



BROWARD COMMUNITY COLLEGE COURSE OUTLINE

LAST REVIEW: 2006-7 **NEXT REVIEW:** 2011-12 **STATUS:** A

(A, I, D)

COURSE TITLE: BASIC ANATOMY AND PHYSIOLOGY

COMMON COURSE NUMBER: DES 0400

CREDIT HOURS:

CONTACT HOUR BREAKDOWN

(per 16 week term)

CLOCK HOURS: 30
(Voc. Course ONLY)

Lecture: 1hour 50 minutes **Lab:** n/a

Clinic: n/a **Other:** n/a

PREREQUISITE(S): DES 0021, DEA 0025

COREQUISITE(S): DEA 0831, DEA 0831L

PRE/COREQUISITE(S):

COURSE DESCRIPTION: A basic anatomy and physiology course designed specifically to meet the needs of dental assisting students. Emphasis will be placed on the human body structure, functions of its components and associated diseases which affect the total care of the dental patient.

UNIT TITLES

1. Anatomic Reference Systems, Cells and Tissues
2. Skeletal System
3. Muscular System
4. Circulatory System
5. Nervous System
6. Respiratory System
7. Digestive System



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8. Urinary System
9. Endocrine System
10. Reproductive System



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ASSESSMENT:

Participation: 5% (Attendance and professional responsibilities)
Quizzes 70%
Final Exam 25%

The student's letter grade for this course will be determined by the departmental percentage scale:

92 - 100 = A

83 - 91 = B

75 - 82 = C

66 - 74 = D

F



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UNITS

Unit 1 Anatomic Reference Systems, Cells and Tissues

General Outcome:

- 1.0 The student shall:** Describe the terms anatomy and physiology as they relate to the anatomic reference system, body structural units, tissues and major body systems.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 1.1.** Define the terms "anatomy and physiology".
- 1.2.** List the four basic anatomic reference systems.
- 1.3.** Trace the structural units of the body from the smallest to the largest unit.
- 1.4.** Discuss the four categories of tissues including examples for each type.
- 1.5.** Identify the basic body directions utilized for the anatomic reference system.
- 1.6.** Identify the major body systems and define the functions for each.
- 1.7.** Identify the body cavities and their two subdivisions.



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Unit 2 Skeletal System

General Outcome:

2.0 The student shall: Describe the skeletal system in terms of divisions, histology, joints, creating, bone destruction and diseases affecting dental treatment.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 2.1** List the functions of the skeletal system
- 2.2** Give the major divisions of the skeletal system.
- 2.3** Explain the histology of bone.
- 2.4** Differentiate between joint/articulation and suture.
- 2.5** Specify the total number of bones in the human skeleton.
- 2.6** Define the following terms:
 - osteoclasts
 - ossification
 - osteoblasts vs. osteocytes
- 2.7** State the conditions/diseases of this system which would affect dental treatment.



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Unit 3 Muscular System

General Outcome:

3.0 The student shall: Describe the function of the muscular system as it relates to functions, types and definitions.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 3.1. Give the functions of the muscular system.
- 3.2. Specify the three types of muscle and give an example of each.
- 3.3. Discuss the three ways muscle attachment occurs.
- 3.4. Explain the process of muscular contraction.
- 3.5. State the criteria by which muscles are named.
- 3.6. Differentiate "origin vs. insertion".
- 3.7. Differentiate isometric and isotonic contractions.
- 3.8. Define:peristalsis

trismus

glycogen

lactic acid



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Unit 4 Circulatory System

General Outcome:

4.0 The student shall: State the functions and mechanisms of the circulatory system.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 4.1** List the components and functions of the circulatory system -- pulmonary versus systemic circulation.
- 4.2** Describe the action of the heart and trace the flow of blood through its parts.
- 4.3** Identify the layers of the heart muscle.
- 4.4** Discuss the clotting mechanism.
- 4.5** Discuss the blood vessels: contrast arteries vs. veins.
- 4.6** Explain the functions of the lymphatic system, its components and related organs.
- 4.7** State the conditions/diseases of this system that would affect dental treatment.
 - factors affecting blood pressure
 - rheumatic fever
 - heart conditions/surgery
 - phlebitis



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Unit 5 Nervous System

General Outcome:

5.0 The student shall: State the divisions and functions of the nervous system.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 5.1** List the functions of the nervous system.
- 5.2** Discuss the histology of nervous tissue: neurologic vs. neurons
- 5.3** Discuss the divisions of the nervous system.
 - Central Nervous System
 - Peripheral Nervous System
 - cranial nerves (12)
 - spinal nerves (31)
 - autonomic nervous system
 - sympathetic vs. parasympathetic
- 5.4** Differentiate efferent and afferent nerves.
- 5.5** Define a "synapse".
- 5.6** Label the parts of a neuron.
- 5.7** Identify the bodies built-in protection of the brain and the spinal cord.
- 5.8** Name the diseases/conditions which affect the dental treatment.



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Unit 6 Respiratory System

General Outcome:

6.0 The student shall: Describe the respiratory system relating to functions, sinuses and conditions affecting dental treatment.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 6.1** List the components of the respiratory system and their functions.
- 6.2** Describe the phenomena of respiration.
- 6.3** Explain the two sites of respiration.
- 6.4** Identify and locate the paranasal sinuses.
- 6.5** Identify the conditions/diseases that would affect the dental treatment.



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Unit 7 Digestive System

General Outcome:

7.0 The student shall: Describe the digestive system and the pathway from digestion to elimination.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 7.1** List the components of the digestive system and their functions.
- 7.2** Trace the path of food from consumption to elimination.
- 7.3** Describe the action of accessory structures; specifically the salivary glands in the process of digestion.
- 7.4** Define the purpose of the peristaltic waves.
- 7.5** Identify the diseases/conditions of this system that would affect the dental treatment.



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Unit 8 Urinary System

General Outcome:

8.0 The student shall: State the purpose and functions of the excretory system.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 8.1** List the components of the system and their functions.
- 8.2** List the components of the excretory system.
- 8.3** Discuss the characteristics and the functions of the skin.
- 8.4** Identify the conditions/diseases that would affect the dental treatment.



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Unit 9 Endocrine System

General Outcome:

9.0 The student shall: Describe the endocrine system and its physiological effect on the body.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 9.1** List the functions of the endocrine system as a whole.
- 9.2** Describe "hormones" and their action on the body organs.
- 9.3** List the six components of the endocrine system, location and major function/s and their target organs.
- 9.4** Identify the location of the components of the endocrine system on a drawing.
- 9.5** Match each endocrine component with:
 - the disorder of each
 - the secretion of each
- 9.6** Identify the diseases/conditions of the system that would affect dental treatment.



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Unit 10 Reproductive System

General Outcome:

10.0 The student shall: Identify the functions of the male and female reproductive system and possible effect on dental treatment.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 10.1** Identify the primary function of the reproductive system.
- 10.2** Identify the components of the male reproductive system.
- 10.3** State the components of the female reproductive system.
- 10.4** State the reproductive disorders and identify those that would affect the dental health of mother and the fetus.