Administrative - Master Syllabus
COVER SHEET

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

Equate Pay hours for course - 3.5

Course Catalog Description – A study of 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
Date 9/10/07

Department Head Leigh Ann Collins
Signature
Date

Division Chair Leigh Ann Collins
Signature
Date 9/20/07

Vice President Ty Pate
Signature
Date 9/26/07
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

| Identify the histological and embryological development of the orofacial structures. |
| Label the major structures of the head and neck. |
| Compare and contrast various teeth including the crown and root morphology. |

### Method of Assessment

| Written examinations |
| Written examinations and lab practical |
| 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

- A = 100 - 93
- B = 92 - 84
- C = 83 - 75
- F = 74 & 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)
  
  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**
  Attach the following:
  • Program SCANS Matrix
  • Course SCANS Competencies Checklist
## SCANS Matrix

**Program:** Dental Hygiene  
**CIP:** 51.0602

### LIST ALL COURSES REQUIRED AND IDENTIFIED COMPETENCIES

<table>
<thead>
<tr>
<th>Competencies</th>
<th>Course Number</th>
<th>Course Title</th>
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<tbody>
<tr>
<td></td>
<td>BIOL 2401</td>
<td>Anatomy &amp; Physiology 1</td>
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<td></td>
<td>BIOL 2402</td>
<td>Anatomy &amp; Physiology 2</td>
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<td></td>
<td>BIOL 2420</td>
<td>Microbiology</td>
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<td></td>
<td>ENGL 1301</td>
<td>English Composition</td>
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<td></td>
<td>SPCH 1315</td>
<td>Fundamentals of Speech (or 1318 or 1321)</td>
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<td></td>
<td>SOCI 1301</td>
<td>Intro to Sociology</td>
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<td></td>
<td>PSYC 2301</td>
<td>Intro to General Psychology</td>
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<td></td>
<td>HUMA</td>
<td>Humanities</td>
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<td></td>
<td>DHYG 1223</td>
<td>Dental Hygiene Practice</td>
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<td>DHYG 1227</td>
<td>Preventive DH Care</td>
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<td>DHYG 1235</td>
<td>Pharmacology for the DH</td>
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<td>DHYG 1261</td>
<td>Clinical DH 1</td>
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<td></td>
<td>DHYG 1271</td>
<td>Service-Learning for Local Need</td>
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<td></td>
<td>DHYG 1301</td>
<td>Oral-Facial Anatomy, Histology, Embryology</td>
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<td>DHYG 1304</td>
<td>Dental Radiology</td>
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<td>DHYG 1307</td>
<td>General &amp; Dental Nutrition</td>
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<td>DHYG 1311</td>
<td>Periodontology</td>
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<td>DHYG 1315</td>
<td>Community Dentistry</td>
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<td>DHYG 1319</td>
<td>Dental Materials</td>
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<td></td>
<td>DHYG 1339</td>
<td>General &amp; Oral Pathology</td>
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<td></td>
<td>DHYG 1431</td>
<td>Pre-clinical DH</td>
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<td></td>
<td>DHYG 2201</td>
<td>Contemporary DH Care 1</td>
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<td></td>
<td>DHYG 2231</td>
<td>Contemporary DH Care 2</td>
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<td></td>
<td>DHYG 2362</td>
<td>Clinical DH 2</td>
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<tr>
<td></td>
<td>DHYG 2363</td>
<td>Clinical DH 3</td>
</tr>
</tbody>
</table>

### COMPETENCY REFERENCES

<p>| 1 Reading | Locate, understand, and interpret written information in prose and in documents such as manuals, graphs, and schedules. |
| 2 Writing | Communicate thoughts, ideas, information, and messages in writing, and create documents such as letters, directions, manuals, reports, graphs, and flow charts. |
| 3 Arithmetic or Mathematics | Perform basic computations and approach practical problems by choosing appropriately from a variety of mathematical techniques. |
| 4 Speaking and Listening | Organize ideas and communicate orally; receive, attend to, interpret, and respond to verbal messages and other cues. |
| 5 Thinking Skills | A worker must think creatively, make decisions, solve problems, visualize, know how to learn, and reason effectively. |
| 6 Personal Qualities | A worker must display responsibility, self-esteem, sociability, self-management, integrity, and honesty. |
| 7 Workplace Competencies | Resources; interpersonal skills; information; systems; and technology. |
| 8 Basic use of computers | |</p>
<table>
<thead>
<tr>
<th>Competency</th>
<th>Method of Assessment</th>
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</thead>
<tbody>
<tr>
<td>1 READING: Locate, understand, and interpret written information in prose and in documents such as manuals, graphs, and schedules.</td>
<td>Written examinations and final examination</td>
</tr>
<tr>
<td>2 WRITING: Communicate thoughts, ideas, information, and messages in writing, and create documents such as letters, directions, manuals, reports, graphs, and flow charts.</td>
<td>N/A</td>
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<tr>
<td>3 ARITHMETIC OR MATHEMATICS: Perform basic computations and approach practical problems by choosing appropriately from a variety of mathematical techniques.</td>
<td>N/A</td>
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<tr>
<td>4 SPEAKING AND LISTENING: Organize ideas and communicate orally; receive, attend to, interpret, and respond to verbal messages and other cues.</td>
<td>Student responds orally in classroom setting to questions about anatomic locations on the skull or to morphologic features of individual teeth.</td>
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<tr>
<td>5 THINKING SKILLS: A worker must think creatively, make decisions, solve problems, visualize, know how to learn, and reason effectively.</td>
<td>Through a laboratory practical, student is able to identify in writing anatomic landmarks on the human skull.</td>
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<td>6 PERSON QUALITIES: A worker must display responsibility, self-esteem, sociability, self-management, integrity, and honesty.</td>
<td>Student demonstrates integrity in test taking, punctuality in attendance and can work with other students in discovery of anatomic details. Written examinations and individual preparation of tooth drawing notebook.</td>
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<tr>
<td>7 WORKPLACE COMPETENCIES: resources; interpersonal skills; information; systems; and technology</td>
<td>N/A</td>
</tr>
<tr>
<td>8 BASIC USE OF COMPUTERS</td>
<td>N/A</td>
</tr>
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