



Purpose: It is the intention of this Administrative-Master Syllabus to provide a general description of the course, outline the required elements of the course and to lay the foundation for course assessment for the improvement of student learning, as specified by the faculty of Wharton County Junior College, regardless of who teaches the course, the timeframe by which it is instructed, or the instructional method by which the course is delivered. It is not intended to restrict the manner by which an individual faculty member teaches the course but to be an administrative tool to aid in the improvement of instruction.

Course Title – Oralfacial Anatomy, Histology & Embryology

Course Prefix and Number – DHYG1301

Department – Dental Hygiene

Division – Allied Health

Course Type: (check one)

- Academic General Education Course (from ACGM – but not in WCJC Core)
 Academic WCJC Core Course
 WECM course (This course is a Special Topics or Unique Needs Course: Y or N)

Semester Credit Hours # : Lecture hours# : Lab/other hours # 3:3:1

Equated Pay hours for course - 3.5

Course Catalog Description – The histology and embryology of oral tissues, gross anatomy of the head and neck, tooth morphology, and individual tooth identification.

Prerequisites/Corequisites - Offered only to students admitted to Dental Hygiene program.

List Lab/ Other Hours
Lab Hours 1
Clinical Hours
Practicum Hours
Other (list)

Approvals – the contents of this document have been reviewed and are found to be accurate.

Prepared by Garland S. Novosad, DDS	Signature 	Date 8/25/10
Department Head Carol Derkowski, RDH	Signature 	Date 9-10-10
Division Chair Carol Derkowski, RDH	Signature 	Date 9-10-10
Vice President of Instruction or Dean of Vocational Instruction	Signature 	Date 9-28-10



I. Topical Outline – Each offering of this course must include the following topics (be sure to include information regarding lab, practicum, clinical or other non lecture instruction):

- I. Introduction to Head and Neck Anatomy
 - A. Surface Anatomy
 - B. Skeletal System
 - C. Muscular System
 - D. Temporomandibular Joint
 - E. Vascular System
 - F. Glandular Tissue
 - G. Nervous System
 - H. Anatomy of Local Anesthesia
 - 1. Overview of Anatomical Considerations for Local Anesthesia
 - 2. Maxillary Nerve Anesthesia
 - 3. Mandibular Nerve Anesthesia
 - I. Lymphatic System
 - J. Fascia and Spaces
 - K. Spread of Dental Infection
- II. Embryonic development of the face and oral cavity
 - A. Cellular proliferation and differentiation following fertilization
 - B. Formation of 3 primary germ layers
 - C. Establishment of primitive mouth
 - D. Early development of the face
 - E. Later development of the face
 - F. Development of the palate
 - G. Early development of the teeth
- III. Histogenesis of dentin
 - A. Origin and development of odontoblasts
 - B. Formation and growth of dentin
- IV. Microscopic structure of mature dentin
 - A. Physical properties
 - B. Chemical composition
 - C. Structure
 - D. Different types of dentin
 - E. Age and functional changes
- V. Histogenesis of enamel
 - A. Origin, development of ameloblasts
 - B. Formation and growth of enamel
 - C. Hertwig's epithelial root sheath
 - D. Junctional epithelium
- VI. Microscopic structure of enamel
 - A. Physical characteristics
 - B. Chemical composition
 - C. Structure
- VII. Structure of periodontal ligament
 - A. Fibers of periodontal ligament
 - B. Blood, lymph vessels and nerves
 - C. Cementoblasts
 - D. Osteoblasts, osteoclasts
 - E. Function of the periodontal ligament
 - F. Factors affecting width, development of periodontal ligament

- VIII. Structure of Cementum
 - A. Physical characteristics of cementum
 - B. Cementogenesis
 - C. Structure of cementum
 - D. Function of cementum
- IX. Development, structure, retrogressive changes of the pulp
 - A. Formation of the pulp
 - B. Function of the pulp
 - C. Anatomy of the pulp
 - D. Elements present in the pulp
 - E. Regressive changes of the pulp
 - F. Development and importance of the pulp stones and other calcified bodies.
- X. Development of alveolar process
 - A. Structure of the alveolar process
 - B. Physiologic changes in alveolar process
- XI. Oral mucosa
 - A. Masticatory mucosa
 - B. Lining mucosa
 - C. Specialized mucosa
- VII. Gingiva
 - A. Physical characteristics
 - B. Origin, development and function of junctional epithelium
 - C. Gingival sulcus and its clinical importance
 - D. Effect of age on gingivae
 - E. Recession and passive eruption
- VIII. Salivary glands
 - A. Physical characteristics of saliva
 - B. Distribution of salivary glands
 - C. Histology of salivary glands
 - D. Function
- XIV. Eruption and shedding
- XV. Tonsils and sinuses
 - A. Palatine tonsils
 - B. Lingual tonsils
 - C. Pharyngeal tonsils
 - D. Function of tonsils
 - E. Paranasal sinuse

Laboratory Outline

- I. Bones of the Skull
 - A. Bony Prominences
 - B. Bony Openings
 - C. Articulations
- II. Dentitions
 - A. Permanent Anterior Teeth
 - B. Permanent Posterior Teeth
 - C. Primary Dentition

II. Course Learning Outcomes

Course Learning Outcome	Method of Assessment
Identify the histological and embryological development of the orofacial structures.	Written examinations
Locate the major structures of the head and neck.	Written examinations and lab practical
Compare and contrast various teeth including the crown and root morphology.	Written examinations and individual drawings of permanent dentition.

III. Required Text(s), Optional Text(s) and/or Materials to be Supplied by Student.

Illustrated Anatomy of the Head and Neck - 3rd Edition, Fehrenbach, Margaret J & Herring, Susan W. Evolve, Saunders, Elsevier, ISBN 13 978-1-4160-3403-2

Illustrated Dental Embryology, Histology, and Anatomy 2nd Edition, Bath-Balogh, Mary & Fehrenbach, Margaret, Evolve, Saunders, Elsevier, ISBN13 978-1-4160-2499-6

Dental Embryology, Histology, and Anatomy Workbook, Bath-Balogh, Mary & Fehrenbach, Margaret, Evolve, Saunders, Elsevier, ISBN13 978-1-4160-3471-1

IV. Suggested Course Maximum – 28

V. List any specific spatial or physical requirements beyond a typical classroom required to teach the course.

VI. Course Requirements/Grading System – Describe any course specific requirements such as research papers or reading assignments and the generalized grading format for the course

Test Scores from exams	50%
Lab Practical and Assignments	30%
Final Exam	20%

A = 100 - 93

B = 92 - 84

C = 83 - 75

D = 74 - 67

F = 66 & below

Must pass final with a minimum grade of 75 to pass the course.

VII. Curriculum Checklist

- Academic General Education Course (from ACGM – but not in WCJC Core)

Administrative-Master Syllabus
form approved June/2006
revised Nov. 2009

No additional documentation needed

- **Academic WCJC Core Course**

Attach the Core Curriculum Checklist, including the following:

- Basic Intellectual Competencies
- Perspectives
- Exemplary Educational Objectives

- **WECM Courses**

If needed, revise the Program SCANS Matrix & Competencies Checklist.