

EASTERN ARIZONA COLLEGE

Human Anatomy and Physiology II

Course Design
2018-2019

Course Information

Division Science
Course Number BIO 202 (SUN# BIO 2202)
Title Human Anatomy and Physiology II
Credits 4
Developed by Tammy Gillespie
Lecture/Lab Ratio 3 Lecture/3 Lab

Transfer Status

ASU	NAU	UA
BIO 202, Natural Science – General (SG)	BIO 202 --and-- BIO 202L	PSIO 202

Activity Course No
CIP Code 26.0400
Assessment Mode Final Exam (120 Questions/120 Points)
Semester Taught Fall and Spring
GE Category Lab Science
Separate Lab Yes
Awareness Course No
Intensive Writing Course No
Diversity and Inclusion Course No

Prerequisites

BIO 201

Educational Value

This course is the second of a two-semester sequence in which human anatomy and physiology are studied using a body systems approach, with emphasis on the interrelationships between form and function at the gross and microscopic levels of organization. Human Anatomy and Physiology II includes the endocrine system through reproduction and growth and development.

Description

Continuation of structure and function of the human body. Topics include the endocrine, circulatory, respiratory, digestive, urinary, and reproductive systems.

Supplies

None

Competencies and Performance Standards

1. Identify anatomical features of the endocrine system

Learning objectives

What you will learn as you master the competency:

- a. Identify the major endocrine glands.
- b. List the major hormones.
- c. Identify features of the pancreas, pituitary, thyroid, and adrenal glands.
- d. Identify specific tissue hormones.

Performance Standards

You will demonstrate your competence:

- through class discussion
- on an objective test
- on a lab practical and lab quizzes

Your performance will be successful when:

- learner lists the major endocrine organs
- learner lists the major hormones produced by the major endocrine organs
- learner identifies features of the pituitary gland
- learner identifies features of the pancreas
- learner identifies features of the thyroid gland
- learner identifies features of the adrenal gland
- learner identifies tissue hormones

2. Identify anatomical features of the cardiovascular system

Learning objectives

What you will learn as you master the competency:

- a. Identify the cardiac anatomy.
- b. Identify major blood vessels entering and exiting the heart.
- c. Identify the anatomy of arteries, arterioles, veins, venules, and capillaries.
- d. Identify special circulations (portal and fetal).
- e. Identify components of the lymphatic system.
- f. Identify features of the lymph nodes.
- g. Identify fluid components of blood.
- h. Identify cellular components of blood.
- i. Identify erythrocyte features.
- j. Identify the five types of leukocytes and their features.
- k. Identify thrombocyte features.

Performance Standards

You will demonstrate your competence:

- through class discussion
- on an objective test
- on a lab practical and lab quizzes

Your performance will be successful when:

- learner identifies the cardiac anatomy
- learner identifies major blood vessels entering and exiting the heart
- learner identifies the anatomy of arteries, arterioles, veins, venules, and capillaries
- learner identifies special circulation (portal and fetal)
- learner identifies components of the lymphatic system
- learner identifies features of lymph nodes
- learner identifies fluid components of blood
- learner identifies cellular components of blood
- learner identifies erythrocyte features
- learner identifies the five types of leukocytes and their features
- learner identifies thrombocyte features

3. Identify anatomical features of the immune system

Learning objectives

What you will learn as you master the competency:

- a. Identify components of nonspecific defense.
- b. Identify features of antigens and antibodies.
- c. Identify components of specific defense.

Performance Standards

Competence will be demonstrated:

- through class discussion
- on an objective test
- on a lab practical and lab quizzes

Criteria - Performance will be satisfactory when:

- learner identifies components of nonspecific defense
- learner identifies features of antigens and antibodies
- learner identifies components of specific defense

4. Identify anatomical features of the digestive system

Learning objectives

What you will learn as you master the competency:

- a. Identify organs of the GI tract.
- b. Identify accessory digestive organs.

Performance Standards

You will demonstrate your competence:

- through class discussion
- on an objective test
- on a lab practical and lab quizzes

Your performance will be successful when:

- learner identifies organs of the GI tract
- learner identifies accessory digestive organs

5. Identify anatomical features of the respiratory system

Learning objectives

What you will learn as you master the competency:

- a. Identify the anatomy of the upper respiratory tract.
- b. Identify the anatomy of the lower respiratory tract.
- c. Identify lung volumes and capacities.

Performance Standards

You will demonstrate your competence:

- through class discussion
- on an objective test
- on a lab practical and lab quizzes

Your performance will be successful when:

- learner identifies the anatomy of the upper respiratory tract
- learner identifies the anatomy of the lower respiratory tract
- learner identifies lung volumes and capacities

6. Identify anatomical features of the urinary system

Learning objectives

What you will learn as you master the competency:

- a. Identify urinary system organs.
- b. Identify nephron structure.

Performance Standards

You will demonstrate your competence:

- through class discussion
- on an objective test
- on a lab practical and lab quizzes

Criteria - Performance will be satisfactory when:

- learner identifies urinary system organs
- learner identifies nephron structure

7. Identify anatomical features of the reproductive system

Learning objectives

What you will learn as you master the competency:

- a. Identify male reproductive anatomy.
- b. Identify female reproductive anatomy.

Performance Standards

You will demonstrate your competence:

- o through class discussion
- o on an objective test
- o on a lab practical and lab quizzes

Your performance will be successful when:

- o learner identifies male reproductive anatomy
- o learner identifies female reproductive anatomy

8. Describe functions of the endocrine system

Learning objectives

What you will learn as you master the competency:

- a. Identify mechanisms of hormone action.
- b. List the functions of the pituitary hormones.
- c. List the functions of the hypothalamic hormones.
- d. List the functions of the thyroid hormones.
- e. Identify the functions of the parathyroid hormones.
- f. Identify the functions of the adrenal hormones.
- g. Identify the functions of the pancreatic hormones.
- h. Identify the functions of the thymus and pineal glands.

Performance Standards

You will demonstrate your competence:

- o through class discussion
- o on an objective test
- o on a lab practical and lab quizzes

Your performance will be successful when:

- o learner identifies mechanisms of hormone action
- o learner lists the functions of the pituitary hormones
- o learner lists the functions of the hypothalamus hormones
- o learner lists the functions of the thyroid hormones
- o learner identifies the function of the parathyroid hormones
- o learner identifies the functions of the adrenal hormones
- o learner identifies the functions of the pancreatic hormones
- o learner identifies the functions of the thymus and pineal glands

9. Describe functions of the cardiovascular system

Learning objectives

What you will learn as you master the competency:

- a. Identify components of hematopoiesis.
- b. Identify components of hemostasis.
- c. Identify disorders of hemostasis.
- d. Identify components of ABO and Rh blood groups.
- e. Identify the pathway of blood flow.
- f. Identify the features of the cardiac cycle and conduction.
- g. Identify components which influence cardiac output.
- h. Identify components which influence blood flow (pressure).
- i. Identify components which influence capillary exchange.
- j. Identify functions of lymph nodes, organs, and tissues.

Performance Standards

You will demonstrate your competence:

- o through class discussion
- o on an objective test
- o on a lab practical and lab quizzes

Your performance will be successful when:

- o learner identifies components of hematopoiesis
- o learner identifies components of hemostasis
- o learner identifies disorders of hemostasis
- o learner identifies components of ABO and Rh blood groups
- o learner identifies the pathway of blood flow
- o learner identifies the features of the cardiac cycle and conduction
- o learner identifies components which influence cardiac output
- o learner identifies components which influence blood flow (pressure)
- o learner identifies components which influence capillary exchange
- o learner identifies functions of lymph nodes, organs, and tissues

10. Describe functions of the respiratory system

Learning objectives

What you will learn as you master the competency:

- a. Identify mechanics of external respiration.
- b. Identify mechanics of internal respiration.
- c. Identify factors influencing respiratory rate and depth.
- d. Identify respiratory disorders.

Performance Standards

You will demonstrate your competence:

- o through class discussion
- o on an objective test

- on a lab practical and lab quizzes

Your performance will be successful when:

- learner identifies mechanics of external respiration
- learner identifies mechanics of internal respiration
- learner identifies factors influencing respiratory rate and depth
- learner identifies respiratory disorders

11. Describe functions of the immune system

Learning objectives

What you will learn as you master the competency:

- Identify features of the first and second lines of defense.
- Identify components of humoral immunity.
- Identify components of cell-mediated immunity.
- Identify features of immunity disorders.
- Identify features of organ transplantation.

Performance Standards

You will demonstrate your competence:

- through class discussion
- on an objective test
- on a lab practical and lab quizzes

Your performance will be successful when:

- learner identifies features the first and second lines of defense
- learner identifies components of humoral immunity
- learner identifies components of cell-mediated immunity
- learner identifies features of immunity disorders

12. Describe functions of the digestive system

Learning objectives

What you will learn as you master the competency:

- Identify digestive activities occurring in the mouth, pharynx, and esophagus.
- Identify digestive activities occurring in the stomach.
- Identify digestive activities occurring in the small intestines.
- Identify digestive activities occurring in the large intestines.
- Identify neural and endocrine influences on digestion.

Performance Standards

You will demonstrate your competence:

- through class discussion
- on an objective test
- on a lab practical and lab quizzes

Your performance will be successful when:

- learner identifies digestive activities occurring in the mouth, pharynx, and esophagus

- learner identifies digestive activities occurring in the stomach
- learner identifies digestive activities occurring in the small intestines
- learner identifies digestive functions occurring in the large intestines
- learner identifies neural and endocrine influences on digestion

13. Describe functions of the urinary system

Learning objectives

What you will learn as you master the competency:

- a. Identify filtration, reabsorption, and secretion in urine formation.
- b. Identify factors influencing urine formation, concentration, and constituency.
- c. Identify factors influencing fluid and electrolyte balance.
- d. Identify factors influencing acid-base balancing.

Performance Standards

You will demonstrate your competence:

- through class discussion
- on an objective test
- on a lab practical and lab quizzes

Your performance will be successful when:

- learner identifies filtration, reabsorption, and secretion in urine formation
- learner identifies factors influencing urine formation, concentration, and constituency
- learner identifies factors influencing fluid and electrolyte balance
- learner identifies factors influencing acid-base balancing

14. Describe functions of the reproductive system

Learning objectives

What you will learn as you master the competency:

- a. Identify features of spermatogenesis.
- b. Identify features of testosterone production.
- c. Identify features of ejaculation.
- d. Identify features of oogenesis.
- e. Identify features of ovulation and menstruation.
- f. Identify features of estrogen and progesterone production.
- g. Identify the process of fertilization.
- h. Identify the process of embryonic and fetal development.
- i. Identify effects of pregnancy of the mother.
- j. Identify the processes of labor.

Performance Standards

You will demonstrate your competence:

- through class discussion
- on an objective test
- on a lab practical and lab quizzes

Your performance will be successful when:

- learner identifies features of spermatogenesis
- learner identifies features of testosterone production
- learner identifies features of ejaculation
- learner identifies features of oogenesis
- learner identifies features of estrogen and progesterone production
- learner identifies the process of fertilization
- learner identifies the process of embryonic and fetal development
- learner identifies effects of pregnancy of the mother
- learner identifies the processes of labor

15. Articulate the functions of the various body systems

Learning objectives

What you will learn as you master the competency:

- a. Identify how one body system affects (influences) other body systems

Performance Standards

You will demonstrate your competence:

- through class discussion
- on an objective test

Your performance will be successful when:

- learner identifies how one body system affects (influences) other body systems

Types of Instruction

Classroom Presentation

On Campus Laboratory

Grading Information

Grading Rationale

Laboratory Work – 30%

Lecture Tests – 60%

Final Exam – 10%

Grading Scale

A 90-100%

B 80-89%

C 70-79%

D 60-69%

F Below 60%