



# BIOL-230 Anatomy and Physiology w/ Lab

Dr. Thomas J. Owen

NORTH CENTRAL KANSAS TECHNICAL COLLEGE

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## COURSE INFORMATION

Anatomy and physiology will explore the relationship between structure and function in humans. Specifically, the course will follow the organization of living systems by focusing on cells, tissues, organs, and organ systems in humans.

Credits: 5

Pre/Corequisites:

- Pre/Corequisite: Grade of C or better in BIOL 121 or CHEM 100, or qualifying examination score.

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## CLASS INFORMATION

Term: Summer Year: 2024

Start Date: 6/03/2024 End Date: 07/26/2024

Delivery Mode: Virtual **INSTRUCTOR**

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Dr. Thomas Owen

Email: [towen@ncktc.edu](mailto:towen@ncktc.edu)

Office Location: Virtual

Please contact me via email or Moodle Messenger

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## TEXTBOOKS

OpenStax. 2019. Anatomy and Physiology. <https://openstax.org/details/books/anatomy-and-physiology>

Visible Body – Human Anatomy Atlas. App can be downloaded from the App Store or Google Play. Students will have two weeks of trial access before payment is necessary. Students will then be automatically prompted to pay \$49.99. Included in the \$49.99 are one year of access to the course platform and web applications, and five permanent mobile app downloads that students get to keep even after the year of access.

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## SUPPLIES

- Computer
- Notebook paper
- Pencil(s)
- Black or blue ink pen(s)
- Colored pencils

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## COURSE COMPETENCIES

1. Use medical terminology appropriately to describe the organizational structure of cells, tissues and organ systems.
2. Identify structures and explain functions of the body systems that provide coverage/support for the body or process nutrients.
3. Identify structures and explain functions of the body systems that process and react to stimuli and permit movement in response.
4. Identify structures and explain functions of the body systems that form blood and its components, permit its circulation and provide immunologic protection.
5. Identify structures and explain functions of the body systems that perform chemically and/or hormonally-mediated respiratory, excretory and reproductive activities.

## GRADING INFORMATION

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### Grading

There will be a weekly quiz over each chapter. Most quizzes will ask for drawings and explaining answers. Weekly labs (15 pts each) will involve hands-on experiments collecting empirical data. Grades earned during labs will be based on submission of written work as well as participation. **Labs are a requirement in this course!** There will also be 5 quizzes on moodle that will happen every three chapters. Visible Body Courseware (VBC) will have extra educational material in the form of virtual anatomy models. There will also be quizzes on the VBC each week. Most chapters will have an identifying structures quiz along with a multiple choice. Some chapters will have more than two quizzes. You will have two attempts to complete each VBC quiz. The higher of your two scores will be your grade. If you have problems completing a quiz please email me at that time. The final exam will be multiple choice, true false, and possibly short answer.

Unit Quizzes	5 unit quizzes x 20 pts each	100 pts
Labs	15 labs x 15 pts per lab	225 pts
Quizzes	15 Quizzes x 20 pts per quiz	300 pts
Visible Body Quizzes	15 chapters	300 pts
Final Exam	1 Final exam	150 pts
<b><i>Total points possible for the course:1,075 pts</i></b>		

### Classroom Policies

#### *Respect*

Topics discussed in class are expected to be approached by the instructor and students scientifically in an unbiased and non-judgmental manner. Therefore, it is expected that respect will be given to everyone in the classroom regardless of their background or opinions on an issue.

#### *Plagiarism and Cheating*

Plagiarism and cheating are considered unacceptable. Therefore, either of these actions will result in an automatic zero on the assignment.

#### *Late Work*

Work is expected to be turned in on time. Therefore, no late work will be accepted.

### *Excused Absences*

Absences will only be excused if the instructor is notified 24 hours prior to missing lab or a doctor's note is shared.

### *Attendance*

Attendance is mandatory. This is especially relevant for labs. If a student misses a laboratory during assigned class time, the student will not be able to make up the lab or turn in any assignments associated with the lab that was missed. Therefore, missing class will result in a zero on labs that was given during the student's absence.

### *Participation*

Laboratories will be the only portion of class held on-campus. This arrangement is meant to enhance the overall learning experience for students enrolled in the course. Therefore, to acquire a passing grade in the course, participation is mandatory, and all assignments must be turned in (with the exception of labs; see "Attendance" section above).

### *Electronics*

Many activities will require the use technology in the classroom. However, cell phones are discouraged from being used during class time unless designated by the instructor. If a cell phone is being used at an undesignated time, the instructor reserves the right to confiscate the cell phone until the end of the class period upon which time it will be returned to the student.

### *Communication*

Your instructor will send weekly emails with reminders of upcoming due dates and/or details on submission of electronic assignments. Therefore, it is expected students are regularly checking their email. Your instructor will request your primary email address at the beginning of the semester.

### *Moodle*

The instructor will use Moodle as a medium for delivering materials and schedules to students. Therefore, students will be directed to the course shell on Moodle frequently to access certain materials.

This course is designed to provide support for your success as a college student at NCK Tech. Upon successful completion of the course, you will earn your academic requirement toward graduation. Your final grade in the course will be "pass" or "no pass" based on your attendance, participation, and the quality of the assignments you complete. Therefore, you must attend each class meeting and complete each assignment at a satisfactory level in order to pass the course. Passing this course is mandatory for graduation. If you do not pass this course, you may be required to retake it. 100 points are available in this course. You must earn 60 to pass.

## **ACADEMIC HONESTY**

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Membership in the NCK Tech learning community imposes upon the student a variety of commitments, obligations, and responsibilities. It is the policy of this college to impose sanctions on students who misrepresent their academic work. Appropriate classroom instructors or other designated persons will select these sanctions consistent with the seriousness of the violation and related considerations.

Examples of scholastic dishonesty include but are not limited to:

- Plagiarism: i.e. taking someone else's intellectual work and presenting it as one's own. Each department set standards of attribution. Faculty will include disciplinary or class-specific definitions in course syllabi.
- Cheating is unacceptable in any form. Examples include consultation of books, library materials, notes or intentional observation of another student's test on paper or a computer screen; accessing another student's answers from an exam to be given or in progress; submission of falsified data; alteration of exams or other academic exercises; and collaboration on projects where collaboration is forbidden.
- Falsification, forgery or alteration of any documents pertaining to assignments and examinations.
- Students who participate in, or assist with, cheating or plagiarism will also be in violation of this policy.

Classroom instructors and/or administrators will assess sanctions for violations of this policy. The seriousness of the violation will dictate the severity of the sanction imposed. Academic sanctions may include but are not limited to any of the following:

1. verbal or written warning
2. lowering of grade for an assignment
3. lowering of term grade

Administrative sanctions may include but are not limited to either of the following

1. Suspension from the course, program, or College
2. Dismissal from the course, program, or College

## **NCK TECH MISSION STATEMENT**

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North Central Kansas Technical College delivers applied, innovative and personalized education to empower learners, enrich lives, develop skilled professionals and strengthen economic systems.

### Vision Statement

North Central Kansas Technical College is dedicated to being a leader in workforce development by maximizing value for students, employers and communities through educational excellence.

### Core Values

Achieving EXCELLENCE with INTEGRITY through

DEDICATION

INNOVATION

COLLABORATION

COMMUNICATION

## NCK TECH NON-DISCRIMINATION POLICY

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NCK Tech is committed to nondiscrimination on the basis of race, color, gender, ethnic or national origin, sex, sexual orientation, gender identity, marital status, religion, age, ancestry, disability, military status, or veteran status in admission or access to, or treatment or employment in, its programs and activities. Further, it is the policy of the college to prohibit harassment (including sexual harassment and sexual violence) of students and employees. Any person having inquiries concerning the college's compliance with the regulations implementing Title VI, Title VII, Title IX, Section 504, and the Americans with Disabilities Act Amendments Act is directed to the VP of Student and Instructional Services (Section 504/ADA Compliance Officer and Title VI, Title VII, & Title IX Compliance Officer) at [\(785\)738-9055](tel:7857389055), [cisbell@ncktc.edu](mailto:cisbell@ncktc.edu), or PO Box 507, 3033 US Hwy 24, Beloit, KS 67420.

## NCK TECH TOBACCO USE POLICY

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The use of tobacco products in any form and/or electronic cigarettes is prohibited in, or within ten (10) feet of any building owned, leased, or rented by the College.

## NCK TECH WEAPONS POLICY

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Individuals who choose to carry concealed handguns **are solely responsible to do so in a safe and secure manner in strict conformity with state and federal laws and NCK Tech weapons policy.** Individuals must be 18 years of age to carry concealed handguns.

Safety measures outlined in the NCK Tech weapons policy specify that a concealed handgun:

- Must be under the constant control of the carrier.
- Must be out of view, concealed either on the body of the carrier, or backpack, purse, or bag that remains under the carrier's custody and control and within immediate reach of the individual.
- Must be in a holster that covers the trigger area and secures any external hammer in an un-cocked position
- Must have the safety on, and have no round in the chamber.

Lockers, toolboxes, and/or tool bags are not approved storage devices in accordance with NCK Tech Policy.

## OVERVIEW FOR STUDENTS WITH DISABILITIES

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NCK Tech is dedicated to providing equal access and opportunity to all campus programs and services for students with disabilities. We are committed to providing reasonable accommodations in accordance with applicable state and federal laws including, but not limited to, Section 504 and 508 of the Federal Rehabilitation Act of 1973 and the Americans with Disabilities Act Amendments Act (ADAAA) of 2008. We strive to create a safe, respectful and inclusive environment and promote awareness, knowledge and self-advocacy.

NCK Tech acknowledges that traditional methods, programs and services are not always appropriate or sufficient to accommodate the limitations experienced by some qualified persons with disabilities. When a student's disability prevents him/her from fulfilling a course requirement through conventional procedures, consideration will be given to alternatives, **keeping in mind that academic standards must be maintained.**

Services are provided through Student Accessibility Services (SAS) staff located in the Student Success Center, on the Beloit Campus, and in Student Services, on the Hays Campus.

- Director of Learning Services, may be reached at [1-785-738-9020](tel:1-785-738-9020); or by mail at [NCK Technical College, 3033 US Hwy 24, Beloit, KS 67420](mailto:Director of Learning Services, NCK Technical College, 3033 US Hwy 24, Beloit, KS 67420).

### **Student Responsibilities**

Students requesting support services will need to register ("self-disclose" and complete Student Accessibility Services Intake and Consent Form), provide appropriate documentation (if available) including how the disability affects academic performance and suggested accommodations, and communicate with the Director of Learning Services as part of the interactive process to create an *Educational Accommodation Plan* that will notify Instructors of approved accommodations, services and/or auxiliary aids.

Students are encouraged to make timely and appropriate disclosures and requests, at least two weeks in advance of a course, program, or activity for which an accommodation is requested (or as soon as realistically possible) to allow adequate time for accommodation services to be set in place.

### ***Accommodations, Academic Support Services, or Auxiliary Aids***

Reasonable accommodations including academic support services and auxiliary aids are provided to allow students with disabilities an equal opportunity to participate in and benefit from our educational programs. Accommodations will be provided on a case-by-case basis determined by student request, documentation, intake interview, Educational Accommodation Plan team, and assessment of individual needs and course requirements.

#### **Reasonable testing accommodations may include, but are not limited to:**

- Extended testing time
- Reduced distraction testing environment
- Test reader and/or scribe
- Use of calculator

#### **Academic support services/auxiliary aids may include, but are not limited to:**

- Note-taking assistance (second set of notes, power point slides, or other visual aids provided)
- Sign Language Interpreter
- Preferential seating in the classroom
- Large print exams, handouts, signs, etc.
- Telecommunications devices
- Use of Assistive Technology

Accommodations may not fundamentally alter the nature of the program or activity, lower academic standards, present undue financial or administrative burden on the college, or pose a threat to others or public safety.

Additionally, some accommodations and services cannot be provided, such as personal devices or assistance with personal services.

Auxiliary aids may be available through a variety of sources available to individual students. The student may make a request in obtaining specialized support services from other resources such as Vocational Rehabilitation Services (VR), Recordings for the Blind, Kansas Talking Book Service, etc. For example, Vocational Rehabilitation may fund such items as transportation to the institution, tuition, textbooks, hearing aids, and other individually prescribed medical devices.

If at any time throughout the academic year, a student feels that the agreed upon accommodations are not being followed or that alternate accommodations need to be provided, the student should notify Student Accessibility Services (SAS) staff. NCK Tech is committed to student success; however, we do not require students to use accommodations. The decision of when to utilize approved accommodations or services is up to the student. Integration, self-advocacy and individual responsibility are promoted and expected.

### ***Grievance Procedure***

Any student who believes he or she has been subjected to discrimination on the basis of disability or has been denied access or accommodations, shall have the right to invoke the Grievance Procedure.

Students are encouraged to first discuss their concerns with SAS. An attempt will be made to resolve the issue(s) causing concern by assisting the student in discussions with the person(s) involved. Most situations are positively resolved through this process. If the student does not feel the concern or complaint has been appropriately resolved, he or she should contact the [Vice President of Student and Instructional Services](#) at 1-800-658-4655 or PO Box 507, 3033 US Hwy 24, Beloit, KS 67420, where grievance procedures are filed for all students, including students with disabilities.

If the complaint is not resolved at the College level, a student may choose to file a complaint with the [Office for Civil Rights](#) at 1-816-268-0550 or [U.S. Department of Education, One Petticoat Lane, 1010 Walnut Street, Suite 320, Kansas City, MO 64106](#).

### ***Confidentiality***

All information regarding a student's disability is confidential. All documentation will remain separate from academic records and will not be released to an individual or source external to NCK Tech without the student's written consent. In order to provide effective services,

it may be necessary to communicate limited information on a need-to-know basis regarding disability-related needs to NCK Tech faculty and/or staff.

## REASONABLE SUSPICION

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If reasonable suspicion of substance abuse exists regarding an employee or student based on objective criteria (including, but not limited to, behavior, appearance, demeanor, detection of the odor of alcohol or any controlled substance), the employee or student will be requested to consent to drug testing performed by NCK Tech's contract vendor at the expense of the college.

- A. A college administrator (or their designee) shall drive the employee or student to the vendor's site for drug testing and shall return the employee or student to his/her residence (or arrange for transportation) following the testing.
- B. Test results shall be sent directly to the college administrator, with a copy also sent to the employee or student. All test results will be considered confidential, access to the results will be limited to institutional personnel who have a legitimate need-to-know.
- C. In the event of a positive test result, the employee or student may request a retest of the sample at the employee or student's expense. The request must be submitted within 24 hours.
- D. Positive results for any illegal drugs, or prescription drugs (either not prescribed for the employee or student, or at levels above the prescribed dosage), or blood alcohol level of 0.04 or greater shall be grounds for disciplinary action, up to and including termination or expulsion.
- E. Refusal to provide a specimen for this testing shall be treated as a positive drug test result.
- F. Test results or specimens that have been determined to be altered by the employee or student shall be grounds for disciplinary action, up to and including termination or expulsion.
- G. If the employee or student tests positive for an authorized prescription drug which may impair his/her performance or judgment, the employee or student may not be permitted to participate in college activities until he/she provides a doctor's release.

## RIGHT TO MODIFY THE SYLLABUS

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The instructor reserves the right to modify the syllabus during the semester. Students will be given advanced notice if a change would occur.

## TENTATIVE COURSE SCHEDULE

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### Anatomy and Physiology Tentative Schedule, Summer 2024

- Items italicized indicate holidays or NCK-Tech related events
- Note this is a tentative schedule; therefore, this outline is subject to change

Week	Week of	Topic	Notable Assessments
1	June 3	Introduction to Human Anatomy and Physiology	Due: June 9th at midnight
2	June 3	Cells	June 9
3	June 10	Tissues	June 16
4	June 10	Skin and the Integumentary System	June 16

5	6-17	Skeletal System	6-23
6	6-17	Muscular System	6- 23
7	6-24	Nervous System	6-30
8	6-24	Endocrine System	6-30
10	7-1	Cardiovascular System	7-7
11	7-1	Lymphatic and Immunity	7-7
12	7-8	Digestion and Nutrition	7-14
13	7-8	Respiratory System	7-14
14	7-15	Urinary System	7-21
15	7-15	Reproductive Systems	7-21
16	7-22	Pregnancy, Growth, and Development	7-22
17	7-23	Final Exam	End of Semester July 26th

## HOMWORK POLICY

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**Late Work:** Homework is due at the beginning of class on the due date. Homework assignments and their due dates will be announced in class. *Late work will not be accepted.*

**Make-up Work:** Student must complete work prior to excused/approved absences. If in the event of an emergency absence, student will be required to submit all work due upon return.

## CELL PHONE AND ELECTRONIC DEVICE POLICY

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Cell phones and other devices may be utilized in this course for enrichment and educational purposes at discretion of the instructor. Use of cell phones without prior authorization from instructor is prohibited.