

**SEWARD COUNTY COMMUNITY COLLEGE
COURSE SYLLABUS**

I. TITLE OF COURSE: BI2115 - Anatomy and Physiology

**II. COURSE DESCRIPTION: 0 or 5 credit hours
2 credit hours of lecture and 3 credit hours of lab per week.**

5 credit hours. 3 hours of lecture and 4 hours of lab per week. This course presents essential principles of human anatomy and physiology, including basic chemistry, cell and tissue studies, and an overview of all the body systems. For each unit of credit, a minimum of three hours per week with one of the hours for class and two hours for studying/preparation outside of class is expected.

EduKan course number: BI278

Pre-requisite:
Refer to placement matrix.

III. PROGRAM AND/OR DEPARTMENT MISSION STATEMENT:

The Science Program at Seward County Community College provides opportunities to improve and enhance each student's understanding and comprehension of the natural world through a variety of courses and experience to develop a scientifically literate citizen.

IV. TEXTBOOK AND MATERIALS:

1. Marieb & Hoehn, Human Anatomy & Physiology, 9th edition, Pearson 2013. Required
2. A Brief Atlas of the Human Body, 2nd edition, Pearson, 2007. (Additional material, not required)
3. Interactive Physiology CD-ROM, Pearson 2008. (Additional material, not required)

V. SCCC OUTCOMES:

- 1: Read with comprehension, be critical of what they read, and apply knowledge gained to real life
- 2: Communicate ideas clearly and proficiently in writing, appropriately adjusting content and arrangement for varying audiences, purposes, and situations.
- 5: Demonstrate the ability to think critically by gathering facts, generating insights, analyzing data, and evaluating information
- 6: Exhibit skills in information and technological literacy
- 9: Exhibit workplace skills that include respect for others, teamwork competence,

attendance/punctuality, decision making, conflict resolution, truthfulness/honesty, positive attitude, judgment, and responsibility

VI. COURSE OUTCOMES:

1. Use the language and concepts of science appropriately and effectively in written and oral communication.
2. Use the methodologies and models of science to select, define, solve and evaluate problems independently and collaboratively.
3. Make scientifically based decisions and solve problems drawing on concepts and experiences from relevant areas.
4. Evaluate critically the evidence, interpretations, results and solutions related to the course content within a real life context.
5. Demonstrate research skills necessary to access needed data to support scientific inquiry.
6. Understand the scope of studies in anatomy and physiology and understand descriptive anatomical and directional terminology.
7. Explain the basic concept of homeostasis and how homeostatic mechanisms apply to body systems.
8. Identify cellular structures and basic tissue types and explain their respective functions.
9. Identify and describe the major gross and microscopic anatomical components of the integumentary system and describe the functions of the system.
10. Identify and describe the major gross and microscopic anatomical components of the skeletal system and explain their functional roles in osteogenesis, repair, and body movement.
11. Identify and describe the major gross and anatomical components of the muscular system and explain their functional roles in body movement, maintenance of posture, and heat production.
12. Identify and describe the major gross and anatomical components of the nervous system and explain their functional roles in communication, control, and integration.
13. Identify and describe the major gross and anatomical components of the eye and ear, and explain their functional roles in vision, hearing, and equilibrium.
14. Identify and locate the receptors responsible for olfaction and gustation, and briefly describe the physiology of taste and smell.
15. Identify and describe the major gross and anatomical components of the endocrine system and explain the functional roles of their respective hormones in communication, control, and integration.
16. Identify and describe the major gross and anatomical components of the cardiovascular system and explain their functional roles in transport and hemodynamics.
17. Identify and describe the major gross and anatomical components of the lymphatic system and explain their functional roles in fluid dynamics and immunity.
18. Identify and describe the major gross and anatomical components of the respiratory system and explain their functional roles in breathing/ventilation and in the process of internal and external respiration.
19. Identify and describe the major gross and anatomical components of the digestive system and explain their functional roles in digestion, absorption, excretion, and elimination.
20. Explain the functional relationship between cellular-, tissue-, and organ-level metabolism, and the mechanisms by which metabolic rate is regulated in the body.

21. Identify and describe the major gross and anatomical components of the urinary system and explain their functional roles.
22. Identify and explain the physiology of the homeostatic mechanisms that control fluid/electrolyte and acid/base balance.
23. Identify and describe the major gross and anatomical components of the reproductive system and explain their functional roles in reproduction and inheritance.

VII. COURSE OUTLINE:

1. Body Plan and Organization
2. Homeostasis
3. Chemistry and Cell Biology
4. Histology
5. Integumentary System
6. Skeletal System
7. Muscular System
8. Nervous System
9. Special Senses
10. Endocrine System
11. Cardiovascular System
12. Lymphatic System
13. Immunity
14. Respiratory System
15. Digestive System
16. Metabolism
17. Urinary System
18. Fluid/Electrolyte and Acid/Base Balance
19. Reproductive System

VIII. INSTRUCTIONAL METHODS:

Lectures and laboratory exercises will be the primary means of class presentation. Prepared slides, models, charts, computer programs, video, medical equipment, and medical techniques will be used. Class exams and lab practical exams will be given at the appropriate times along with an article assignment.

IX. INSTRUCTIONAL AND RESOURCE MATERIALS:

1. Commercially prepared slides
2. Charts
3. Models
4. Video
5. Computer projected images
6. Skeleton

7. Journal databases
8. Computer Software

X. METHODS OF ASSESSMENT:

Methods of assessing the general course outcomes and the specific course competencies include section exams, a comprehensive final exam, lab technique, lab quizzes, and article assignments.

SCCC Outcome #1 will be assessed and measured by multiple choice questions; essay questions that allow the student to illustrate knowledge, depth of understanding, and creativity; problem-based learning for assessment of thinking and decision-making skills, values, and attitudes. This could include critical analysis and web-based projects for assessment of acquiring, processing, and evaluating information.

SCCC Outcome #2 will be assessed and measured by an individually written paper.

SCCC Outcome #5 will be assessed and measured by quizzes, exams, and application to case scenarios.

SCCC Outcome #6 will be assessed and measured by use of computer simulations, internet research for the written paper assignment, and use of technological instruments in the student laboratory.

SCCC Outcome #9 will be assessed and measured by laboratory procedures demonstrating the use of lab skills; observation of how students interact and assist one another in lab; and long-term investigations to assess inquiry and decision-making skills, experimental design, communication and understanding of the scientific process.

XI. ADA STATEMENT:

Under the Americans with Disabilities Act, Seward County Community College will make reasonable accommodations for students with documented disabilities. If you need support or assistance because of a disability, you may be eligible for academic accommodations. Students should identify themselves to the Dean of Students at 620-417-1106 or going to the Student Success Center in the Hobble Academic building, room 149 A.

XII. CORE OUTCOMES PROJECT:

The learning outcomes and competencies detailed in this course outline or syllabus meet, or exceed the learning outcomes and competencies specified by the Kansas Core Outcomes Groups project for this course as approved by the Kansas Board of Regents

KRSN: BIO2020

Syllabus Reviewed: 10/28/2021

