

Anoka Technical College

BIOL 2200: Anatomy & Physiology II

A. COURSE DESCRIPTION

Credits: 4

Lecture Hours/Week: 3

Lab Hours/Week: 2

OJT Hours/Week: *.*

Prerequisites:

This course requires the following prerequisite

BIOL 2100 - Anatomy & Physiology I

Corequisites: SURG 1003

MnTC Goals: Goal 02 - Critical Thinking, Goal 03 - Natural Science

Anatomy & Physiology II is a course that builds on the foundation of Anatomy & Physiology I to prepare students for advanced coursework required for Health Care Programs. This course continues to examine the human body from an anatomical and physiological examination of the following systems: digestive, urinary, respiratory, circulatory, immune, and reproduction. Students will gain a comprehensive understanding of human gross anatomy by participating in animal dissection, lab experiments, and computer-assisted instruction, while examining the interrelationships of the physiology that drives the human body. (Prerequisites: BIOL2100) (MN Transfer Goals 2, 3) (3 Credits Lecture/1 Credit Lab)

B. COURSE EFFECTIVE DATES: 03/09/2003 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Heart and circulatory system anatomy and physiology
2. Respiratory system anatomy and physiology
3. Immune and lymphatic system anatomy and physiology
4. Digestive system anatomy and physiology
5. Urinary system anatomy and physiology
6. Reproductive system anatomy and physiology

D. LEARNING OUTCOMES (General)

1. Identify the structural features of the heart and their related function and interrelationship with the vascular system.
2. Diagram the structure and describe the physiologic processes associated with the vascular system.
3. Articulate the function of the lungs with the physiologic mechanisms that control respiration.
4. Differentiate the various blood cell structures and functions, specifically focusing on triggers of coagulation, and blood clots are dissolution.
5. Understand the organization and responsibilities of the lymphatic system in regards to our immunity.
6. Describe innate and adaptive immunity and apply immune physiology to our defenses against pathogens.
7. Identify the structures of the digestive system and explain how food is broken down into components to generate or metabolize energy.
8. Identify the structures of the kidney in relationship to the urinary system, and describe how kidney nephrons function to maintain homeostasis.
9. Differentiate between the structures and functions specific to both the male and female reproductive systems.
10. Describe the process of fertilization through birth.
11. Hypothesize possible causes of diseases using appropriate anatomy and physiology.
12. Perform lab dissections and experiments in groups.
13. Communicate experimental data and clinical findings, both orally and in writing.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

Goal 02 - Critical Thinking

1. Gather factual information and apply it to a given problem in a manner that is relevant, clear, comprehensive, and conscious of possible bias in the information selected.
2. Imagine and seek out a variety of possible goals, assumptions, interpretations, or perspectives which can give alternative meanings or solutions to given situations or problems.
3. Analyze the logical connections among the facts, goals, and implicit assumptions relevant to a problem or claim; generate and evaluate implications that follow from them.
4. Recognize and articulate the value assumptions which underlie and affect decisions, interpretations, analyses, and evaluations made by ourselves and others.

Goal 03 - Natural Science

1. Demonstrate understanding of scientific theories.
2. Formulate and test hypotheses by performing laboratory, simulation, or field experiments in at least two of the natural science disciplines. One of these experimental components should develop, in greater depth, students' laboratory experience in the collection of data, its statistical and graphical analysis, and an appreciation of its sources of error and uncertainty.
3. Communicate their experimental findings, analyses, and interpretations both orally and in writing.
4. Evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted