



RANGER COLLEGE  
OLNEY, TEXAS

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COURSE SYLLABUS

**Anatomy and Physiology I**

**Biol 2401**

**4 credit hours**

**INSTRUCTOR:**

**Will Stewart**

INSTRUCTOR: Will Stewart  
EMAIL: wstewart@rangercollege.edu  
OFFICE: Olney High School  
PHONE: 940-564-5637

**OFFICE SCHEDULE**

Monday: 2:50 - 4:30 PM  
Tuesday: 2:50 - 4:30 PM  
Wednesday: 2:50 - 4:30 PM  
Thursday: 2:50 - 4:30 PM  
Friday: 2:50 - 4:30 PM

The above schedule and procedures in this course are subject to change in the event of extenuating circumstances.

**I. Texas Core Curriculum Statement of Purpose**

Through the Texas Core Curriculum, students will gain a foundation of knowledge of human cultures and the physical and natural world, develop principles of personal and social responsibility for living in a diverse world, and advance intellectual and practical skills that are essential for all learning.

**II. Course Description**

This course includes study of the basic structure of the cell, tissue organization and tissue and organ structure and physiological processes of the integumentary, skeletal, muscular and nervous systems in humans. The principle of structure and function and the role these organ systems play in maintaining homeostasis will be emphasized. This course is designed for students entering medical or allied health careers and physical education majors.

**III. Required Background or Prerequisite**

Recommended prerequisite: BIOL 1406

**IV. Required Textbook and Course Materials**

HOLE'S ESSENTIALS OF HUMAN ANATOMY AND PHYSIOLOGY 13th edition. Shier, Butler and Lewis. McGraw Hill. 2015. ISBN 978-007-337-8152

Laboratory Atlas of Anatomy and Physiology 6<sup>th</sup> edition. Eder, Kaminsky, Bertram. McGraw Hill 2009. ISBN 978-0-07-352567-9

## V. Course Purpose

Courses in the life and physical sciences focus on describing, explaining and predicting natural phenomena using the scientific method. These courses involve the understanding of interactions among natural phenomena and the implications of scientific principles on the physical world and on human experiences.

## VI. Learning Outcomes

Upon successful completion of this course, students will:

Use anatomical terminology to identify and describe locations of major organs of each system covered.

Explain interrelationships among molecular, cellular, tissue, and organ functions in each system.

Describe the interdependency and interactions of the systems.

Explain contributions of organs and systems to the maintenance of homeostasis.

Identify causes and effects of homeostatic imbalances.

Describe modern technology and tools used to study anatomy and physiology.

## VII. Core Objectives

This course meets the following of the six Core Objectives established by Texas:

- Critical Thinking Skills (CT)** – Creative thinking, innovation, inquiry, and analysis; evaluation and synthesis of information
- Communication Skills (COM)** – effective development, interpretation and expression of ideas through written, oral, and visual communication
- Empirical and Quantitative Skills (EQS)** – The manipulation and analysis of numerical data or observable facts resulting in informed conclusions
- Teamwork (TW)** – The ability to consider different points of view and to work effectively with others to support a shared purpose or goal
- Social Responsibility (SR)** – Intercultural competence, knowledge of civic responsibility, and the ability to engage effectively in regional, national, and global communities
- Personal Responsibility (PR)** – The ability to connect choices, actions, and consequences to ethical decision-making

### VIII. Methods of Instruction

1. Lectures (3-4 weekly) in which the major concepts and theories in anatomy and physiology will be discussed.
2. Labs (1-2 weekly) in which major anatomical and physiological principles will be demonstrated by examination of specimens and viewing videos.

### IX. Methods of Assessment

Exams will consist primarily of fill-in-the-blank and short answer questions and will cover all material discussed since the last exam (except the final which is cumulative). Each question will be graded as correct or incorrect in accordance with information in the text and lectures. Exam grades will be taken as the number of points correct.

Students missing lectures are responsible for getting notes (notes, and other resources, are available on the Ranger College web page via Blackboard).

Make-up exams, for exams missed due to an excused absence, will be given later in the semester. Bonus points may be available for students taking the exam at the assigned time, but not for makeup exams. Students are strongly urged to not miss exams.

The course grade will be computed as follows:

Average of lecture exams (CT, COM, EQS)	=	3/4
Lab average (COM, TW)	=	<u>1/4</u>
Total	=	Course Grade

$$\frac{(\text{average of lecture exams} * 3) + \text{lab average}}{4} = \text{Course Grade}$$

Letter grades will be assigned as follows:

$$90-100 = A, \quad 80-89 = B, \quad 70-79 = C, \quad 60-69 = D, \quad \text{below } 60 = F$$

### X. Course/Classroom Policies

Regular and punctual attendance in all classes and labs is considered essential for optimum academic success. If the student has the equivalence of three weeks of unofficial absences... the instructor may drop the student from the course with a grade of F (Ranger College General Catalog). Students are expected to be seated by the beginning of the lecture period. Excessive tardies (6) may be considered as absences. Excessive unexcused absences (6) may result in a grade of I (incomplete) and may result in dismissal from the course with a grade of F.

It is your responsibility to inform the instructor of an excused absence. An absence is excused if you are excused by the Dean to participate in an authorized College activity. Any student who is disruptive to the class will be dismissed from the class and may be dismissed from the course.

Any student found with unauthorized notes (cheat sheets, electronic devices, etc.) during an exam or copying from another student's exam will be subject to disciplinary action. Any student misconduct will be reported to the Dean of Student Services.

No tobacco use is permitted in the science building, or other locations on RC campus.

**XI. Course Outline/Schedule**  
**BIOLOGY 2401 - ANATOMY AND PHYSIOLOGY**

Text: Hole's Essentials of Human Anatomy and Physiology 13th edition  
Shier, Butler and Lewis

<u>DATE</u>	<u>LECTURE TOPIC</u>	<u>TEXT ASSIGNMENT</u>
1	Class orientation, introduction	Ch. 1
2	Structure and Function of Cells; Tissues	Ch. 3, 5
3	<b>Labor Day Holiday</b>	
4	Tissues – epithelial and connective	Ch. 5
5	Integumentary System skin and organs	Ch. 6
6	Skeletal Tissues and Physiology	Ch. 7
7	<b><u>Exam 1</u></b> (Cells-Integ. System)	
8	Skeletal Tissues- bone remodeling	"
9	Skeletal System – joints and bones	"
10	" - bones	"
11	"	"
12	<b><u>Exam 2</u></b> (Skeletal System)	
13	Muscular Tissue and Physiology	Ch 8 "
14	Muscular System – sliding filament model	"
15	" - muscle energetics	"
16	" - kinesiology	"
17	<b><u>Exam 3</u></b> (Muscular System)	
18	Nervous Tissue – electrochemical message	Ch9
19	"	"
20	"	"
21	<b><u>Exam 4</u></b> (nervous tissue)	
22	Central Nervous System - brain and spinal cord anatomy	Ch 9
23	PNS and Autonomic Nervous System	"
24	"	"
	<b>Thanksgiving Holiday</b>	
25	<b><u>Exam 5</u></b> (CNS and PNS)	
26	Senses – Receptors and general senses	Ch 10
27	"	"
28	Special senses – smell, taste, hearing	"
29	Special senses – vision	"
30	<b><u>Exam 6</u></b> (General and Special Senses)	"
31	review	
32	<b><u>FINAL EXAM</u></b> (comprehensive)	

## **XII. Non-Discrimination Statement**

Admissions, employment, and program policies of Ranger College are nondiscriminatory in regard to race, creed, color, sex, age, disability, and national origin.

## **XIII. ADA Statement**

Ranger College provides a variety of services for students with learning and/or physical disabilities. Students are responsible for making initial contact with the Ranger College Counselor, Gabe Lewis (glewis@rangercollege.edu). It is advisable to make this contact before or immediately after the semester begins.

## **XIV. Exit plan for the science building:**

In case of fire or other emergency, the nearest exit from the classroom (102) is the classroom door then to the west building exit. The nearest exit from the biology lab (101) is the classroom door then to the west building exit. If it is a fire exit the building and meet in the band practice lot to the west of the high school. If it is a tornado or severe weather exit the east doors and go to the high school gym.

Please remain outside the building or in the gym until otherwise notified by faculty and administration.