

Course discipline/number/title: DH 1512: Oral Anatomy

A. CATALOG DESCRIPTION

1. Credits: 4
2. Hours/Week: 4
3. Prerequisites (Course discipline/number): BIOL 1217
4. Other requirements: None
5. MnTC Goals (if any): NA

B. COURSE DESCRIPTION: The focus of this course is on the anatomical components and functions of the teeth and tooth supporting structures, soft tissue landmarks of the oral cavity, and dental terminology. Embryology and histology of the maxillofacial area and dental structures are emphasized. The skeletal structure, muscular function, blood supply, and innervations of the maxillofacial region will also be covered.

C. DATE LAST REVISED (Month, year): December, 2023

D. OUTLINE OF MAJOR CONTENT AREAS:

1. Basic cell structure
2. Embryology of the head and neck
3. Tooth development and eruption
4. Enamel
5. Pulp and dentin
6. Cementum and alveolar bone
7. Attachment apparatus
8. Oral mucosa
9. Structures and muscles of the head and neck
10. Temporomandibular joint (TMJ)
11. Blood supply, nerve supply, and lymphatics
12. Osteology of the skull
13. Dentitions
14. Incisors, canines, premolars and molars
15. Dental anomalies
16. Superficial structures of the head and neck
17. Glands of the head and neck
18. Dental charting and occlusion

E. LEARNING OUTCOMES (GENERAL): The student will be able to:

1. Describe the superficial structures of the head and neck.
2. Use appropriate dental terminology.
3. Describe, in detail, the morphology of the permanent dentition.
4. Describe, in detail, the morphology of the primary dentition.
5. Differentiate between the morphology of the primary and permanent dentition.
6. Assess the inter-arch relationship of the teeth and its effect on the health of the supportive structures.
7. Identify tissues that compose the teeth.
8. Recognize how the functions of teeth determine their shape and size.
9. Identify the surfaces, line angles, and point angles of the teeth.
10. Annotate teeth using the Palmer, Universal, and Federation Dentaire Internationale/International Standards Organization notation systems.
11. Outline tooth development.
12. Differentiate among hereditary and congenital dental anomalies.
13. Illustrate how the attachment apparatus is related to the gingival unit.
14. Understand how the clinical experience is related to the theory and lecture portion of dental anatomy.
15. Describe cell structure and function.
16. Describe the action and innervations of the muscles of mastication.
17. Differentiate among the four basic tissues which make up the body.
18. Describe the structures and actions related to the temporomandibular joint.

- E. LEARNING OUTCOMES (GENERAL): The student will be able to: continued. . .
19. Describe the embryonic structures that form the face and the approximate age of formation.
  20. Discuss the embryonic structures involved in the development of the cleft lip and palate.
  21. Describe the properties and components of dentin.
  22. Describe the properties and components of enamel.
  23. Describe the components and age changes of pulp.
  24. Describe the formation of the root.
  25. Describe the development of the cementum, periodontal ligament, and alveolar bone.
  26. Differentiate among the three types of mucosa and their location.
  27. Discuss the three stages of keratinization and the location of each.
  28. Discuss the structure and function of the tongue.
  29. Discuss the structure and function of the salivary glands.
  30. Describe the location and function of the cranial nerves and their sensory/motor innervations.
  31. Demonstrate charting a dentition and classifying occlusion.
- F. LEARNING OUTCOMES (MNTC): NA
- G. METHODS FOR EVALUATION OF STUDENT LEARNING: Methods may include but are not limited to:
1. Quizzes
  2. Comprehensive Final Examination
  3. Class Activities
- H. RCTC CORE OUTCOME(S). This course contributes to meeting the following RCTC Core Outcome(s):  
Communication. Students will communicate appropriately for their respective audiences.
- I. SPECIAL INFORMATION (if any): None