SEWARD COUNTY COMMUNITY COLLEGE
COURSE SYLLABUS

I. TITLE OF COURSE: BI2314 - Human Physiology

II. COURSE DESCRIPTION: 0 or 4 credit hours
3 credit hours of lecture and 1 credit hours of lab per week.

Designed to fulfill the requirements for two year and/or four year degrees pursued by students entering the fields of medical related sciences, physical education, and biological sciences. System functions of the human body and related diseases (pathophysiology) will be covered. 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.

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, 10th edition, Pearson 2013. Required
2. Marieb & Mitchell, Human Anatomy & Physiology Laboratory Manual, 10th edition, Pearson 2012.Required
3. A Brief Atlas of the Human Body, 2nd edition, Pearson, 2007. (Additional material, not required)
4. 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:

Expected learning outcomes of this course are in alignment with the learning objectives established by the Statewide Core Competencies.

1. Broaden his/her educational background by integrating information and procedures utilized in understanding the physiology of the human body.
2. Gain an understanding of the interrelatedness of the body's systems and the homeostatic mechanisms in which the body functions.
3. Understand and appreciate scientific methods and information through application in laboratory experiences and discussions.
4. Recognize the dependence of human physiology and the mental and physical state.
5. Appreciate the interaction between the body's systems and the organisms that are associated.
6. Increased awareness of historical understanding of human physiology will develop a better future understanding.
7. Upon successful completion of the course work students will be able to define, explain, and identify the following information and concepts dealing with the function of the human body.
8. Chemical composition, cell structure, genetic control, enzymes, cell respiration, metabolism, membrane transport and potential.
9. Electrical activity, synaptic transmission, transmission within the CNS, transmission within the ANS, five senses, diseases.
10. Classification of hormones, regulation of hormones, interactions of hormones, mechanisms of hormone action, individual glands, diseases.
11. Contractions, regulation, theories and relationships of filaments, slow & fast fibers, fatigue, diseases.
12. Blood composition, clotting cascade, acid-base balance, heart electrical activity, output, flow and volume, pressure, lymph composition, lymphocyte functions, diseases (affecting & caused by).
13. Gas exchange, pressures, ventilation, regulation, transportation, acid-base balance, diseases.
14. Filtration, absorption, plasma clearance, chemical balances, secretions, contractions, motility, diseases.
15. Meiosis, embryo development, hormonal control, genetic information, diseases.
16. Laboratory work will enhance the concepts presented in lecture through computer based modules, hand-on experimentation including EKG analysis and clinical tests, and a variety of other methods to allow the student to apply what they have learned.

VII. COURSE OUTLINE:

1. Introduction
2. Nervous System
3. Endocrine System
4. Muscle System

5. Cardiovascular & Immune Systems
6. Respiratory System
7. Urinary & Digestive Systems
8. Reproductive System

VIII. INSTRUCTIONAL METHODS:

Lectures and laboratory exercises will be the prime 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. Student prepared slides
3. Charts
4. Models
5. Microscopes
6. Video
7. 35 mm transparencies (or computer projected images)
8. EKG, Blood pressure cuffs, etc.

X. METHODS OF ASSESSMENT:

Methods of assessing the general course outcomes and the specific course competencies include section exams, comprehensive final exam, lab technique, final lab exam, article assignment, and individual effort.
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 evaluation of information.
SCCC Outcome #2 will be assessed and measured by a written paper by each student.
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 for 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: BIO2030

Syllabus Reviewed: 5/19/2021