



BIOL 2402 Anatomy & Physiology II

Course Syllabus:

"Northeast Texas Community College exists to provide responsible, exemplary learning opportunities."

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| Office Hours | Monday | Tuesday | Wednesday | Thursday | Friday | Online |
|--------------|--------------------|--------------------|--------------------|--------------------|-------------------|-------------------------|
| | 4:30pm – 5:00pm | 1:30pm – 5:00pm | 4:30pm – 5:00pm | 1:30pm – 5:00pm | By appointment | Email via EAGLE MAIL |

Course Description:

Catalog Course Description: 4 credit hours. Lecture/Lab/Clinical: Prerequisite(s): BIOL 2401 with a final grade of C or better.

BIOL 2402 is a continuation of BIOL 2401. The course includes a study of the structure and function of human organ systems including circulatory, digestive, respiratory, urinary and reproductive. Animal dissection is a required component of laboratory activity in both face-to-face and online formats.

Required Textbook(s):

Lecture: BIOL 2402 ACCESS CODE McKinley

Laboratory:

- BIOL 2401/2402 ANATOMY & PHYSIOLOGY: AN INTEGRATIVE APPROACH LAB MANUAL (FETAL PIG VERSION) Eckel ISBN: 978-1-260-84911-0 2ND Edition**
- BIOL 2402 LAB ACCESS CODE ECKEL CONNECT 2ND edition**

Inclusive Access: We have negotiated with the Publisher to obtain a discounted price for your lecture course materials. Your ebooks (Lab and Lecture) and Connect Access Codes are included with your tuition and will be available through Blackboard on the first class day. The materials are required for your class and essential to your success. If you also determine that you would like a print copy of your lecture text in addition to your inclusive access, loose-leaf copies will be available in the College Store at a discounted price (Print Upgrade: Anatomy and Physiology: An Integrative Approach; McKinley ISBN: **9781260572148** EDITION 3). You may opt out of purchasing your materials from the College Store through the Census Date for the course. If you choose to opt out you will be responsible for purchasing your Connect Access Code from another vendor. You will receive a refund for the Exclusive Access if you opt out.

Recommended Reading(s): Chapters 17-29 Lecture Textbook; Chapters 17-28 in the Lab Manual

Core Curriculum Purpose and Objectives:

Through the 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.

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

College Student Learning Outcomes:

Critical Thinking Skills

CT.1

Students will demonstrate the ability to 1) analyze complex issues, 2) synthesize information, and 3) evaluate the logic, validity, and relevance of data.

Communication Skills

CS.1

Students will effectively develop, interpret and express ideas through written communication.

Empirical and Quantitative Skills

EQS.1

Students will manipulate numerical data or observable facts by organizing and converting relevant information into mathematical or empirical form.

EQS.2

Students will analyze numerical data or observable facts by processing information with correct calculations, explicit notations, and appropriate technology.

Team Work

TW2. Students will work with others to support and accomplish a shared goal.

Student Learning Outcomes:

Upon successful completion of this course, students will:

1. Explain the nature of the endocrine system.
2. Describe the characteristics and functions of blood.
3. Discuss the major structures and functions of the organs of the cardiovascular system.
4. Describe the major structures and general functions of the lymphatic system and immunity.
5. Name the major organs of the digestive system and describe the general functions.
6. Name the major organs of the respiratory system and describe the general functions.
7. Discuss the major structures and functions of the urinary system including water and electrolyte balance.
8. Be familiar with both male and female reproductive systems.
9. Communicate results of scientific investigations, analyze data and formulate conclusions using critical thinking and scientific problem-solving skills.

Lectures & Discussions: **DATES/TOPICS ARE SUBJECT TO CHANGE**

Week 1- Intro to A&P II; Chapter 17: Endocrinology

Week 2- Chapter 17, continued; Chapter 26: Digestion

Week 3- Chapter 26, continued

Week 4- **LECTURE EXAM 1, M/T Feb 11/12**; Chapter 18: Cardio/Blood

Week 5- Chapter 18, continued; Chapter 19: Cardio/Heart

Week 6- Chapter 19, continued

Week 7- Chapter 20: Cardio/Circulation/Vasculature; Chapter 21 Lymphatics

SPRING BREAK

Week 8- Chapter 22 Immunity and Body Defenses

Week 9- **LECTURE EXAM 2, M/T MARCH 25/26**; Chapter 23: Respiratory

Week 10- Chapter 23, continued; Chapter 24: Urinary

Week 11- Chapter 24, continued

Week 12- Chapter 25 Fluids, Electrolytes, & Acid/Base; **LECTURE EXAM 3, W/TH April 17/18**

Week 13- Chapter 28: Reproductive System

Week 14- Chapter 29: Development & Pregnancy

Week 15- Genetics; **LECTURE EXAM 4, W/TH MAY 8/9**

Week 16- **FINAL EXAM (Comprehensive)**: Date and Time to be determined

EVALUATION/GRADING POLICY:

Course grades will be determined as follows:

| | |
|----------------|---------------|
| 90 --- 100 = A | 60 --- 69 = D |
| 80 --- 89 = B | 59 and < = F |
| 70 --- 79 = C | |

Please note:

- Due to FERPA, student privacy regulations, you will need to provide a written note listing anyone who will be allowed to pick up your work or to whom I may speak with (other than you) regarding your grade(s) or attendance.

Overall Course Grade Determined As Follows: Lecture = 75%; Lab = 25%

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|----------|--|-----------------------------|
| LECTURE: | 4 Lecture Exams = | 40% of Lecture Grade |
| | Final Exam (comprehensive) = | 20% of Lecture Grade |
| | LearnSmart & Homework Tutorial Assignments = | 15% of Lecture Grade |

LABORATORY:

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|---|---------------------------------|
| Average of Pre & Post-Lab Assignments = | 20% of Overall Lab Grade |
| Lab Practical Exam Avg (4 Exams) = | 80% of Overall Lab Grade |

NOTE: Lab Practical Exams will be Fill In The Blank.

LAB SCHEDULE

DATES AND ASSIGNMENTS SUBJECT TO CHANGE

| DATE | LAB | IN LAB PROCEDURES TO COMPLETE |
|-------------|------------|---|
| JAN 22 | - | INTRODUCTION TO LAB |
| JAN 24 | 19 | ENDOCRINOLOGY: EXERCISES 19.1 – 19.6; 19.8 |
| JAN 29 | 28 | FETAL PIG ENDOCRINOLOGY DISSECTION: EXERCISES 28.1; 28.3; PAGE 817 EXERCISE 28.10 . FIND THYROID GLAND, THYMUS, PANCREAS, ADRENALS, OVARIES/TESTES |
| JAN 31 | 26 | DIGESTIVE SYSTEM: EXERCISES 26.1 – 26.7 |
| FEB 5 | 26 | DIGESTIVE SYSTEM: EXERCISES 26.8 -26.13 |
| FEB 7 | 26 | DIGESTIVE SYSTEM: EXERCISES P. 741 CLINICAL VIEW: GALLSTONES, P. 742 MOTILITY, P. 743 CHOLERA & ACID/BASE, P. 745 26.15: CLINICAL CASE STUDY |
| FEB 12 | | LAB PRACTICAL EXAM 1 |
| FEB 14 | 20 | BLOOD: EXERCISES 20.1 – 20.7 |
| FEB 19 | 20 | BLOOD: BLOOD TYPES, EXERCISES 20.8, BLOOD CHOLESTEROL EXERCISE 20.9, & BLOOD GLUCOSE EXERCISE 20.10 |
| FEB 21 | 21 | THE HEART: EXERCISES 21.1 – 21.5 |
| FEB 26 | 21 | THE HEART: COW HEART DISSECTION: EXERCISES 21.6 & 21.7 |
| FEB 28 | 21 | THE HEART: ELECTRICAL CONDUCTIVITY, EKG, HEART SOUNDS. HEART BLOCKS: P. 563-564, P. 569 ECG CLINICAL VIEW, P. 572 |

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| MAR 5 | 22 | CARDIOVASCULAR: VESSELS AND CIRCULATION: EXERCISES 22.1 – 22.7 |
| MAR 7 | 22 | CARDIOVASCULAR: VESSELS AND CIRCULATION: EXERCISES 22:8 – 22.11 |
| MAR 11 - 15 | | SPRING BREAK |
| MAR 19 | 22 | CARDIOVASCULAR: VESSELS AND CIRCULATION: EXERCISES: 22.12 – 22.14, P. 615 (ALL OF IT), EXERCISE 22.16 |
| MAR 21 | 23 | LYMPHATIC SYSTEM AND IMMUNITY: ALL |
| MAR 26 | | LAB PRACTICAL EXAM 2 |
| MAR 28 | 24 | RESPIRATORY SYSTEM: EXERCISES 24.1 – 24.9 (UP THRU TOP 1/3 OF P. 669) |
| APR 2 | 24 | RESPIRATORY SYSTEM: P. 669 PHYSIOLOGY, P. 670 (ALL); EXERCISES 24.10 – 24.12 |
| APR 4 | 25 | URINARY SYSTEM: EXERCISES 25.5 – 25.9, AND 25.1 – 25.4 |
| APR 9 | 25 | URINARY SYSTEM: EXERCISE 25.10 |
| APR 11 | 25 | URINARY SYSTEM: EXERCISE 25.11 |
| APR 16 | | ACID/BASE CASES: RESPIRATORY ACIDOSIS & ALKALOSIS, METABOLIC ACIDOSIS AND ALKALOSIS |
| APR 18 | | LAB PRACTICAL EXAM 3 |

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|-------------|----|---|
| APR 23 | 27 | REPRODUCTIVE SYSTEM & DEVELOPMENT: EXERCISES 27.11 – 27.13, EXERCISES 27.1 – 27.10 |
| APR 25 | 27 | REPRODUCTIVE SYSTEM & DEVELOPMENT: EXERCISES 27.14 – 27.16 |
| APR 30 | | GENETICS LECTURE IN LAB |
| MAY 2 | | GENETICS LECTURE IN LAB |
| MAY 7 | | GENETICS LAB (HANDOUT) |
| MAY 9 | | LAB PRACTICAL EXAM 4 |
| MAY 13 - 16 | | FINALS WEEK |

- **NO LABORATORY SPECIMENS OR MODELS ARE TO BE REMOVED FROM THE LAB ROOM. Lab attendance is required to receive a lab grade.**

Laboratory Attire:

No shorts, short skirts, sleeveless shirts, loose clothing, bare midriffs, low tops, open-toed shoes or sandals will be allowed in the laboratory. Proper lab attire is required at all times, which includes clothing that covers upper arms, legs, thorax and abdomen. Long hair should be tied back to avoid getting it into the dissection field. Students not meeting proper laboratory attire will not be allowed to participate in lab and will receive a zero that lab's Post-Lab assignment.

NTCC Academic Honesty Statement:

"Students are expected to complete course work in an honest manner, using their intellects and resources designated as allowable by the course instructor. Students are responsible for addressing questions about allowable resources with the course instructor. NTCC upholds the highest standards of academic integrity. This course will follow the NTCC Academic Honesty policy stated in the Student Handbook."

Academic Ethics

The college expects all students to engage in academic pursuits in a manner that is beyond reproach. Students are expected to maintain complete honesty and integrity in their academic pursuit. Academic dishonesty such as cheating, plagiarism, and collusion is unacceptable and

may result in disciplinary action. Refer to the student handbook for more information on this subject.

ADA Statement:

It is the policy of NTCC to provide reasonable accommodations for qualified individuals who are students with disabilities. This College will adhere to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations as required to afford equal educational opportunity. It is the student's responsibility to request accommodations. An appointment can be made with Shannin Garrett, Academic Advisor/Coordinator of Special Populations located in the College Connection. She can be reached at 903-434-8218. For more information and to obtain a copy of the Request for Accommodations, please refer to the [NTCC website - Special Populations](#).

Family Educational Rights And Privacy Act (FERPA):

The Family Educational Rights and Privacy Act (FERPA) is a federal law that protects the privacy of student education records. The law applies to all schools that receive funds under an applicable program of the U.S. Department of Education. FERPA gives parents certain rights with respect to their children's educational records. These rights transfer to the student when he or she attends a school beyond the high school level. Students to whom the rights have transferred are considered "eligible students." In essence, a parent has no legal right to obtain information concerning the child's college records without the written consent of the student. In compliance with FERPA, information classified as "directory information" may be released to the general public without the written consent of the student unless the student makes a request in writing. Directory information is defined as: the student's name, permanent address and/or local address, telephone listing, dates of attendance, most recent previous education institution attended, other information including major, field of study, degrees, awards received, and participation in officially recognized activities/sports.