BIOL 2401 Anatomy & Physiology I

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

Course Syllabus: Fall 2020

Dr. Kathy Carter

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Office Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Online
	1:30pm - 5:00pm	4:30pm - 5:00pm	1:30pm – 5:00pm	4:30pm - 5:00pm	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.

Course Structure and Overview:

Course Format: Synchronous/Live Remote via Zoom
NTCC Definition Live Remote classes will connect the instructor and the student in a virtual classroom where the student will receive live instruction and be able to interact directly with the faculty member during the course class time.

This course, both lecture and laboratory, will be conducted via Zoom. You are expected to be online in the Zoom classroom interacting with fellow students and the professor during the scheduled lecture and laboratory times. Additional course material will be presented fully online through the course Blackboard page. Most assignments, including lecture exams, laboratory practical exams, and labs will be submitted electronically through Blackboard.

Required Textbook(s): Lecture: BIOL 2401 ACCESS CODE MCKINLEY CONNECT (VIA INCLUSIVE ACCESS W/DIGITAL TEXT & CONNECT) Author: *McKinley* **ISBN: 9781260849110** Edition 3 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, 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 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.***
2. **Dissection Tool Kit:** Required for this synchronous course so that you can carry out dissections at home. You can purchase this from the NTCC College Store OR at this link: https://www.homesciencetools.com/product/advanced-dissecting-tools/?gclid=EAIaIQobChMIjaaS1ueT6wIVg5yzCh19EQW0EAQYBCABEgIpN_D_BwE Either way, this will be approximately $15.

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

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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.

Minimum Technology Requirements:

1. Wireless Internet capable laptop computer or tablet (Chromebooks are not recommended)
2. Video conferencing capability using Zoom through computer or mobile phone.
3. Access to printer for required hand-written assignments.
4. Access to a scanner for electronic submission of hand-written assignments. NOTE: Free mobile phone applications are available that can substitute for a scanner. Hand-written assignments must be submitted in pdf format through Blackboard.

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
4. Functional use of MS Word and pdf for lab reports
5. Ability to print and scan documents for electronic submission of hand-written assignment.

Communications:

1. Primary communication between the instructor and students will be during lecture and lab Zoom meetings. We will meet class via Zoom, rather than "face to face" at the same times we would normally meet in the classroom/laboratory. I require my students to engage in class. You must participate in answering questions posed by me or by other students.
2. You are free to contact me as necessary outside of class. NTCC email is the official form of communication used by the college. Email communications from non-NTCC email addresses will not be answered. You must check your NTCC email account daily, even on the weekends. You may reach me at kcarter@ntcc.edu. Please do not hesitate to contact me if you have questions. I check my campus email multiple times a day, every day, so will do my best to get back to you as soon as possible. I am happy to help.
3. I will also use Blackboard's Announcement function to send out various information to the class. You will receive an email notification when an announcement is put into Blackboard. Students are expected to check Blackboard daily.
4. Lecture Connect LearnSmart and Homework Tutorial Assignments are already listed in Blackboard, along with their due dates. Each week you will have a LearnSmart and Homework Tutorial assignment, which is due each Sunday night by 11:59pm. Laboratory Assessments are due weekly each Saturday night by 11:59pm.
5. Zoom Office Hours: My office hours are listed on the first page of this syllabus. I will hold office hours BY APPOINTMENT, during these times. You must schedule an Office Hours appointment with me via NTCC email so that I can focus specifically on your questions. There will be a ZOOM OFFICE HOURS link in the LEFT toolbar that you can click on to enter my office hours to meet your appointment. Thank you.

ZOOM Meeting Etiquette:

1. This is a virtual classroom, therefore, appropriate classroom behavior is expected.
2. Log into your class or meeting from a distraction-free, quiet environment.
3. Please keep your audio on mute until you want to speak. This will help to limit background noise.
4. Close unneeded applications on your computer to optimize the video quality.
5. If you would like to speak or answer a question, simply unmute yourself and speak.

6. Keep your class notes out and/or pen and paper to take notes.
7. Make sure your video is on (if you have camera capabilities) so your teacher and peers can see you.
8. Be mindful of your background lighting. If you are sitting with your back to a window, you may be silhouetted by the light coming through. Your overhead light might also need to be adjusted for the best image quality.
9. Please take care of your personal needs (appropriate dress, basic hygiene, eating, chewing gum, talking to others in your home, etc.) prior to entering a Zoom classroom.
10. Remember to sign out or "leave the meeting" when the session is finished

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 date 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; **LECTURE EXAM I: Sept 23/24**
Week 6- Chapter 7: Skeletal System: Bone Structure & Function; Chapter 8: Axial & Appendicular Skeleton
Week 7- Chapter 8, continued
Week 8- Chapter 9: Articulations
Week 9- **LECTURE EXAM 2: Oct 19/20**; Chapter 10: Muscle Tissue
Week 10- Chapter 10: Muscle Tissue; Chapter 11: Muscular System: Axial & Appendicular Muscles
Week 11- Chapter 11 continued
Week 12- **LECTURE EXAM 3: Nov 9/10;** Chapter 12: Nervous System: Nervous Tissue
Week 13- Chapter 13: Nervous System: Brain & Spinal Cord
Week 14- Chapter 14: Nervous System: Spinal Cord & Spinal Nerves;
Week 15- Chapter 16: Nervous System: Senses; **LECTURE EXAM 4: Dec 2/3**
Week 16- 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 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. 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.

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 LearnSmart and Homework Tutorials) =**15%** of Overall Course Grade

LABORATORY GRADE:

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.

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 for the Post-Lab assignment. 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	AUG 25	LAB ORIENTATION, SAFETY
	AUG 27	LAB 2: BODY ORG, MEMBRANES, & TERMINOLOGY
2	SEPT 1	LAB 4: CARE & USE OF THE MICROSCOPE
	SEPT 3	LAB 5: CELL STRUCTURE & FUNCTION AND LAB 7: CELL CYCLE
3	SEPT 8	LAB 6: MOVEMENT THROUGH MEMBRANES
	SEPT 10	LAB 8: EPITHELIAL TISSUES
4	SEPT 15	LAB 9: CONNECTIVE TISSUES
	SEPT 17	LAB 9: CONNECTIVE TISSUES (continued)
5	SEPT 22	LAB 11: INTEGUMENTARY SYSTEM
	SEPT 24	LAB PRACTICAL EXAM 1
6	SEPT 29	LAB 12: BONE STRUCTURE & CLASSIFICATION AND LAB 13: ORGANIZATION OF THE SKELETON
	OCT 1	LAB 14: SKULL
7	OCT 6	LAB 15: VERTEBRAL COLUMN & THORACIC CAGE
	OCT 8	LAB 16: PECTORAL GIRDLE & UPPER LIMB
	OCT 13	LAB 17: PELVIC GIRDLE & LOWER LIMB AND LAB 18: FETAL SKELETON

8	OCT 15	LAB 19: JOINT STRUCTURE & MOVEMENTS
	OCT 20	LAB PRACTICAL EXAM 2
9	OCT 22	LAB 10: MUSCLE (& NERVOUS) TISSUE – ONLY MUSCLE PART LAB 20: SKELETAL MUSCLE STRUCTURE & FUNCTION
	OCT 27	LAB 22: MUSCLES OF THE HEAD & NECK
10	OCT 29	LAB 23: MUSCLES OF THE CHEST, SHOULDER, & UPPER LIMB
	NOV 3	LAB 24: MUSCLES OF THE VERTEBRAL COLUMN, ABDOMINAL WALL & PELVIC FLOOR
11	NOV 5	LAB 25: MUSCLES OF THE HIP & LOWER LIMB AND LAB 26: SURFACE ANATOMY
	NOV 10	LAB PRACTICAL EXAM 3
12	NOV 12	LAB 10: MUSCLE AND NERVOUS TISSUE (NERVOUS TISSUE ONLY), LAB 27: NERVOUS TISSUE & NERVES, AND LAB 30: BRAIN & CRANIAL NERVES
	NOV 17	LAB 28: MENINGES, SPINAL CORD, & SPINAL NERVES
13	NOV 19	LAB 32: DISSECTION OF THE SHEEP BRAIN & SPINAL CORD
	NOV 24	LAB 35: EYE STRUCTURE, LAB 36: VISUAL TESTS, AND EYE DISSECTION
14	NOV 26	THANKSGIVING
	DEC 1	LAB 37: EAR & HEARING AND LAB 38: EAR & EQUILIBRIUM
15	DEC 3	LAB PRACTICAL EXAM 4

16 **NO LABORATORY FINAL**

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

ELECTRONIC LABORATORY ASSESSMENT SUBMISSION

1. Labs performed each week are due the following Saturday night by 11:59pm
2. The "Lab Assessment" can be found at the end of the Laboratory Exercise document in your lab manual. This is the part of each lab that must be scanned and then submitted as a SINGLE pdf DOCUMUENT per lab each Saturday night by 11:59pm.
3. First, scan each page of the Laboratory Assessment and save the Assessment as a single pdf document. Lab Assessments must be submitted as a pdf file. **You MUST include all pages of the Lab Assessment as ONE SINGLE DOCUMENT.** Failure to do so will result in your receiving a zero for the lab. Also, you MUST include your Driver's License on each page you scan – place it in dead space on the page.
4. Next, go to the Course Home Page in Blackboard; scroll down to the LAB folder and open it. Open the current unit you are covering and you will see a folder that has the Labs listed individually for that Unit. Click on the lab number you wish to upload for grading and follow the instructions.
5. If you have problems scanning and saving the pages as a single pdf document, then please contact the NTCC IT Help Desk ASAP. Inability to submit the document in the correct format is no excuse and will result in a zero for the lab.

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! Exams will be proctored. The instructor may incorporate tools like Zoom to monitor students taking exams, and/or may employ proctoring software to monitor students during lecture and lab practical exams. Cheating on a lecture or lab practical exam may result in a grade of Zero or removal from the course with a grade of F.

Proctorio:

Proctorio is a Learning Integrity resource. The course instructor may use Proctorio, a browser-locking and remote proctoring solution designed to protect the integrity of the course's assessments, within some or all of your Connect assignments and lecture and lab practical exams. The course instructor may enable Proctorio's secure assignment and/or exam settings, and only the course instructor will make a judgment as to any potential academic integrity violation. The purpose of using software like Proctorio is to make education more equal by allowing each student to earn the grades they deserve. The US Federal Government also requires that all schools have a process in place for verifying student identity to protect against Federal Student Aid (FSA) fraud.

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.