



BIOL 2401 Anatomy & Physiology I

“Northeast Texas Community College exists to provide personal, dynamic learning experiences empowering students to succeed.”

Course Syllabus: SPRING 2022

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Office Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Online
	4:30pm - 5:00pm via email	1:30pm - 5:00pm via email	4:30pm - 5:00pm via email	1:30pm - 5:00pm via email	By appointment	kcarter@ntcc.edu

Information relative to the delivery of the content contained in this syllabus is subject to change. Should that happen, the student will be notified.

Catalog Course Description: 4 credit hours. Lecture/Lab/Clinical: Three hours of lecture and three hours of lab each week. Prerequisite(s): TSI complete in reading and writing. Anatomy and Physiology I is intended for students entering a field of study in health sciences or kinesiology. This course is the first semester of a two semester sequence and includes a study of basic cell biology, histology, the integument, skeletal, muscular and nervous systems. Animal dissection is a required component of laboratory activity in both face-to-face and online format. Successful completion of BIOL 2401 with a C or better allows the student to continue on to BIOL 2402.

Required Textbook(s): **Lecture:** BIOL 2401 ACCESS CODE MCKINLEY CONNECT (VIA INCLUSIVE ACCESS W/DIGITAL TEXT & CONNECT) Author: *McKinley* Edition 4 McGraw-Hill

Inclusive Access: We have negotiated with the Publisher to obtain a discounted price for your lecture course materials. Your ebook and Connect Access Code 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 in your success. If you also determine that you would like a print copy of your text in addition to your inclusive access, loose-leaf copies will be available in the College Store at a discounted price (**PRINT UPGRADE: ANATOMY & PHYSIOLOGY: AN INTEGRATIVE APPROACH, McKinley, Edition 4.**) 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 Inclusive Access if you opt out.

Laboratory: REQUIRED TEXTBOOK AND MATERIALS

1. **BIOL 2401/2402: Laboratory Manual for Human Anatomy & Physiology: (FETAL PIG VERSION)** Author: Terry R. Martin ISBN: 9781260159363 Edition 4

PLEASE NOTE: Lab Manuals CANNOT be rented from a third party. Each student MUST have a consumable lab book from which pages MUST be torn out and submitted for grading. This means that absolutely NO copies can be submitted as it violates copyright laws.

Recommended Reading(s): Chapters 1 through 16 in the textbook

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

EQS2

Analyze numerical data or observable facts.

EQS3

Draw informed conclusions.

Team Work

TW2

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

Required Computer Literacy Skills:

1. Web browsing skills for working with the online homework system
2. Ability to use Blackboard for access to course information
3. Competent and professional emailing skills

Student Learning Outcomes:

1. Define anatomy and physiology, explain the importance of the relationship between structure and function and be able to describe and identify directional terms, anatomical positions, and anatomical structures.

2. Explain the nature of a human cell.
3. Describe the general make-up of a tissue and be able to recognize the primary tissue types and examples of each type.
4. Describe the general structure, function and interaction of the integumentary system.
5. Describe the general structure, function and interaction of the skeletal system inclusive of joints.
6. Summarize the major characteristics and functions of skeletal, smooth and cardiac muscle. Be able to identify the major superficial muscles of the human body.
7. Describe the general structure, function and interaction of the nervous system.
8. Work safely and collaboratively in the laboratory using appropriate equipment and tools to communicate results of scientific investigations, analyze data and formulate conclusions using critical thinking and scientific problem-solving skills.

Lecture Discussion And Exam Schedule:

Please NOTE: Lecture and Exam Schedule are subject to change.

Week 1	Intro to A&P, & Chapters 1&2: Anatomical Terminology & Chemistry
Week 2	Chapters 1&2 cont., Chapter 4: Biology of the Cell
Week 3	Chapter 4, cont.; Chapter 5: Tissue Organization
Week 4	Chapter 5, cont; Chapter 6: Integumentary System
Week 5	Chapter 6, cont;
Week 6	LECTURE EXAM 1: FEB 21; Chapter 7: Skeletal System: Bone Structure & Function;
Week 7	Ch 7 cont; Chapter 8: Axial & Appendicular Skeleton;
Week 8	Chapter 9: Articulations; LECTURE EXAM 2: MAR 9
Week 9	SPRING BREAK
Week 10	Chapter 10: Muscle Tissue;
Week 11	Chapter 11: Muscular System: Axial & Appendicular Muscles; Chapter 11 continued
Week 12	Ch 11 cont; LECTURE EXAM 3: APR 6
Week 13	Chapter 12: Nervous System: Nervous Tissue; Chapter 13: Nervous System: Brain & Spinal Cord
Week 14	Ch 13 cont.; Chapter 14: Nervous System: Spinal Cord & Spinal Nerves;
Week 15	Ch 14 cont; Chapter 15: NS: Autonomic Nervous System; Chapter 16: Nervous System: Senses;
Week 16	LECTURE EXAM 4: MAY 2

FINAL EXAM (Comprehensive): Date and Time to be determined

Evaluation/Grading Policy Overview:

On the first day of lecture and lab I will address the specifics of the grading policy and what constitutes consideration for a make-up exam. Suffice to say that Lecture and Lab Practical Exams are **NOT TO BE MISSED.**

PLEASE NOTE: There is no such thing as “Late Homework,” or “Late Lab Assessments.” You must turn in all lecture assignments/lab assessments by their due date or you will receive a zero. Only in dire scenarios will I consider allowing a late assignment to be turned in after the due date. I drop the 6 lowest lab report grades, which means that the zero you get for a report not turned in on time or not turned in at all, will not hurt you unless you exceed 6 of these. You are going into medicine and being exact and on time is critical to the life of your patient. If you learn to be disciplined in the small things, it will be easier to be disciplined in the big things.

Also Note: If you don’t turn in an assignment, the space in the Blackboard Grade Book for that assignment will remain blank. That assignment, and any other blank spaces for grades of assignments not turned in, will not be calculated into the running total until I take the system off “running total” at the end of the semester. This means that your course grade is lower than it shows in Blackboard if you have assignments you have not turned in. Those

blanks WILL be counted as zeros at the end of the semester when I take the system off of “running total.” Blackboard will not physically put a zero in a blank even when I take the system off of “running total;” however, it will count each blank as a zero when computing your final grade.

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 WEIGHTED AS FOLLOWS: Lecture = **75%**; Lab = **25%**

LECTURE GRADE

EXAMS: **60%** of Overall Course Grade

4 Lecture Exams = **40%** of Overall Course Grade

FINAL EXAM (**Comprehensive**) = **20%** of Overall Course Grade

*You MUST take the Final Exam. Anyone who does not take the Final Exam will automatically receive an F for the course grade, regardless of your average going into the Final Exam.

ASSIGNMENTS: (CONNECT Homework Tutorials) =**15%** of Overall Course Grade **PLEASE NOTE:** YOU are responsible to make sure that your Homework Tutorial grades show up In Blackboard. Do NOT wait until the last week of class to check and see if a Homework Tutorial grade has been entered by the Connect system into your Blackboard grade book. It will be too late to try and “find” those grades prior to the time your Final Grade must be submitted. YOU must stay up with the Connect system to make sure that your grades are being posted correctly by the software.

LABORATORY GRADE

The laboratory grade is valued at **25%** of the overall course grade and is determined as follows:

Average of Lab Assessments = **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.” Spelling correctly is critical.

GRADE CALCULATION EXAMPLE:

CATEGORIES	YOUR AVG	VALUE	CALCULATE POINTS	CURRENT POINTS
SB+HW AVG	75	15%	75 x 15% (15% = 0.15)	11.25
EXAMS	66	40%	66 x 40% (40% = 0.4)	26.4
FINAL EXAM	70	20%	78 x 20% (20% = 0.2)	14
OVERALL LAB GRADE*	61.6*	25%	61.6 x 25% (25% = 0,25)	15.4
CURRENT COURSE GRADE			ADD CATEGORY POINTS	68.65

Now, let's calculate the OVERALL LAB GRADE:

CATEGORIES	YOUR AVG	VALUE	CALCULATE POINTS	CURRENT POINTS
LAB ASSESSMENTS	88	20%	88 x 20% (20% = 0.2)	17.6
LAB PRACTICALS	55	80%	55 x 80% (80% = 0.8)	44
OVERALL LAB GRADE			17.6 + 44 =	61.6

LECTURE ATTIRE: No shorts, short skirts, bare midriffs, low tops, or Yoga pants are allowed in the Lecture Classroom. If a student doesn't follow this rule they will be asked to leave the classroom.

LABORATORY ATTIRE:

No shorts, short skirts, sleeveless shirts, loose clothing, bare midriffs, low tops, Yoga pants, 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 for assignments/quizzes due that day. They will also be dismissed from the class for that day. Please adhere to these requirements when we are dissecting via Zoom.

LABORATORY ASSIGNMENT AND LAB PRACTICAL EXAM SCHEDULE:

PLEASE NOTE: DATES AND TOPICS/EXAMS ARE SUBJECT TO CHANGE

WEEK	DATE	LAB TOPIC
1	JAN 17	MLK HOLIDAY – NO CLASS
	JAN 19	LAB ORIENTATION, SAFETY
2	JAN 24	LAB 2: BODY ORG, MEMBRANES, & TERMINOLOGY PROCEDURES A, B, & C
	JAN 26	LAB 4: CARE & USE OF THE MICROSCOPE PROCEDURE A
3	JAN 31	LAB 5: CELL STRUCTURE & FUNCTION & LAB 7: CELL CYCLE
	FEB 2	LAB 6: MOVEMENT THROUGH MEMBRANES
4	FEB 7	LAB 8: EPITHELIAL TISSUES
	FEB 9	LAB 9: CONNECTIVE TISSUES
5	FEB 14	LAB 9: CONNECTIVE TISSUES, CONTINUED
	FEB 16	LAB 11: INTEGUMENTARY SYSTEM
6	FEB 21	LAB PRACTICAL EXAM 1
	FEB 23	LAB 12: BONE STRUCTURE & CLASSIFICATION & LAB 13: ORGANIZATION OF THE SKELETON

	FEB 28	LAB 14: SKULL
7	MAR 2	LAB 15: VERTEBRAL COLUMN & THORACIC CAGE LAB 16: PECTORAL GIRDLE & UPPER LIMB
	MAR 7	LAB 17: PELVIC GIRDLE & LOWER LIMB LAB 19: JOINT STRUCTURE & MOVEMENTS
8	MAR 9	LAB PRACTICAL EXAM 2
	MAR 14	SPRING BREAK
	MAR 16	
	MAR 21	LAB 10: MUSCLE (& NERVOUS) TISSUE – ONLY MUSCLE PART – DON'T TURN IN UNTIL WE GET TO NEUROLOGY) LAB 20: SKELETAL MUSCLE STRUCTURE & FUNCTION
10	MAR 23	LAB 22: MUSCLES OF THE HEAD & NECK
	MAR 28	LAB 23: MUSCLES OF THE CHEST, SHOULDER, & UPPER LIMB
11	MAR 30	LAB 24: MUSCLES OF THE VERTEBRAL COLUMN, ABDOMINAL WALL & PELVIC FLOOR
	APR 4	LAB 25: MUSCLES OF THE HIP & LOWER LIMB & LAB 26: SURFACE ANATOMY
12	APR 6	LAB PRACTICAL EXAM 3

13 APR 11 LAB 10: MUSCLE AND NERVOUS TISSUE (NERVOUS TISSUE ONLY),
LAB 27: NERVOUS TISSUE & NERVES, AND
LAB 28: MENINGES, SPINAL CORD, & SPINAL NERVES

APR 13 LAB 30: BRAIN & CRANIAL NERVES
LAB 32: DISSECTION OF THE SHEEP BRAIN & SPINAL CORD

14 APR 18 LAB 35: EYE STRUCTURE &
EYE DISSECTION

APR 20 LAB 36: VISUAL TESTS

15 APR 27 LAB 37: EAR & HEARING &

APR 29 LAB 38: EAR & EQUILIBRIUM

16 MAY 2 LAB PRACTICAL EXAM 4

NO LABORATORY FINAL

PLEASE NOTE: Regular Lab attendance is required to receive a lab grade.

Scholastic Dishonesty, aka, Cheating:

As per the NTCC Student Handbook, Scholastic Dishonesty, aka, Cheating, shall include, but shall not be limited to:

1. Copying from another student's test or class work;
2. Using test materials not authorized by the person administering the test;
3. Collaborating with or seeking aid from another student during a test without permission from the test administrator;
4. Knowingly using, buying, selling, stealing, or soliciting, in whole or in part, the contents of an unadministered test, paper, or another assignment;
5. The unauthorized transporting or removal, in whole or in part, of the contents of the unadministered test;
6. Substituting for another student, or permitting another student to substitute for one's self, to take a test;
7. Bribing another person to obtain an unadministered test or information about an unadministered test; or
8. Manipulating a test, assignment, or final course grades.

CHEATING IN ANY FORM WILL NOT BE TOLERATED! Cheating on a lecture or lab practical or final exam will result in removal from the course and a course grade of F.

NTCC Academic Honesty Statement:

"Students are 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.

Eagle Assist: At Northeast Texas Community College, we understand that students often need support that extends beyond the classroom. “Eagle Assist” is the place to start when looking for that type of assistance. Our support system is here to help you succeed in both your academic and personal growth.

Services provided:

- Mental Health Counseling (visit www.thevirtualcaregroup.com/ntcc to activate your account)
- Classroom Accommodations
- NTCC Care Center Food Pantry
- NTCC Care Center Hygiene Closet
- NTCC Care Center Cook Nook
- Financial Literacy
- Child Care Assistance
- Emergency Aid

Send us a message at eagleassist@ntcc.edu

*Dual credit students please email jstewart@ntcc.edu if interested.