

Biological Sciences BSC 1085C - Anatomy & Physiology I

Summer 2025

- Professor: Pat McArthur, Ph.D.
- Office Hours:
 - Reference the office schedule outside building 350 room 212 office door
- Phone No.:
 - 850-729-5241
- Email:
 - mcarthup@nwfsc.edu
- Final Exams: April 30th – May 6th
- Reference Number: 20162, 20154, 20155, 20153
- Campus/Room: Rm. Niceville building 350 Room 113, Fort Walton Room 613
- Class Days: Niceville (20162) M-W 9:00-11:15, (20154) M-W 12:30- 2:45, (20155) M-W 6:30 -8:45, Fort Walton (20153) TU 12:30-3:30,
- Class Times: See above

Course Description

A combined lecture and laboratory class involving the study of the basic principles and foundations of mammalian physiology, specifically, the medical model. Specific attention and detail will be given to the molecular mechanisms that share commonality with all systems. Material will range from organizational levels through conceptual understanding of bioengineering covering design through molecular interactions responsible for specific function. Particular attention will be focused on the topics of anatomical and physiological themes involving the chemical, cellular, and tissue level of organization, integumentary, skeletal, and muscular systems, and the central and peripheral nervous systems along with neural integration. This course is designed to dovetail the student's undergraduate science curriculum and build the foundational principles needed for allied health professions.

Course Prerequisite

There are no prerequisites for this course.

Course Materials

Recommended Text: A text book is not required. Seeley, R. (2006). Anatomy & Physiology (6th, 7th or 8th or 9th ed.). Boston, MA: McGraw Hill., or Martini, F. (2004 or 2005). Fundamentals of anatomy & physiology (6th or 7th ed.). Boston, MA: Benjamin Cummings.

Required Lab Manual: The required dedicated lab manual for this course can be purchased at the college bookstore and is a requirement for this course.

Student Success Statement

Northwest Florida State College aspires to provide a quality, convenient, and affordable education by using data-informed decision making and industry best practices. Northwest Florida State College seeks to provide students with premiere learning experiences that create personal and professional connections that support students' personal growth, and clear, inclusive, education pathways that help students to successfully engage in a diverse society.

Attendance Confirmation

Active participation and academic engagement are expectations of enrollment in this course. Faculty confirm each student's attendance in class after the drop-add period ends. Students who have not attended class or otherwise engaged academically in the course through the submission of an academic assignment or through participation in a curricular activity will be withdrawn from the course for nonattendance.

Students who are withdrawn for nonattendance or nonparticipation early in the course may request to be reinstated in the course by contacting their instructor by email. Reinstatement in the course is at the instructor's discretion during the first three weeks of class and is not guaranteed. Reinstatement requests occurring after this three-week period may be submitted to the instructor for consideration; however, additional administrative approval will be required to grant the reinstatement. If you are withdrawn from a course due to nonattendance and are not granted reinstatement in the course, please contact a Student Success Navigator for assistance.

Classroom Conduct

In accordance with CDC guidelines, NWFSC requires students, faculty, and staff to wear face coverings properly while on campus, including during each class meeting. Individuals who do not comply with this requirement will not be permitted to remain on campus. Students should apply social distancing practices whenever possible, extending courtesy to their peers and professor by being mindful of individual space. As the circumstances and guidance around COVID-19 develops further, updates are available on our [NWFSC COVID-19/Coronavirus Response Plan page](#). If changes for specific classroom policy or procedures are needed, you will receive an update through College email.

Grading Scheme and Procedures

Examinations and Grading Scale:

Class Attendance Policies:

Role will be taken at each class meeting and attendance, as well as promptness, is **mandatory**. While it is recognized that certain unforeseen events may prevent you from attending a certain class, you will be held responsible for all information conveyed during scheduled class meetings. Make-up work will only be accepted after an excused absence. For an absence to be excused, it must be determined as such during an office meeting with the instructor during office hours or some other appointed time within the following 24 hours. In following the College's guidelines if you have three consecutive absences or 25% total absences you will automatically be dropped from the course. In keeping with the College's policies under no circumstances may you bring a child to lecture or laboratory.

Students who stop attending class or are not able to pass the course due to attendance expectations stated in the syllabus may receive a failing grade which may impact the receipt of federal aid in subsequent courses. Students traveling for college approved activities will not be penalized academically but will be responsible for missed work."

As a courtesy to other students and the learning process, students may not bring children with them to class sessions. Health and safety concerns prohibit children from accompanying adult students in any lab, shop, office or classroom or other college facility where potential hazards exist. If a child related emergency means you must miss class, contact the instructor as soon as possible to determine your options. Students traveling for college approved activities will not be penalized academically but will be responsible for missed work.

Instructor Communication

Email is the official communication medium of the College. Please check College email regularly for any class and College notifications. Responses to email are usually made with two business days of original receipt. Please **DO NOT** use Blackboard Messages in place of email.

Blackboard

All NWFSC classes use Blackboard Learn (Ultra course view), a platform for online learning. Students can access this class's Blackboard site at online.nwfsc.edu, or through RaiderNet. Students will find the class syllabus, course grades, and other resources.

Technical Skills and Specialized Technology

This course is an in person traditional class. All instructional content and interaction takes place in the classroom.

Media

No media is used in this class.

Emergency College Closure

In the event of unusual or extraordinary circumstances, the schedule, requirements, and procedures in this course are subject to change. If the College closes for inclement weather or

other emergency, any exams, presentations, or assignments previously scheduled during the closure period will automatically be rescheduled for the first regular class meeting held once the college re-opens. If changes to graded activities are required, students will not be penalized as a result of the adjustments but will be responsible for meeting revised deadlines and course requirements.

Academic Continuity Plan

Northwest Florida State College is dedicated to protecting the health and wellbeing of its students, staff, and faculty. The College is dedicated to working with faculty and students to ensure timely course and program completion during emergencies. In the event of a College closure, the format of this course may be modified to enable completion of the course through other means, including but not limited to online course delivery through Blackboard.

In the instance that a College closure is necessary, you will be provided with an addendum to the syllabus including full instructions. To ensure that you receive this addendum and notification of any course format changes, be sure to check Blackboard and your College email through RaiderNet. As always, the College's primary focus is the safety of the College community. Additionally, the College will apply this plan to support students and faculty who are able to engage remotely until such time as the College reopens instructional facilities.

Student Rights, Responsibilities, and Academic Integrity

Students are responsible for adherence to all college policies and procedures, including those related to academic freedom, cheating, classroom conduct, computer/network/e-mail use and other items included in the *Northwest Florida State College Catalog and Student Handbook*. Students should be familiar with the rights and responsibilities detailed in the current *Northwest Florida State College Catalog and Student Handbook*. Plagiarism, cheating, or any other form of academic dishonesty is a serious breach of student responsibilities and may trigger consequences which range from a failing grade to formal disciplinary action.

Grievance Policy and Procedures Statement

NWFSC aims to deliver high-quality instructional experiences. In the event of a concern regarding a class, students should first attempt to resolve the matter with the instructor. If a resolution cannot be reached, students may seek out additional counsel in Academic Leadership through a [formal process](#). Access the [Formal Grievance/Appeal form](#).

Assignment Schedule

Appendix: Tentative Schedule, subject to change by notice in class from instructors

Lectures:

It is my belief that lectures and laboratory should complement, not duplicate, what can be found in your text. Therefore, the lectures and laboratory will be presented in this course for some combination of the following reasons:

1. In order to clarify difficult material covered in the text, or amplify material inadequately covered.
2. In order to convey information which, may not be generally available to the class.

3. In order to express my scientific point of view on some topic.

Class discussion is always welcome. I will be happy to open any topic for discussion whenever interest is indicated. You should bring your lab manual to every class. During lecture it is often important to identify passages or terms requiring special attention, and specific reference will frequently be made to noteworthy figures, tables and/or diagrams.

A great deal of complicated material is covered in this course, and **considerable study** will be required to master the topics, which will be addressed. For this reason, you should arrange to study each topic in the text **before** the lecture on that material is given (see Course Schedule, below). The background provided by such study will enhance your understanding of the lectures. After each class, your lecture notes should be integrated with the lab material and handouts, to correlate the information obtained from both sources. This will help to clarify the topics, which are difficult for you, and promote a coherent understanding of the subject matter. If questions still remain, you should seek assistance from me. In many cases a specific problem can be discussed and resolved quickly, and there are various sources to which I can refer you for additional help (see Appendix A, attached).



NORTHWEST FLORIDA STATE COLLEGE

Lecture Course Schedule:

WEEK	TENTATIVE EXAM DATES	LECTURE TOPIC/TEXT ASSIGNMENT
1		Introduction-
2		Homeostasis
3		Chemistry of macromolecules, electrolytes, minerals
4		Chemistry of macromolecules. Electrolytes, minerals
5	Lecture Exam # 1	Nucleotides-DNA
6		Principles of osmosis and diffusion
7		Water homeostasis
8		Principles of electrophysiology
9		Muscle and nerve action potential diagrams
10	Lecture Exam # 2	Nerve conduction process
11		Nerve conduction process
12		Overview of CNS
13		Osteology and calcium homeostasis
14		Muscle physiology
15		Muscle physiology
16	Lecture Exam # 3	Sensory physiology

Final Exam Week	(Final Exam)	Comprehensive Final: Chapters 1-17
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Laboratory Course Schedule:

WEEK	TENTATIVE EXAM DATES	LECTURE TOPIC/TEXT ASSIGNMENT
1		Foreign Word Roots (Short course in Latin)
2	Laboratory Exam	(Nomenclature)
3		Axis, orientation, nomenclature, body cavities
4		Axis, orientation, nomenclature, body cavities
5	Laboratory Exam	(Axis and Orientation)
6		Body cavities and linings, Body compartments, Cranial nerves

7		Body cavities and linings, Body compartments, Cranial nerves
8		Body cavities and linings, Body compartments, Cranial nerves
9	Laboratory Exam	(Body cavities and linings, Body compartments, Cranial nerves)
10		Bone nomenclature, landmarks and articulations
11	Laboratory Exam	Bone nomenclature, landmarks and articulations
12		Bone nomenclature, landmarks and articulations
13	Laboratory Exam	(Upper half-Bone) Axial Skeleton
14		Bone nomenclature, landmarks and articulations
15		Bone nomenclature, landmarks and articulations
16	Laboratory Exam	(Lower half-Bone) Appendicular Skeleton

APPENDIX - A

A SELECTED BIBLIOGRAPHY

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Campus Resources

Academic Services

Academic resources and support for student success are now centralized in the Learning Commons (building 500). The Learning Commons comprises the Library, Academic Success, Tutoring, Math Lab, and other academic support services. Students are encouraged to visit the Learning Commons for assistance and to take advantage of individual and group study areas, computers, whiteboards, and free printing. Visit the [Learning Commons](#) page for hours and information.

Tutoring

Free tutoring is offered to all NWFSC students in individual or small group formats for courses in math, science, business, writing, and language. Assistance with study and organizational skills are also available as well as the option to submit a paper for feedback and help with writing skills. Tutoring sessions are provided in person or remotely through Zoom. Appointments are preferred to guarantee time with a tutor, but walk-in support may also be available. Visit [Learning Commons - Tutoring](#) for more information and open hours for walk-in support. Email lccoach@nwfsc.edu for questions and assistance with services at other campus locations.

Open Computer Labs

Northwest Florida State College has open computer labs available for students on the Niceville, Fort Walton Beach, DeFuniak, and Crestview locations. Social distancing measures are being implemented at all open computer labs. Please visit our [website](#) for more information on computer lab locations and hours.

Testing Center

The Testing Center administers college admissions tests, placement tests, proctored exams, ACT/SAT, GED, CLEP, and DSST (formerly known as DANTEs). Make-up exams may be taken in the Testing Center, with instructor permission. General test information concerning testing with accommodations, testing center locations, hours and scheduling may be accessed on the Testing Center website at [Testing Center](#).

Library, Online Reference Materials, and Resources

The NWFSC library provides print and digital resources and services to support all courses and programs at NWFSC. For help with research, locating books, articles and or other resources, visit our library collection on the second floor of the Learning Commons. Students can email a librarian at reference@nwfsc.edu or schedule a virtual Zoom session with a librarian at [WCOnline](#). All currently enrolled NWFSC students also have access to UWF's Library and resources located on the Fort Walton Beach campus. Visit the [Library](#) webpage for more information.

Military and Veterans Services

Northwest Florida State College provides a full range of benefits and services to [service members, veterans, and their dependents](#).

Veterans Success Center

The Veterans Success Center located on the ground level (West section) of Building 500 on the Niceville campus. The staff at the Veterans Success Center can assist student veterans and eligible family members pursuing their educational, professional, vocational objectives, and to transition into the workplace. The Veterans Success Center is a central location for student veterans and eligible family members to initiate their VA Educational Benefits, receive VA specific academic advising support from a Student Success Navigator, and utilize state-of-the art infrastructure and technology in designated areas to foster success. The Veterans Success Center offers a tranquil, professional, and respectful location to create a cooperative community for student veterans and provides resources for leadership, support, advisement, and campus engagement as part of Northwest Florida State College Office of Financial Aid, not the U.S. Department of Veterans Affairs (DVA).

New students are highly encouraged to make their initial inquiries for VA educational benefits to the Veterans Success Center. For more information please call [850-502-2895](tel:850-502-2895) and select option 5, or email va@nwfsc.edu , or visit our website at www.nwfsc.edu/veterans/.

Military Tuition Assistance

Northwest Florida State College is proud to be a military friendly college. We encourage active-duty military members to consider a DOD Tuition Assistance program. These programs, available from the member's respective military branch, can help subsidize the cost of tuition. You must apply for tuition assistance by following your military branch's procedures and filling out their provided form. Please contact your local education center for more detailed requirements. Questions about Military Tuition Assistance benefits may be directed to 850-502-2895 or viewed on the College's website, www.nwfsc.edu/tuition-assistance/

VetSuccess on Campus

VetSuccess on Campus (VSOC) is a program through the Veterans Benefits Administration that places an experienced Veterans Readiness and Employment Counselor directly on campus to assist and support student veterans and eligible family members. The VetSuccess on Campus Counselor serves as a "liaison" for veterans on campus. All student veterans, Active Duty service members, and family members attending NWF State College can access the Department of Veterans Affairs through a full-time VA Counselor. Contact Maronda Clark, VetSuccess on Campus Counselor at Maronda.Clark@va.gov or by phone at 850-678-5111 ext. 6752

Accommodation Resources

To obtain disability-related academic accommodations, students with disabilities must contact the Accommodation Resource Center at arc@nwfsc.edu or call 850-729-6079. Upon request of accommodations, students will be asked to provide medical documentation that supports their disability request. If students are concerned that they may have an undiagnosed, disability-related condition that impacts their academic progress, it is recommended that they see a licensed medical professional for a diagnosis. Please contact the Accommodation Resource Center with any questions or concerns relating to permanent or temporary student disabilities.

Students who have been approved for accommodations through the ARC are encouraged to work with their professor on facilitation. All inquiries and discussions will remain confidential.

BayCare Confidential Helpline: 1-800-878-5470 (Open 24 hours/day)

Northwest Florida State College has partnered with BayCare Health to provide mental health, counseling, and personal development resources to all actively enrolled students. All students are eligible to receive up to three sessions with a licensed therapist or personal coach at no cost to the student. Access the NWFSC + BayCare Dashboard at www.nwfsc.edu/advising for a menu of services and resources. (Additional sessions or services are the responsibility of the student and may be billable to the student's personal insurance. Speak with a BayCare representative for more information.)

Welcome to Class

Thank you for choosing NWFSC for your education—and welcome to class!

