

D A 62A: DENTAL SCIENCES I

Foothill College Course Outline of Record

Heading	Value
Effective Term:	Summer 2021
Units:	2
Hours:	2 lecture, 1 laboratory per week (36 total per quarter)
Degree & Credit Status:	Degree-Applicable Credit Course
Foothill GE:	Non-GE
Transferable:	CSU
Grade Type:	Letter Grade Only
Repeatability:	Not Repeatable

Student Learning Outcomes

- The student must be able to correctly identify permanent and primary teeth using the Palmer and Universal Numbering systems.
- (new) The student will be able to correctly identify the muscles of the head and neck used for mastication. (Active)(previous) The student when given a unidentified tooth must be able to assess the tooth characteristics, determine which tooth it is in the dentition, and justify his/her reasoning in writing.

Description

Discussion of anatomy and morphology of the teeth, the eruption sequence and process; normal occlusion, development and class of malocclusions; anatomy of the skull, arteries and veins, musculature and nervous structures of the head and neck. Intended for students in the Dental Assisting Program; enrollment is limited to students accepted in the program.

Course Objectives

The student will be able to:

- Dental Assisting Theory and Practice Competency
 - label the different tissues of the tooth
 - describe the names given to the teeth in the dentition
 - describe surfaces and anatomical landmarks found on the teeth
 - describe the divisions of the dentition
 - identify the periodontal tissues
 - label the structures of the face and oral cavity
 - describe the eruption process
 - describe the relationships seen in normal occlusion and malocclusion
 - identify the individual bones of the skull and important landmarks on the bones
 - identify the bones of the face and important landmarks on the bones
 - be familiar with identifying characteristics of deciduous versus permanent teeth
 - describe the muscles of the head and neck
 - label the tissues associated with the temporomandibular joint
 - describe the function and movement of the temporomandibular joint
 - identify the salivary glands and describe the function of saliva in the oral cavity
 - describe the surfaces of the tongue and the function of the papillae found on the tongue
 - describe how the blood supply is associated with the oral cavity
 - identify the lymph nodes associated with the oral cavity and describe their functions

- identify the cranial nerves associated with the oral cavity
 - identify the nerves of the skull associated with local anesthesia
- B. Dental Assisting Program Competencies
- Dental Assisting Theory and Practice: dental assisting students must be competent in applying the theory and practice of dental assisting for persons of all ages and abilities
 - Infection Control and Hazardous Waste Management: dental assistants must possess the knowledge and abilities to prevent the transmission of infectious diseases
 - Ethical and Legal Principles: dental assisting students must be competent in understanding ethical/legal principles as applied to the dental office

Course Content

- Tissues of the tooth
 - Enamel
 - Dentin
 - Cementum
 - Pulp
 - Pulp horns
 - Root canal
- Names given to the teeth in the dentition
 - Central incisor
 - Lateral incisor
 - Cuspid
 - Premolars
 - Molars
- Surfaces and anatomical landmarks found on the teeth
 - Surfaces
 - Mesial
 - Distal
 - Facial/buccal/labial
 - Lingual/palatal
 - Occlusal/incisal
 - Anatomical landmarks
 - Cingulum
 - Cusp/cusp of Carabelli
 - Fissure
 - Fossa
 - Groove/developmental groove/supplemental groove
 - Mamelon
 - Marginal ridge
 - Apical foramen
- Divisions of the tooth
 - Anatomical and clinical crown and root
 - CEJ, DCJ and DEJ
 - Occlusal, incisal, cervical, middle, apical thirds
- Line and point angles
- Contacts
- Embrasures
- Curve of Wilson
- Curve of Spee
- Divisions of the dentition
 - Midline
 - Maxillary arch
 - Mandibular arch
 - Quadrants
 - Sextants
- Periodontium
 - Alveolar process
 - Periodontal ligament

3. Gingiva
 - a. Free gingiva
 - b. Attached gingiva
4. Mucosa
5. Free gingival groove
6. Sulcus
- F. Structures of the face and oral cavity
 1. Lips
 - a. Labial commissure
 - b. Vermillion zone
 - c. Lower and upper lip
 2. Vestibule/mucobuccal fold
 3. Mucogingival junction
 4. Labial and lingual frenum
 5. Salivary gland ducts
 - a. Stenson's duct
 - b. Wharton's duct
 6. Sublingual caruncle
 7. Plica fimbriata
 8. Interdental papilla
 9. Uvula, posterior/anterior pillars, soft palate, hard palate, tonsils, oropharynx
 10. Retromolar pad and maxillary tuberosity
 11. Hard palate, rugae and incisive papilla
 12. Floor of the mouth
- G. Eruption process
 1. Exfoliation
 2. Timeline
- H. Malocclusion
 1. Class I, II and III malocclusions
 2. Overjet and overbite
 3. Edge-to-edge bite
 4. Crossbite
- I. Bones of the skull and associated landmarks
 1. Frontal bone
 - a. Orbit
 - b. Frontal sinuses
 2. Parietal bones
 - a. Sagittal suture
 - b. Coronal suture
 - c. Fontanelle
 3. Occipital bone
 - a. Lamboidal suture
 - b. Foramen magnum
 4. Temporal bones
 - a. External auditory meatus
 - b. Mastoid process
 - c. Glenoid fossa
 - d. Styloid process
 5. Sphenoid bone
 - a. Greater and lesser wings
 - b. Sphenoid sinuses
 - c. Sella turcica
 - d. Pterygoid process
 - e. Hamulus
 6. Ethmoid bone
 - a. Ethmoid sinuses
 - b. Medial and superior conchae
 7. Auditory ossicles
 - a. Malleus, incus and stapes
- J. Bones of the face and associated landmarks
 1. Zygomatic bones
 - a. Frontal process
 - b. Temporal process
 - c. Zygomatic arch
 2. Maxillary bones
 - a. Maxillary suture
 - b. Zygomatic process
 - c. Maxillary sinuses
 - d. Alveolar processes
 - e. Maxillary tuberosity
 - f. Infraorbital foramen
 3. Palatine bones
 - a. Greater and lesser palatine foramen
 - b. Incisive foramen
 - c. Medial palatine suture
 4. Nasal bones
 5. Lacrimal bones
 6. Vomer bone
 7. Superior, middle and inferior conchae
 8. Mandible
 - a. Ramus
 - b. Coronoid process
 - c. Sigmoid notch
 - d. Condylod process
 - e. Angle of the mandible
 - f. Oblique ridge
 - g. Mental protuberance
 - h. Mylohyoid ridge
 - i. Mandibular notch
 - j. Mental and mandibular foramen
 - k. Retromolar area
 - l. Body of the mandible
 - m. Genial tubercles
 9. Hyoid bone
- K. Deciduous versus permanent teeth
 1. Number of teeth
 2. Types of deciduous teeth
 3. Anatomical differences
- L. Muscles of the head and neck
 1. Muscles of mastication
 - a. Types
 - b. Function
 - c. Origins and insertions
 2. Muscles of facial expression
 - a. Types
 - b. Function
- M. Temporomandibular joint
 1. Glenoid fossa
 2. Articular eminence
 3. Condylod process
 4. Capsular ligament
 5. Articular space
- N. Temporomandibular joint movements
 1. Hinge action
 2. Gliding action
- O. Salivary glands
 1. Parotid salivary gland
 2. Sublingual salivary gland
 3. Submandibular salivary gland
 4. Minor salivary glands
- P. Tongue
 1. Surfaces of the tongue
 - a. Dorsal

- b. Ventral
- c. Lateral surfaces
- d. Apex
- 2. Taste
 - a. Sweet
 - b. Salty
 - c. Sour
 - d. Bitter
- 3. Papillae
 - a. Fungiform
 - b. Circumvallate
 - c. Filiform
- Q. Blood supply associated with the oral cavity
 - 1. Arteries
 - 2. Veins
 - a. Pterygoid plexis
 - R. Lymph nodes
 - 1. Cervical nodes
 - 2. Preauricular, subauricular, postauricular nodes
 - 3. Occipital nodes
 - S. Canial nerves associated with the oral cavity
 - 1. Trigeminal nerve
 - 2. Facial nerve
 - 3. Glossopharyngeal nerve
 - 4. Hypoglossal nerve
 - T. Nerves of the skull associated with local anesthesia
 - 1. Anterior superior alveolar (ASA) nerve
 - 2. Middle superior alveolar (MSA) nerve
 - 3. Posterior superior alveolar (PSA) nerve
 - 4. Nasopalatine nerve
 - 5. Greater palatine nerve
 - 6. Inferior alveolar and lingual nerves
 - 7. Mental nerve
 - 8. Buccal nerve

Lab Content

- A. Identify parts of the skull and teeth on models.
- B. Anatomy in clay on plastic skull.
- C. Examine extracted teeth.
- D. Examine study models for classification of occlusion.
- E. Label drawings and color study guides.

Special Facilities and/or Equipment

When taught via Foothill Global Access, on-going access to computer with email software and hardware; email address.

Method(s) of Evaluation

- Quizzes (8)
- Midterm (1)
- Final exam (1)
- Tooth anatomy assignment (1)

Method(s) of Instruction

- Lecture
- Discussion
- Laboratory
- Demonstration

Representative Text(s) and Other Materials

Bird, DL, and DS Robinson. *Modern Dental Assisting, 12th ed.*. 2018.

Bird, DL, and DS Robinson. *Student Workbook to Accompany Modern Dental Assisting, 12th ed.*. 2018.

Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments

- A. Read five chapters in the textbook.
- B. Five workbook assignments.
- C. Tooth drawings.
- D. Anatomy in clay.

Discipline(s)

Dental Technology