



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 lac

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

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	Method of Assessment
Identify the histological and embryological development of the orofacial structures.	Written examinations
Label 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

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									
Competencies								Course Number	Course Title
1	2	3	4	5	6	7	8		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BIOL 2401	Anatomy & Physiology I
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BIOL 2402	Anatomy & Physiology 2
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	BIOL 2420	Microbiology
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ENGL 1301	English Composition
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	SPCH 1315 (or 1318 or 1321)	Fundamentals of Speech
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	SOCI 1301	Intro to Sociology
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	PSYC 2301	Intro to General Psychology
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	HUMA	Humanities
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	DHYG 1223	Dental Hygiene Practice
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	DHYG 1227	Preventive DH Care
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DHYG 1235	Pharmacology for the DH
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	DHYG 1261	Clinical DH 1
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	DHYG 1271	Service-Learning for Local Need
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DHYG 1301	Oral-Facial Anatomy, Histology, Embryology
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	DHYG 1304	Dental Radiology
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DHYG 1307	General & Dental Nutrition
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DHYG 1311	Periodontology
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	DHYG 1315	Community Dentistry
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	DHYG 1319	Dental Materials
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DHYG 1339	General & Oral Pathology
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	DHYG 1431	Pre-clinical DH
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	DHYG 2201	Contemporary DH Care 1
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	DHYG 2231	Contemporary DH Care 2
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	DHYG 2362	Clinical DH 2
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	DHYG 2363	Clinical DH 3
COMPETENCY REFERENCES									
								8 Basic use of computers	
								7 Workplace Competencies: resources; interpersonal skills; information; systems; and technology.	
								6 Personal Qualities: A worker must display responsibility, self-esteem, sociability, self-management, integrity, and honesty.	
								5 Thinking Skills: A worker must think creatively, make decisions, solve problems, visualize, know how to learn, and reason effectively.	
								4 Speaking and Listening: Organize ideas and communicate orally; receive, attend to, interpret, and respond to verbal messages and other cues.	
								3 Arithmetic or Mathematics: Perform basic computations and approach practical problems by choosing appropriately from a variety of mathematical techniques.	
								2 Writing: Communicate thoughts, ideas, information, and messages in writing, and create documents such as letters, directions, manuals, reports, graphs, and flow charts.	
								1 Reading: Locate, understand, and interpret written information in prose and in documents such as manuals, graphs, and schedules.	



Course Prefix & Number: DHYG 1301 Oral Facial Anatomy, Histology, & Embryology	
SCANS COMPETENCIES FOR THIS COURSE	
Competency	Method of Assessment
1 READING: Locate, understand, and interpret written information in prose and in documents such as manuals, graphs, and schedules.	Written examinations and final examination
2 WRITING: Communicate thoughts, ideas, information, and messages in writing, and create documents such as letters, directions, manuals, reports, graphs, and flow charts.	N/A
3 ARITHMETIC OR MATHEMATICS: Perform basic computations and approach practical problems by choosing appropriately from a variety of mathematical techniques.	N/A
4 SPEAKING AND LISTENING: Organize ideas and communicate orally; receive, attend to, interpret, and respond to verbal messages and other cues.	Student responds orally in classroom setting to questions about anatomic locations on the skull or to morphologic features of individual teeth.
5 THINKING SKILLS: A worker must think creatively, make decisions, solve problems, visualize, know how to learn, and reason effectively.	Through a laboratory practical, student is able to identify in writing anatomic landmarks on the human skull.
6 PERSON QUALITIES: A worker must display responsibility, self-esteem, sociability, self-management, integrity, and honesty.	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..
7 WORKPLACE COMPETENCIES: resources; interpersonal skills; information; systems; and technology	N/A
8 BASIC USE OF COMPUTERS	N/A