Warren County Community College

BIO 263 Anatomy & Physiology II
Course Master Syllabus

Course Information

Catalog Description: As a continuation of BIO 262 – Anatomy & Physiology I, this course emphasizes the senses, autonomic nervous, endocrine, cardiovascular, lymphatic, digestive, respiratory, urinary, and reproductive systems. Laboratory exercises are designed to reinforce content. This course is a requirement for nursing intent majors and recommended for science majors.

Prerequisite(s): BIO 262 – Anatomy & Physiology I

Corequisite(s): High School biology and/or chemistry or equivalent highly recommended
ENG 140 – English Composition I highly recommended

Credits: 4

Hours: 3 lecture and 3 lab

Required Text(s):

- MindTap Basic Health Science for Rizzo's *Fundamentals of Anatomy and Physiology*, 4th edition
- eBook: Update: *Anatomy & Physiology Laboratory Manual*

Supplemental Materials:

Instructor Information

Instructor's Name:

Contact Information:

Office Hours:

Program Goals

1. Apply the scientific method in experimentation and data analysis.

2. Analyze complex scientific problems, perform calculations, and evaluate solutions.
3. Communicate scientific information clearly through both oral and written communication.
4. Critically analyze problems through gathering data from multiple sources and apply findings to new scenarios.
5. Describe fundamental biological, chemical, and physical principles, including, but not limited to, molecular and cellular functions, anatomy and physiological function, inheritance, and both organic and inorganic chemical reactions.
6. Interpret results from experimentation that utilizes modern laboratory techniques and instrumentation.

Class Core Competencies

The following core competencies are embedded in this curriculum:

- Communicate effectively in both speech and writing.
- Apply appropriate mathematical and statistical concepts and operations to interpret data to solve problems.
- Use scientific method of inquiry, through the acquisition of scientific knowledge.
- Use computer systems or other appropriate forms of technology to achieve educational and personal goals.
- Understand ethical issues and situations.
- Address an information need by locating, evaluating, and effectively using information.

Class Learning Assessment

Student Learning Outcomes	Suggested Means of Assessment
Utilize the proper anatomical and directional terms addressing body structures, body systems and their locations	Tests, quizzes, assessment tasks, pre and post-tests
Identify structures of (applicable body systems).	Tests, quizzes, assessment tasks, practical exams

Student Learning Outcomes	Suggested Means of Assessment
Correlate structure and function relationships within a particular system. Integrate knowledge of anatomical and physiological functions of the entire body.	Tests, quizzes, assessment tasks, exams
Explain the function of the organs within a particular system and their importance to that system's function and to maintaining homeostasis.	Tests, quizzes, class discussions, critical thinking rubrics, pre and post-tests
Differentiate among various histological body tissue samples.	Tests, quizzes, lab reports
Recognize the importance of lab safety and apply the scientific method when conducting lab experiments	Hands-on tasks, practical exams, performance assessment activities, lab reports
Demonstrate effective oral/written communication skills to analyze lab results	Participation in class discussions, essay questions, exams, lab reports
Exhibit professional behaviors and follow high ethical standards	Team group lab work for scientific reporting

Grading System

Letter Grade	Percentage Range
A	90 to 100 percent
B Plus (B+)	87 to 89.9 percent
B	80 to 86.9 percent
C Plus (C+)	77 to 79.9 percent
C	70 to 76.9 percent
D	60 to 69.9 percent
F	Below 60 percent

College Information

Disability Services

Disability Services Webpage

Statement and Policy on Cheating, Plagiarism, and Academic Conduct

Academic Conduct Policy (Policy 304) [PDF]

Students are required to perform all the work specified by the instructor and are responsible for the content and integrity of all academic work submitted. A violation of academic integrity will occur if a student: (1) knowingly represents work of others as one's own, (2) uses or obtains unauthorized assistance in any academic work, (3) gives fraudulent assistance to another student, or (4) furnishes false information or other misuse of college documents.

Unauthorized use of Artificial Intelligence (AI) is prohibited unless the instructor explicitly permits it in the syllabus or assignments. If tools such as ChatGPT are permitted by an instructor to be used for an assignment, they should be used with caution and with proper citation. In all such cases, you may only use the specific tools identified as acceptable and you must adhere to the College's standards for attribution, validation, and transparency.

In cases of suspected violation of academic integrity, the incident is to be reported to the Office of Academics. A student found guilty of violating the rule of academic integrity by the Vice President of Academics will be considered to have failed in personal obligation to the College; such failure will be subject to disciplinary action by the College. Unless otherwise notified, the instructor will allow students who are pending disciplinary action to attend class.

Tutoring and Testing at the Instructional Support Center (ISC)

- Instructional Support Center (ISC) Webpage

WCCC Library Services

- WCCC Library Website

Citation Styles and Formatting

Work submitted for any Warren County Community College course must conform to the required formatting and citation style that are specified by the instructor. The Library and Instructional Support Center can assist students with formatting and citations for assignments and papers.

WCCC Attendance Expectations

The College expects students to attend and participate in all classes. This involves sharing discussions and lectures in class, as well as interacting with other students.

Grades are based on the quality of work students complete in meeting the requirements for a particular course, as stated in the course syllabus and catalog description. Attendance, among other factors, may be an additional criterion for assigning grades. Students should realize that they are responsible for all class meetings and that work missed because of absences may affect their grades. Attendance in online classes is determined by the completion of assignments/ tests. Students who have not completed any assignments or tests will be considered non-attending and receive an NF grade in online classes.

Class Attendance Expectations

Topical Outline

A. Integration of Nervous System Functions
    i. Sensation
    ii. Control of skeletal muscles
    iii. Brain functions
B. Special Senses
    i. Olfactory
    ii. Gustatory
    iii. Visual
    iv. Hearing and balance
C. Autonomic Nervous System
    i. Contrasting somatic motor & autonomic nervous systems
    ii. Structure of ANS
    iii. Physiology of ANS
    iv. Regulation
    v. Functional generalizations
D. Functional Organization of Endocrine System
    i. General characteristics
    ii. Hormone structure
    iii. Transport in body
    iv. Metabolism and excretion
    v. Interaction and hormone receptors
E. Endocrine Glands
    i. Functions
    ii. Pituitary & hypothalamus
    iii. Thyroid
    iv. Parathyroid
    v. Adrenals

vi. Pancreas
vii. Ovaries and testes
viii. Pineal
ix. Thymus

F. CVS: Blood
    i. Functions
    ii. Components of blood
    iii. Physiology of hemostasis
    iv. Blood grouping

G. CVS: Heart
    i. Functions
    ii. Anatomy of the heart
    iii. Conductive system
    iv. Blood flow through heart
    v. Cardiac cycle
    vi. Cardiac output
    vii. Regulation

H. CVS: Peripheral Circulation and Regulation
    i. Arteries, arterioles, capillaries, venules, veins
    ii. Circulatory routes
    iii. Physiology of circulation

I. Lymphatic System and Immunity
    i. Lymphatic tissue, organs, and vessels
    ii. Immunity
    iii. Innate immunity
    iv. Adaptive immunity
    v. Acquired immunity

J. Respiratory System
    i. Functions
    ii. Anatomy & histology
    iii. Pulmonary ventilation, air volumes and capacities
    iv. Exchange of respiratory gases
    v. Modification of ventilation

K. Digestive System
    i. General histology
    ii. Anatomy, histology and physiology of the oral cavity, esophagus, stomach, pancreas, liver,
    iii. Gallbladder, small intestine, large intestine

L. Metabolism
    i. Nutrition

ii. Metabolism (general)
iii. Carbohydrate metabolism
iv. Lipid metabolism
v. Protein metabolism
vi. Interconversion
vii. Metabolic states

M. Urinary System
i. Functions
ii. Anatomy & physiology of: kidneys, ureters, urinary bladder, urethra
iii. Urine – production, composition, regulation

N. Reproductive System
i. Male reproductive system: anatomy & physiology of scrotum, testes, ducts, glands
ii. Female reproductive system: anatomy & physiology of ovaries, uterine tubes, uterus, vagina, mammary glands

Grading Methods

Assignment	Points/Percentage

Class Itinerary

Week / Unit	Topic	Readings/Assignments

Week / Unit	Topic	Readings/Assignments