**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

**Equateed 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.

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

Prepared by Garland S. Novosad, DDS  
Signature: [Signature]

Date: 9/25/10

Department Head Carol Derkowski, RDH  
Signature: [Signature]

Date: 9/10/10

Division Chair Carol Derkowski, RDH  
Signature: [Signature]

Date: 9/16/10

Vice President of Instruction or Dean of Vocational Instruction  
Signature: [Signature]

Date: 9/22/10
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 sinuses

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.


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

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>100 - 93</td>
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<td>B</td>
<td>92 - 84</td>
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<td>C</td>
<td>83 - 75</td>
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<td>D</td>
<td>74 - 67</td>
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<tr>
<td>F</td>
<td>66 &amp; below</td>
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Test Scores from exams 50%
Lab Practical and Assignments 30%
Final Exam 20%

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)
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.