communication
- C. Role of the fascial spaces in the spread of odontogenic infection

## **UNIT XI Anatomical Considerations in the Spread of Dental Infection**

- A. The infection process
- B. Odontogenic infections
- C. Infection resistance factors
- D. Spread of odontogenic infections
- E. Prevention of the spread of dental infections and the role of the dental hygienist

## **UNIT OBJECTIVES: Head and Neck Anatomy**

### **UNIT I Introduction to Head and Neck Anatomy – Discipline knowledge, (C-10, PC-1)**

1. Discuss the rationale for the study of head and neck anatomy by dental professionals. (C.10, PC.1)
2. Define terms used to describe anatomical nomenclature of the body. (C.10)

*Gen Ed SLOs:*

*Depth of knowledge*

*Inquiry/analysis*

### **UNIT II Surface Anatomy/ Regions of the head and neck – Discipline knowledge**

1. Describe the boundaries of the oral cavity proper and the oral vestibule. (C.10)
2. Identify and describe the anatomic landmarks of the outer surface of the face. (C.10)
3. Identify and describe the normal anatomic landmarks of the regions of the Head. (C.10)
4. Identify and describe the normal anatomic landmarks of the regions of the Neck. (C.10)
5. Locate and describe important intraoral landmarks, their significance and steps of clinical examination. (C.10, PC.1)
6. Discuss the clinical considerations associated with the study of surface anatomy/ regions of the head and neck as it applies to the practice of dental hygiene. (C10, PC.1)

*Gen Ed SLOs:*

*Depth of knowledge*

*Inquiry/analysis*

*Breadth of knowledge*

### **UNIT III Skeletal System – Discipline knowledge**

1. Identify the parts, anatomic landmarks, and articulations of the bones in the Head and Neck. (C.10)
2. Describe abnormalities associated with the bones of the head and neck. (C.10)
3. Differentiate among the facial and cranial bones. (C.10)
4. Identify the key landmarks of the maxilla and the mandible. (C.10, PC.1)
5. Locate and name the main foramina of the skull and discuss their role. (C.10)
6. Discuss the clinical considerations associated with the study of the skeletal system as it applies to the practice of dental hygiene. (C.10. PC.1)

*Gen Ed SLOs:*

*Depth of knowledge*

*Inquiry/analysis*

*Breadth of knowledge*

### **UNIT IV Muscular System – Discipline knowledge**

1. Describe the location, actions, and innervation of the muscles of facial expression. (C.10)
2. Describe the location and actions of the muscles of mastication. (C.10)
3. Locate the muscles of mastication and their origins and insertions and describe their innervation. (C.10)

4. Locate the muscles involved in elevation, depression, protrusion, retraction and lateral deviation of the mandible. (C.10)
5. List the steps of the clinical examination of facial and neck musculature. (C.10, PC.1)
6. Explain the etiology and clinical signs of Bell's Palsy. (C.9, PC.1)
7. Discuss the clinical considerations associated with the study of the muscular system as it applies to the practice of dental hygiene. (C.10, PC.1)

*Gen Ed SLOs:*

*Depth of knowledge*

*Breadth of knowledge*

#### **UNIT V Temporomandibular Joint** – *Discipline knowledge*

1. Describe and locate the components of the temporomandibular joint and its accessory ligaments. (C.10)
2. Discuss the types of movement and associated muscles of mastication. (C.10)
3. Explain how the extreme pressures generated during mastication are absorbed by the components of the temporomandibular joint. (C.10)
4. List the steps for the palpation of the TM Joint. (C.9, C.10, PC.1)
5. List the muscles of mastication and their actions on the movements of the TMJ. (C.10)
6. Explain the two types of movements (gliding and rotational) and where in the joint they occur. (C.9, C.10)
7. Discuss the clinical considerations associated with the TMJ as it applies to the practice of dental hygiene. (C.10, PC.1)
8. Discuss acute (subluxation) and chronic TMJ disorders. List the steps for management of subluxation. (C.9, C.10, PC.1)

*Gen Ed SLOs:*

*Depth of knowledge*

*Information literacies*

*Written communication*

#### **UNIT VI Glandular Tissue** – *Discipline knowledge*

1. Identify the major salivary glands and their duct openings during a clinical examination. (C.10, PC.1)
2. Name the ducts of the major salivary glands. (C.10)
3. Discuss the role of saliva and its composition. (C.10)
4. Explain the methods of study of the function of the salivary glands. (C.10, PC.1)
5. Describe the relationship of the salivary glands to the surrounding structures. (C.10)
6. Discuss the disorders of the salivary glands the role of the dental hygienist in their diagnosis and management. (C.9, C.10, PC.1, HP.2)
7. Describe the location of the minor salivary glands and their difference from the major glands. (C.10)
8. Locate the thyroid gland, explain its function and disorders and list the steps of clinical examination. (C.10, PC.1)
9. Identify the location and explain the role and disorders of the lacrimal, parathyroid, and thymus



glands. (C.10)

10. Discuss the clinical considerations associated with the study of the glandular system as it applies to the practice of dental hygiene. (C.10, PC.1)

*Gen Ed SLOs:*

*Depth of knowledge*

*Breadth of knowledge*

#### **UNIT VII Lymphatic System – Discipline knowledge**

1. Describe the function of the lymphatic system. (C.10)
2. Locate the lymph nodes of the head and neck and list the steps of the clinical examination. (C.10, PC.1)
3. Describe lymphatic drainage related to the oral cavity. (C.10)
4. Describe the clinical appearance of lymph nodes when infection is present and differentiate among the odontogenic, non-odontogenic, localized, and generalized lymphadenopathy. (C.9, C.10, PC.1, HP.2)
5. Discuss the clinical considerations associated with the study of the lymphatic system as it applies to the practice of dental hygiene. (C.10, PC.1)

*Gen Ed SLOs:*

*Depth of knowledge*

*Breadth of knowledge*

#### **UNIT VIII Nervous System – Discipline knowledge**

1. Discuss the functional and structural organization of the nervous system. (C.10)
2. Differentiate between somatic and autonomic nervous system and their components. (C.10)
3. Describe the organization and functions of the divisions of sympathetic and parasympathetic nervous system. (C.10)
4. Describe the cranial nerves and their main branches and areas of innervation. (C.10)
5. Describe the major branches of the Trigeminal Nerve (CN V) and explain the innervation of the maxillary and mandibular teeth and the associated structures. (C.9, C.10)
6. Explain the innervation of the tongue and distinguish among the sensory, motor, and taste innervation. (C.9, C.10)
7. Discuss the clinical considerations of the cranial nerves as they apply to the practice of Dental Hygiene. (C.10, PC.1)

*Gen Ed SLOs:*

*Depth of knowledge*

*Breadth of knowledge*

*Information literacies*

#### **UNIT IX Vascular System – Discipline knowledge**

1. Discuss the vascular supply to the face, cranium and the brain, oral cavity, the teeth and associated structures. (C.10)
2. Name the major arteries and veins of the head and neck regions and their main branches to the

oral cavity. (C.10)

3. Locate the major venous anastomoses and sinuses and discuss their function and role in the spread of infection. (C.10, PC.1, HP.2)
4. Differentiate among the main vascular lesions (hematoma, hemorrhage, vascular tumor). (C.9, C.10, PC.1, HP.2)
5. Define thrombosis, embolus, bacteremia, sepsis, and metastasis by vascular route. (C.10, PC.1)
6. Discuss the clinical considerations associated with the study of the vascular system as it applies to the practice of dental hygiene. (C.10, PC.1)

*Gen Ed SLOs:*

*Depth of knowledge*  
*Breadth of knowledge*  
*Information literacies*

#### **UNIT X Fascia and Spaces – Discipline knowledge**

1. Name and locate the main fascia and fascial spaces of the head and neck. (C.10)
2. Describe the connections between the major fascial spaces of the head and neck. (C.10)
3. Explain the importance of the fascial spaces in the spread of odontogenic infections. (C.9, C.10, PC.1, HP.2)
4. Differentiate between the deep and superficial layers of fascia. (C.10)
5. Discuss the clinical considerations associated with the study of fascia and spaces as they apply to the practice of dental hygiene. (C.10, PC.1)

*Gen Ed SLOs:*

*Depth of knowledge*  
*Breadth of knowledge*  
*Written communication*

#### **UNIT XI Anatomical Considerations in the Spread of Dental Infection – Discipline knowledge**

1. Discuss the etiology and pathogenesis of odontogenic and non-odontogenic infections of the head and neck regions. (C.9, C.10, PC.1)
2. Define the following conditions: abscess, cellulitis, maxillary sinusitis, Ludwig's angina, infectious pericarditis, and cavernous sinus thrombosis. (C.10)
3. Differentiate between dental and periodontal abscess based on the clinical and radiographic appearance. (C.10, PC.1)
4. Explain the steps of assessment and differential diagnosis of various types of odontogenic and non-odontogenic infections of the head and neck, and the role of the dental hygienist. (C.9, C.10, PC.1, HP.2)
5. Explain the general and local factors of susceptibility and resistance to infection. (C.9, C.10, PC.1)
6. Discuss the clinical considerations associated with the study of anatomical considerations in the spread of dental disease as they apply to the practice of dental hygiene. (C.10, PC.1)

*Gen Ed SLOs:*

*Depth of knowledge*  
*Breadth of knowledge*  
*Information literacies*

*Written communication*  
*Life-long learning*

## **COURSE OUTLINE: Dental Anatomy**

### **UNIT I Development and Eruption of the Dentitions**

- A. Orientation to DEN 1112 Oral Anatomy
- B. Rationale for the study of dental anatomy
- C. Chronologies of human dentition
- D. Dental Terminology and tooth designation systems
- E. Parts of the tooth crown and root and anatomical terminology
- F. Primary dentition overview
- G. Permanent dentition overview
- H. Mixed dentition overview

### **UNIT II Permanent Posterior Teeth**

- A. Maxillary first molar
- B. Maxillary second molar
- C. Maxillary third molar
- D. Mandibular first molar
- E. Mandibular second molar
- F. Mandibular third molar
- G. Maxillary first premolar
- H. Maxillary second premolar
- I. Mandibular first premolar
- J. Mandibular second premolar
- K. Disorders of the crown and root affecting the posterior teeth
- L. Orthodontic considerations for the posterior teeth
- M. Premature loss of primary teeth and the effect on succedaneous dentition
- N. Dental hygiene clinical considerations for the posterior teeth

### **UNIT III Permanent Anterior Teeth**

- A. Maxillary central incisor
- B. Maxillary lateral incisor
- C. Mandibular central incisor
- D. Mandibular lateral incisor
- E. Maxillary canine
- F. Mandibular canine
- G. Disorders of the crown and root of the anterior teeth
- H. Orthodontic considerations for the anterior teeth
- I. Dental hygiene clinical considerations for the anterior teeth

### **UNIT IV The Primary (Deciduous) Teeth**

- J. Life cycle
- K. Importance of primary teeth
- L. Nomenclature
- M. Major contrasts between primary and permanent teeth
- N. Detailed description of each primary tooth, alignment and occlusion

#### **UNIT V Occlusion and malocclusion**

- A. Concepts of occlusion
- B. Angle's classification of occlusion
- C. Class I, II, III malocclusion and associated facial profiles
- D. Tooth crowding and spacing
- E. Cross bite
- F. Tooth impaction and congenitally missing teeth
- G. Orthodontic correction and surgical treatment of malocclusion

### **UNIT OBJECTIVES: Dental Anatomy**

#### **UNIT I Development and Eruption of the Dentitions – *Discipline knowledge***

1. Define parts of the tooth and dental tissues (enamel, dentin, cementum, pulp) and their role. (C.10)
2. Differentiate between primary and permanent teeth. (C.10)
3. Explain the three tooth designation system, their differences and advantages/disadvantages. (C.10)
4. Explain the difference between succedaneous and non-succedaneous permanent teeth. (C.10)
5. Define the components of the tooth crown and major features of the surfaces of the teeth. (C.10)
6. Discuss the clinical considerations associated with the study of the development and eruption of the dentitions as they apply to the practice of dental hygiene. (C.10, PC.1)

*Gen Ed SLOs:*

*Depth of knowledge*

*Breadth of knowledge*

#### **UNIT II Permanent Posterior Teeth – *Discipline knowledge***

1. Describe, compare and contrast the morphology of maxillary first and second premolars. (C.10)
2. Describe, compare and contrast the morphology of mandibular first and second premolars. (C.10)
3. Describe the common variations of the mandibular second premolar. (C.10)
4. Differentiate between the maxillary and mandibular premolars. (C.10)
5. Describe, compare and contrast the morphology of maxillary first, second, and third molars. (C.10)
6. Describe, compare and contrast the morphology of mandibular first, second and third molars. (C.10)
7. Differentiate between maxillary and mandibular molars. (C.10)
8. Relate molar root morphology to instrument selection, plaque control, and patient education.

(C.10, PC.1)

9. Describe the components of the pulp cavity and related structures and their clinical significance. (C.10)
10. Explain orthodontic considerations for the posterior teeth and the role of the dental hygienist. (C.10, PC.1)
11. Define and differentiate crown and root abnormalities of the posterior teeth and related considerations for the dental hygienist. (C.10, PC.1)

*Gen Ed SLOs:*

*Depth of knowledge*

*Breadth of knowledge*

### **UNIT III Permanent Anterior Teeth – Discipline knowledge**

1. Describe the morphology of an incisor tooth and compare and contrast the features of maxillary central and lateral incisors. (C.10)
2. Describe the anomalies most frequently found on incisor teeth. (C.10)
3. Compare and contrast the features of mandibular central and lateral incisors. (C.10)
4. Compare and contrast the features of maxillary and mandibular incisors. (C.10)
5. Describe the morphology and compare and contrast features of the permanent maxillary and mandibular canines. (C.10)
6. Describe, in detail, all features of the permanent maxillary and mandibular canines. (C.10)
7. Relate molar root morphology to instrument selection, plaque control, and patient education. (C.10, PC.1)
8. Describe the components of the pulp cavity and related structures and their clinical significance. (C.10)
9. Explain the orthodontic considerations for the anterior teeth. (C.9, C.10, PC.1, HP.2)
10. Differentiate between tooth impaction and the congenitally missing teeth. (C.10)

*Gen Ed SLOs:*

*Depth of knowledge*

*Breadth of knowledge*

*Written communication*

### **UNIT IV Primary (Deciduous) Teeth – Discipline knowledge**

1. Describe the effects of premature loss and over-retention of primary teeth. (C.9, PC.1, HP.2)
2. Define the common nomenclature associated with the primary dentition. (C.10)
3. Enumerate the difference between the primary and secondary teeth in regard to: number, size, color and morphology, crown shape, and root divergence. (C.10)
4. Describe the distinguishing feature of each of the deciduous teeth. (C.10)
5. Discuss the significance of physiologic spacing of deciduous anterior teeth. (C.9, C.10, HP.2)
6. Relate molar root morphology to instrument selection, plaque control, and patient education. (C.10, PC.1)
7. Describe the components of the pulp cavity and related structures and their clinical significance. (C.10)
8. Discuss the anatomical features of the deciduous crown, roots, and pulp chamber/canals as it

compares to the permanent teeth. (C.10)

9. Discuss various parental attitudes related to the deciduous teeth and the importance of primary dentition and the role of the dental professionals. (C.9, PC.1, HP.2)

*Gen Ed SLOs:*

*Depth of knowledge*  
*Information literacies*  
*Oral and Written communication*  
*Global/multicultural orientation*

#### **UNIT V Occlusion and malocclusion – Discipline knowledge**

1. Define terms and discuss concepts relating to occlusion. (C.10)
2. Relate the contours of the teeth to the health of the gingiva and jaw movements. (C.10, PC.1)
3. Describe how root morphology and proximal curvature influence periodontal health.
4. Describe the terms occlusion and malocclusion. (C.10)
5. Discuss Angle's classification of occlusion and clinically recognize each class. (C.10)
6. Relate the class of occlusion according to Angle's classification to the associated facial profile.
7. Define and differentiate overbite, overjet, crossbite, and open bite. (C.10)
8. Differentiate between primary and secondary occlusal trauma. (C.10)
9. Explain the mesial drift, physiological and pathological tooth migration, and controlled movement during orthodontic treatment. (C.9, C.10, PC.1)
10. Explain the clinical dental hygiene considerations for the class of occlusion, teeth alignment in the arch, and orthodontic treatment. (C.9, PC.1, HP.2)

*Gen Ed SLOs:*

*Depth of knowledge*  
*Information literacies*  
*Oral and Written communication*

#### Schedule of classes and reading assignments

| <b>Session</b> | <b>Session overview and reading assignments</b>   |
|----------------|---|
| Session 1      | <ul style="list-style-type: none"><li>• Introduction to the course</li><li>• Lecture 1 H&amp;N: Introduction to Head and Neck Anatomy (ch.1) and Surface Anatomy (ch.2)</li><li>• Lecture 1 DA: Overview of the Dentitions (ch.15, p.193-200)</li></ul> |
| Session 2      | <ul style="list-style-type: none"><li>• Quiz 1</li><li>• Lecture 2 H&amp;N: Skeletal System (ch.3, except pp. 55-64)</li><li>• Lecture 2 DA: Dentitions contd. (ch.15, p.200-205)</li></ul>   |
| Session 3      | <ul style="list-style-type: none"><li>• Quiz 2</li><li>• Lecture 3 H&amp;N: Skeletal system contd. Maxilla &amp; Mandible (ch.3, pp. 55-64)</li><li>• Lecture 3 DA: Permanent Maxillary Molars (ch.17, p.244-253)</li></ul>                             |

|            |   |
|------------|---|
| Session 4  | <ul style="list-style-type: none"> <li>• Quiz 3</li> <li>• Lecture 3 H&amp;N: Muscular System (ch.4)</li> <li>• Lecture 3 DA: Permanent Mandibular Molars (ch.17, p.254-261)</li> </ul>                 |
| Session 5  | <ul style="list-style-type: none"> <li>• Quiz 4</li> <li>• Lecture 4 H&amp;N: TMJ (ch.5)</li> <li>• Lecture 4 DA: Permanent Maxillary Premolars (ch.17, p.230-237)</li> </ul>                           |
| Session 6  | <ul style="list-style-type: none"> <li>• Quiz 5</li> <li>• Lecture 5 H&amp;N: Glandular Tissue (ch.7)</li> <li>• Lecture 5 DA: Permanent Mandibular Premolars (ch.17, p.238-243)</li> </ul>             |
| Session 7  | <ul style="list-style-type: none"> <li>• EXAM 1 DA</li> <li>• Lecture 6 H&amp;N: Lymphatic System (ch.10)</li> </ul>  |
| Session 8  | <ul style="list-style-type: none"> <li>• EXAM 1 H&amp;N</li> <li>• Lecture 6 DA: Permanent Canines (ch.16, p.220-227)</li> </ul>  |
| Session 9  | <ul style="list-style-type: none"> <li>• Lecture 7 DA: Incisors (ch.16, p.207-220)</li> <li>• Lecture 7 H&amp;N: Nervous System – CNS, PNS, Cranial Nerves (ch.8, pp.165-175)</li> </ul>                |
| Session 10 | <ul style="list-style-type: none"> <li>• Quiz 6</li> <li>• Lecture 8 H&amp;N: Innervation of the Oral Cavity (ch.8, pp.175-188)</li> <li>• Lecture 8 DA: Normal Occlusion (ch.20, p.281-290)</li> </ul> |
| Session 11 | <ul style="list-style-type: none"> <li>• Quiz 7</li> <li>• Lecture 9 H&amp;N: Vascular System (ch.6)</li> <li>• Lecture 9 DA: Malocclusion (ch.20, p.291-298)</li> </ul>                                |
| Session 12 | <ul style="list-style-type: none"> <li>• Quiz 8</li> <li>• Lecture 10 H&amp;N: Fasciae and Spaces (ch.11)</li> <li>• Lecture 10 DA: Primary Dentition (ch.18)</li> </ul>                                |
| Session 13 | <ul style="list-style-type: none"> <li>• EXAM 2 DA</li> <li>• Lecture 11 H&amp;N: Spread of Dental Infection (ch.12)</li> </ul>   |
| Session 14 | <ul style="list-style-type: none"> <li>• EXAM 2 H&amp;N</li> </ul>  |
| Session 15 | <ul style="list-style-type: none"> <li>• TERM PROJECT WORK DUE</li> </ul>   |