

Concordia University Mission

Concordia University is a Lutheran higher education community committed to helping students develop in mind, body, and spirit for service to Christ in the Church and in the world.

Program/Department Mission

The mission of Concordia University Wisconsin's Bachelor of Science Degree in Rehabilitation Science is to prepare rehabilitation professionals to practice competently, to have knowledge and the ability to use resources to facilitate health promotion in the community.

Course Number and Name

BIO 301: Advanced Functional Anatomy and Physiology

Course Description:

Advanced Functional Anatomy and Physiology is an integrated approach to the anatomy and physiology of the human body, with particular emphasis on the musculoskeletal, cardiovascular and nervous systems and their application to movement and clinical conditions. Consideration will also be given to the study of cells, tissues, and other organ systems. Additionally the course will include the study of living subject anatomy, guiding the student in the identification and palpation of structures in the living subject.

Credit Hours:

4 credit hours

Instructor:

Jessica Grimm, DPT

- Office: HS 110B
- Phone: 262/243-4498
- Email: Jessica.Grimm@cuw.edu
- Office Hours:
 - MW 9:00 – 9:30 and 12:00 – 1:00
 - TR 9:00 – 9:30 and 11:30 – 1:00
 - Please make an appointment to secure a meeting time or to schedule a time outside of office hours.

Course Location:

Luther 003

Course Meeting Time and Expectations:

Monday & Wednesday, 10:00-11:50 PM

There will be no class on September 2nd (Labor Day).

Instructor-student interaction and student preparation time:

This course meets 4 hours per week for a total of 60 professor-student contact hours. Students are expected to spend a minimum of 2 hours studying outside of class per 1 hour of class time in order to prepare assignments and master the content of the course. *Here is a link to the university Credit Hour Policy:* <http://celt.cuw.edu/concordia-credit-hour-policy/>

Course Prerequisites:

Successful completion of BIO 191/181 **and** BIO 192/182.

Required Resources:

- Biel, Andrew. (2014). Trail guide through the body: How to locate muscles, bones and more, 5th ed. Boulder, CO: Books of Discovery. (ISBN: 978-0-9829786-5-8)
- Safety glasses or goggles

Teaching Strategies:

This course will include lectures, readings, discussions, small group activities, human cadaver lab activities, palpation practice, and drawing/labeling of anatomical structures.

Course Evaluation and Grading:

Quizzes (5)	10%
Assignments (5)	10%
Written Exams (3):	30%
Lab Exams (2):	30%
Cumulative Final Exam:	20%
	100%

Grading Scale:

A	93 - 100	B+	87 – 89.99	C+	77 – 79.99	D+	67 – 69.99
A-	90 – 92.99	B	83– 86.99	C	73 – 76.99	D	63 – 66.99
		B-	80 – 82.99	C-	70 – 72.99	D-	60 – 62.99
						F	59 or below

About the Assessments:

- Quizzes:
 - There will be 5 graded quizzes throughout the course to assess student learning of course content and objectives. Students will have the first 20 minutes of class to complete the quiz on scheduled days. The quizzes are useful study tools for the exams.
- Assignments
 - There will be 5 graded assignments throughout the course to assess the students learning of course content and objectives that must be either completed and handed in at the end of the class, on the day the assignment is distributed (in-class assignments) **or** completed and submitted to Blackboard by 11:59pm on the date the assignment is due.

- Exams:
 - There will be 3 written lecture exams and 2 lab exams during the semester. Together, they will be worth 60 percent of the total grade. Students will have the entire class period to complete the written lecture exams. Lab exams will be 30 minutes in length and will focus on identification of anatomical structures in the cadaver lab.
- Cumulative Final Exam:
 - A comprehensive Final Exam will be given the last week of the semester to assess student learning of course content and objectives.

Course and Instructor Policies:

- Attendance Policy:
 - **Attendance is mandatory.** Absences are excused only at the discretion of the program faculty. Any unexcused absence may result in the student being dismissed from the program. Any student excused from a class is responsible for obtaining the material missed from one of their classmates. Any unexcused absences for an assignment, quiz, or test will result in the grade of “0”. The only excuses for absence accepted are illness of the student, an immediate family member, or in such cases as approved **in advance** by the course instructor. **In the event of illness, it is the student’s responsibility to notify the course instructor or respective faculty member in advance of the scheduled class.** Frequent, unexcused absences or tardiness will result in the student being called before the Student Progress Committee.
- Cell Phones / Computer Policy:
 - **Cell phones and computers are not to be used at any time during class,** without permission. Cell phones and computers are allowed to be used on exam review days. Anyone using a cell phone or computer during unapproved class will be dismissed from class that day and it will count as a class absence.
- Due Dates Policy:
 - Any assignments that are due via Drop Box on Blackboard are due by 11:59pm on the due date indicated, whether you are absent from class or not.
- Anatomy Lab Policies:
 - Students enrolled in BIO 301 are privileged to have a cadaver lab experience. **You must be accompanied by an instructor while in the lab.** You must come prepared to go in the lab each class period. **You must have closed-toed shoes, protective safety glasses, and gloves to participate in cadaver lab activities.** Gloves will be provided. **No food or drink is allowed in the lab.** You may choose to wear a lab coat; this is optional. Students may choose to bring separate clothing for time spent in the lab. Lab participation is a required part of this course.

- Exam Policy:
 - It is expected that all students will take exams at the scheduled times. No make-up exams will be given without permission of the instructor, which must be obtained **IN ADVANCE** of the exam, and must be for a serious and substantive reason. No exams may be repeated. No extra credit will be given in this course. In all cases, responsibility for make-up of any missed class or lab time lies with the student rather than with the instructor.
- Blackboard Policy:
 - Course handouts, PowerPoint slides, study questions, study hints, diagrams and sample exam questions will be posted on Blackboard.
- Professional Behavior Policy:
 - Professional behavior in this course is defined as follows:
 - Demonstrating appropriate respect to the cadavers and cadaver materials used in the laboratory.
 - Attending all class and laboratory sessions.
 - Arriving on time to class and laboratory.
 - Being prepared to learn, including bringing all necessary materials to class and lab .
 - Working effectively and cooperatively with classmates to learn course material and perform the human cadaver dissection.
- Use of CUW E-mail Policy:
 - If there are changes in this syllabus, course schedule, or important clarifications to share, they will be sent to all registered students via CUW E-mail and posted on Blackboard. Please check your CUW E-mail; consistently throughout this course.
- Spelling Policy:
 - Because clear and accurate communication is essential in health care, correct spelling of all anatomical, medical, and English words is required in the course. Points will be deducted for incorrect spelling.

Concordia University Policies:

- Accessibility Services:
 - In accordance with the Americans with Disabilities Act (ADA) and the Americans with Disabilities Amendments Act (ADAAA) and Section 504 of the Vocational Rehabilitation Act of 1973, individuals with disabilities are protected from discrimination and assured accessibility services and accommodations that provide equal access to the activities and programs of the University. Students with a disability who require accessible accommodations in order to obtain equal access to this course should contact the Director of the Academic Resource Center (ARC) & Accessibility Services:
 - 📍 Mequon campus, Centers and Online (262) 243-4299 or www.cuw.edu/arc
 - 📍 Ann Arbor campus (734) 995-7582 or www.cuaa.edu/arc

- Recording policy: Students may record class sessions when recording is part of an accommodation specified by the Academic Resource Center (ARC) & Accessibility Services. In all other circumstances, students must obtain the written permission of the course instructor prior to recording a class.
- Academic Integrity Policy: Concordia University expects all students to display honest, ethical behavior at all times and under all circumstances. Academic dishonesty is defined as follows:
 - **Cheating:** includes, but is not limited to: a) the use of unauthorized assistance in taking any type of test or completing any type of classroom assignment; b) assisting another student in cheating on a test or class assignment, including impersonation of another student.
 - **Plagiarism:** includes, but is not limited to: a) failure to give full and clear acknowledgement of the source of any idea that is not your own; b) handing in the same assignment for two different courses without the consent of the instructors.
 - **Fabrication:** the forgery, alteration, or misuse of any University academic document, record, or instrument of identification.
 - **Academic Misconduct:** intentionally or recklessly interfering with teaching, research, and/or other academic functions.
 - **Sanctions:** Faculty members who find evidence of academic dishonesty have sole discretion to determine the penalty, using their professional judgment. This can include a failing grade in the course, or removal of the student from the course. Additional sanctions will be imposed when a student is found to have violated the academic integrity policy more than once; these sanctions may include suspension or expulsion from the university.
- Test integrity software: Respondus LockDown Browser and/or Respondus Monitor may be used for exams taken through Blackboard. Students cannot print, make screen captures, access other web pages, or access other applications while taking the exam. Students may complete an identity authentication procedure and be recorded during the exam session (audio and video). If test integrity software will be used in this course, the instructor will provide additional information and computer requirements.
 - Respondus LockDown Browser information for students: <http://celt.cuw.edu/respondus-lockdown-browser/>
 - Respondus Monitor information for students: <http://celt.cuw.edu/respondus-monitor/>

- Concordia University Recommended Technology: Please see the following link for recommended technology resources. Your individual program may have different requirements.
 - <https://www.cuw.edu/academics/services/technology-services/computer-recommendations.html>
- Title IX Policy: Concordia University is committed to fostering a safe, productive learning environment. University policy and federal law (Title IX) prohibit discrimination on the basis of sex which includes but is not limited to harassment, domestic and dating violence, sexual assault, and stalking. Sexual misconduct of any type is not permitted by the university. Please see the following link for more information about CU's policies and procedures concerning sexual misconduct: <https://www.cuw.edu/about/offices/compliance/title-ix-sexual-harassment-policies/index.html>

Relationship to the Curriculum:

BIO301 is a functional anatomy and physiology class that builds on the basic science knowledge gained in previous biology classes by providing a therapy-specific perspective of the musculoskeletal system, nervous system and other body systems. BIO301 begins to develop a medical-based thought process to problem solving. It is a pre-requisite class for the advanced anatomy class in the Master of Occupational Therapy Program.

Connection to Concordia University Global Learning Outcomes (GLOs):

- **Christian Faith** - Our graduates are grounded in the Christian faith while also recognizing other major worldviews and how they differ from a Christian understanding of the world as they learn about God's design for how the human body moves.
- **Critical Thinking/Creative Problem Solving** - Our graduates think rationally, critically, and creatively as they learn about the human body.
- **Analytical Fluency** - Our graduates work with data effectively with their classmates in order to learn more about the human body and take that knowledge gained to serve others in a rehabilitation setting.

Program/Department Learning Outcomes (PLOs):

Students will be developing basic rehabilitation skills through discussion and class participation activities, increasing their knowledge about different cultures around the world. Students will demonstrate the ability to communicate in a professional manner both orally and in written communication through small group work, a group presentation, and participation in online discussion forums. Students will begin to practice thinking about medical ethics in a rehabilitation context and be able to solve problems in an ethical manner through exposure to clinical case studies and cut the nerve practice.

Click here for a link to Concordia's program, major and department learning outcomes:

<https://www.cuw.edu/about/offices/institutional-effectiveness/outcome-statements.html>

Program Level Student Learning Outcomes:

Rehabilitation Science (Undergraduate) – CUW

- Learning Outcome One: Students will be able to demonstrate basic rehabilitation skills.
- Learning Outcome Two: Students will demonstrate the ability to communicate in a professional manner both orally and in written communication.
- Learning Outcome Three: Students will apply medical ethics in a rehabilitation context and be able to solve problems in an ethical manner.
- Learning Outcome Four: Students will demonstrate the ability to use research as a means to promote evidence-based practice.
- Learning Outcome Five: Students will be able to explain and understand the impact of culture in rehabilitation.
- Learning Outcome Six: Students will be able to apply the tenets of Christian faith to their interactions in a health care environment with colleagues and patients.

Course Objectives:

Upon completion of BIO301, students will be able to:

1. Reflect on the relationship between personal faith and life choices that support justice, reconciliation, and peace.
2. Correctly spell Latin, Greek, and English terms commonly used in the study of human anatomy.
3. Communicate using anatomical terminology.
4. Illustrate and describe directional and movement terms of anatomical structures.
5. Identify the structure and describe the function of human cells, tissues, and organ systems, including the musculoskeletal, cardiovascular, and nervous systems.
6. Explain bone structure and physiology
7. Explain muscle structure and physiology
8. Describe the electrical system and physiology of the heart.
9. Interpret the structures and functional of the brachial plexus.
10. Compare parasympathetic vs. sympathetic nervous system
11. Identify root levels of major nerves of the human body.
12. Identify major bones, bony landmarks, muscles, nerves and vascular structures of the human body.
13. Locate proximal and distal attachments and innervations of major muscles of the human body.
14. Name and describe the primary actions of the major muscles of the human body using planes and axes.
15. Demonstrate how anatomical structures contribute to functional movement with regards to planes and axes.