KINnected

Western University
Faculty of Health Sciences

Western HealthSciences

**School of Kinesiology**

**KIN 1060A | KIN 2222A | HS 2300A**

# Systemic Approach to Functional Human Anatomy

**Summer intersession 2024**

Welcome to **Functional Human Gross Anatomy**! Our teaching team is delighted to have you join us this term. In this course, we will focus on learning the basics of human anatomy, with specific attention to the **musculoskeletal** (muscles and bones), **nervous** (brain, spinal cord, and neurons), **cardiovascular** (heart and vessels), and **respiratory** (lungs and breathing) systems. Anatomy is a fundamental discipline that will support your understanding of core concepts related to health and disease in your degree ahead. The course is cumulative, and voluminous in nature, so we encourage you to **stay involved**, **ask questions**, and **participate** as much as possible – be sure to complete the online lecture modules before coming to your lab section. We look forward to meeting you soon!

## Learning Outcomes:

By the end of this course, a successful student should be able to:

- Communicate the locations, functions, and movements of structures using correct anatomical terms.
- Use pictures and words to outline principles of neuronal conduction.
- Explain the basic structure of the nervous system, differentiating between the central and
- peripheral nervous systems, as well as between the somatic and autonomic nervous
- systems.
- Describe how the autonomic nervous system regulates basic homeostasis in the body.
- Identify major surface anatomy landmarks, bones, joints, muscles, nerves, and vessels
- related to the upper limb, lower limb, and trunk by name, location, and function.
- Explain how the heart and lungs interact to form the cardiorespiratory system,
- differentiating between systemic and pulmonary circuits.
- Describe muscle contraction, key events of the cardiac cycle, and mechanics of
- breathing.
- Explain and predict functional implications of musculoskeletal, neural, and
- cardiorespiratory changes in aging, exercise, and injury based upon clinical signs and symptoms.

Overall, the spirit of this course is to foster authentic learning, critical thinking, active questioning, and an appreciation for health and disease from a gross anatomical perspective.

| | |
|---|---|
| **Instructor:** Jacob Fanous<br>**Email:** *jfanous3@uwo.ca*<br>**Office Hours:** By appointment<br><br>**TAs:** | **Lectures:** Online, asynchronous via OWL Brightspace<br>**Labs:** [redacted]<br>Lab times listed below |

**NOTE:** All course information including grades, assignment outlines, deadlines, etc. are available via OWL Brightspace. Check the website regularly for course announcements.
You can also download the "OWL Brightspace Pulse" app on your mobile device – you will need to ensure notifications are turned on under the "communication" tab when you log into OWL Brightspace on your computer, to receive notifications on the app.

**Calendar Course Description (including prerequisites/anti-requisites):**
A gross anatomical description of systemic structure and function of the human body, with emphasis on skeletal, muscular, and cardiovascular systems. Integration between systems will be discussed using clinical examples related to sport, medicine, and physical therapy. This is an introductory level, lecture-based course for students in the Faculty of Health Sciences.

**Anti-requisite(s):**
Anatomy and Cell Biology 2200A/B; Anatomy and Cell Biology 2221; Health Sciences 2330A/B; the former Anatomy and Cell Biology 3319.

**Prerequisite(s):**
Kinesiology: Registration in year two of the Kinesiology program
Health Studies and Non-FHS: Grade 12U Biology or equivalent is strongly recommended.

**You are responsible for ensuring that you have successfully completed all course prerequisites, and that you have not taken an anti-requisite course.**

**Statement on Prerequisite Checking**
Unless you have either the requisites for this course or written special permission from your Dean to enroll in it, you may be removed from this course, and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.

**If you wish to enroll in this course without the stated prerequisite(s), you must obtain written approval from the course coordinator. The approval should then be forwarded to your academic counsellor.**

## Important Dates:

| | | |
|---|---|---|
| Quiz 1 | Unit 1: Intro to Anatomy | Opens May 15 – Closes May 22 |
| Quiz 2 | Unit 2: Nervous System | Opens May 22 – Closes May 29 |
| Quiz 3 | Unit 3: Upper Limb | Opens May 29 – Closes June 5 |
| Quiz 4 | Unit 4: Lower Limb + Trunk | Opens June 5 – Closes June 19 |
| Quiz 5 | Unit 5: Cardiorespiratory | Opens June 12 – Closes **June 23** |

| | | |
|---|---|---|
| Final Exam | Unit 1 – Unit 5 | TBD (June 24, 25) ***in-person** |

## Lab Schedule:

| | | |
|---|---|---|
| Sec 002 | Thursday, May 30<br>Friday, May 31<br>Thursday, June 20<br>Friday, June 21 | 9am – 12pm |

| | | |
|---|---|---|
| Sec 003 | Thursday, May 30<br>Friday, May 31<br>Thursday, June 20<br>Friday, June 21 | 1pm – 4pm |

## Schedule expectations:

Every week, you are expected to complete the following:

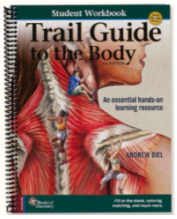
- Online modules for each unit (asynchronously via OWL Brightspace)
- Provide feedback and questions you have regarding that week's content using the forums on OWL Brightspace
- Complete the MCQ unit quiz.
    - Quizzes are online and should be treated as closed book.
    - All quizzes will open Wednesday at 4pm (as per important dates above).
    - All quizzes will close at 4pm of the date listed under important dates above.
- Complete MCQ practice online via PeerWise

***It is imperative that you keep up with the content**

Course topic outline at a glance:

| Week | Date | | Unit | Topic(s) |
|---|---|---|---|---|
| 1 | MAY | 13 – 17 | 1 | 1A: Anatomical terminology and bones |
| | | | | 1B: Joints, cartilage, and muscle |
| 2 | | 20 – 24 | 2 | 2A: Central and peripheral nervous system |
| 3 | | 27 – 31 | 3 | 3A: Axilla and brachial plexus |
| | | | | 3B: Shoulder, arm, and elbow |
| | | | | 3C: Forearm and hand |
| 4 | JUNE | 3 – 4 | 4 | 4A: Hip to Knee |
| | | | | 4B: Leg and foot |
| 5 | | 10 – 14 | | 4C: Trunk |
| 6 | | 17 – 21 | 5 | 5A: Cardiovascular system |
| | | | | 5B: Respiratory system |

## Required Course Material:




This term, we have an **OPTIONAL** textbook available for purchase: Trail Guide to the Body, 6th ed. Student Workbook by Books of Discovery. This is a great study tool for our MSK content and for applying lecture content in the lab. Your best option is to select the hard copy text for purchase.
All other content will be presented in the course notes. If you wish to purchase/use a supplementary resource (which is completely optional) any anatomy textbook will do.

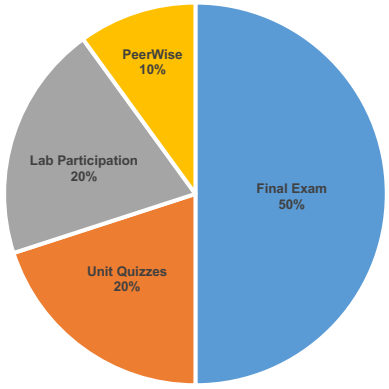
## Course Evaluation:

Evaluation in this course will be divided across 4 areas. Please note that these are subject to change up until the start of the course.

1. Final Exam - 50%
    - The final exam will be cumulative, in-person, and on paper.
    - Units 1-5 will be covered equally based on their representation in lecture.
2. Unit Quizzes (5) - 5% each. 20% total
    - There will be five quizzes in total; however, only the top four scores will be counted, each worth 5%. This allows you to miss one quiz without penalty. Note, this includes any quiz missed with academic accommodation.
    - 30mins, 15 MCQ quiz, linear format, on OWL Brightspace.
    - Each quiz will open on the Wednesday at 4pm as mentioned above, and will remain

open for a week (closing on the following Wednesday at 4pm). EXCEPT for Quiz 5, which will close on Sunday June 23rd at 11:59pm.
    - A quiz cannot be submitted after it has been returned to the class, thus THERE ARE NO MAKEUP QUIZZES.
    - If more than one quiz is missed without approved academic considerations, a grade of zero will be assigned. If academic considerations are approved for two or more missed quizzes, the weight of those sessions will be redistributed
3. Lab Participation - 20% total
    - Attend the 4 x 3hr in-person labs and complete the in-class bell-ringer questions. Each lab attended is worth 5%.
        - This will involve a mini bell-ringer (3-5 questions) at the end of lab, you will be **graded on completion** – not correctness!
    - Ensure that you have watched the lectures and are ready to participate, ask questions, interact with the models.
    - This a great time to review your anatomy knowledge using the available models.
4. PeerWise Participation - 10% total
    - Create 10 questions for your peers for 2.5%
    - Answer + rate 30 questions from your peers for 7.5% max
    - Each unique question created/answered = 0.25%

**NOTE**:
**All labs** are in-person and **mandatory** to pass the course.
You **must complete** at least **3 of the 5 quizzes** to pass this course.
The **final exam** will be **in-person**, there is **no online alternative**.




## Missed Assessment/Academic consideration:

The University recognizes that a student's ability to meet their academic responsibilities may, on occasion, be impaired by extenuating circumstances, including short-term illness or injury. Reasonable academic consideration is a cooperative process between the University, the student, and academic staff. All participants in the process must act in good faith, and fulfil their respective obligations, if it is to succeed.

Students who experience an extenuating circumstance (i.e., illness, injury, or other legitimate conflict) sufficiently significant as to temporarily render them unable to meet academic requirements, may submit a request for academic considerations through the following routes:

i. For medical absences, submitting a Student Medical Certificate (SMC) signed by a licensed medical or mental health practitioner, in order to be eligible for academic considerations; or
ii. For non-medical absences, submitting appropriate documentation (e.g., obituary, police report, accident report, court order, etc.) to academic advising office in their faculty of registration, in order to be eligible for academic considerations.

**If academic considerations are approved,**
**the weighting of an assessment will be redistributed onto the final exam.**

## Course/University Policies

1. The website for Registrarial Services is http://www.registrar.uwo.ca.

In accordance with policy, the centrally administered e-mail account provided to students will be considered the individual's official university e-mail address. It is the responsibility of the account holder to ensure that e-mail received from the University at his/her official university address is attended to in a timely manner.

2. **Academic Offences**

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, in the Academic Calendar (westerncalendar.uwo.ca).

**Plagiarism**

Student work is expected to be original. Plagiarism is a serious academic offence and could lead to a zero on the assignment in question, a zero in this course, or your expulsion from the university. You are plagiarizing if you insert a phrase, sentence or paragraph taken directly from another author without acknowledging that the work belongs to him/her. Similarly, you are plagiarizing if you paraphrase or summarize another author's ideas without acknowledging that the ideas belong to someone else. All papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between Western University and Turnitin.com (www.turnitin.com).

**Re-submission of Previously Graded Material**

Without the explicit written permission of the instructor, you may not submit any academic work for which credit has been obtained previously, or for which credit is being sought, in another course or program of study in the University or elsewhere.

**Use of Statistical Pattern Recognition on Multiple Choice Exams**

Computer-marked multiple-choice tests and/or exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating.

***3.*** **Use of Electronic Devices**

**During Exams:** Unless you have medical accommodations that require you to do so, or explicit permission from the instructor of the course, you may not use any electronic devices during ANY tests, quizzes, midterms, examinations, or other in-class evaluations.

**During Lectures and Tutorials:** Although you are welcome to use a computer during lecture and tutorial periods, you are expected to use the computer for scholastic purposes only, and refrain from engaging in any activities that may distract other students from learning. From time to time, your professor may ask the class to turn off all computers, to facilitate learning or discussion of the material presented in a particular class. **Unless explicitly noted otherwise, you may not make audio or video recordings of lectures – nor may you edit, re-use, distribute, or re-broadcast any of the material posted to the course website.**

**Personal Response Systems** ("clickers") may be used in some classes. For those classes in which we use this technology, it is your responsibility to ensure that the device is activated and functional. You must speak with the course instructor immediately, if you have any

concerns about whether or not your clicker is malfunctioning.
You must use only your own clicker. For all components of this course in which clicker records are used to compute a portion of the grade:

- The use of somebody else's clicker in class constitutes a scholastic offence;
- The possession of a clicker belonging to another student will be interpreted as an attempt to commit a scholastic offense

## 4. Academic Considerations and Absences from Lectures and Assessments

***Religious Accommodation***

When a course requirement conflicts with a religious holiday that requires an absence from the University or prohibits certain activities, students should request (in writing) any necessary academic considerations at least two weeks prior to the holiday to the academic counsellors in their Home Department. Additional information is provided in the Western Multicultural Calendar.

***Academic Accommodation***

Please contact the course instructor if you require lecture or printed material in an alternate format or if any other arrangements can make this course more accessible to you. Students with ongoing accommodation needs within this course are also encouraged to contact Accessible Education, which provides recommendations for accommodation based on medical documentation or psychological and cognitive testing. The policy on Academic Accommodation for Students with Disabilities can be found here.

***Academic Consideration***

The University recognizes that a student's ability to meet their academic responsibilities may, on occasion, be impaired by extenuating circumstances that are medical or compassionate in nature. These extenuating circumstances may be acute (short term), or it may be chronic (long term), or chronic with acute episodes. In all cases, students are advised to consult with the academic counsellors in their home units, at their earliest opportunity. Academic counsellors may refer students to Accessible Education for ongoing academic accommodations.

Most forms of academic consideration require documentation, and this documentation is to be submitted to academic counsellors within five (5) business days of their return to academic responsibilities. Any such documents will be retained in the student's file, and will be held in confidence in accordance with the University's Official Student Record Information Privacy Policy. Once the petition and supporting documents have been received and assessed, appropriate academic considerations shall be determined by academic counseling, in consultation with the student's instructor(s). Academic considerations may include extension of deadlines, waiver of attendance requirements for classes/labs/tutorials, arranging Special Exams or Incompletes, re-weighting course requirements, or granting late withdrawals without academic penalty. Academic considerations shall be granted only where the documentation indicates that the onset, duration and severity of the illness are such that the student could not reasonably be expected to complete their academic responsibilities. (Note – it will not be sufficient to provide documentation indicating simply that the student "was seen for a medical reason" or "was ill.").

Whenever possible, students who require academic considerations should provide notification and documentation in advance of due dates, examinations, etc. Under no circumstances are students expected to submit rationales for (or documentation of) any absences, to course instructors. Students are, however, required to follow-up with course instructors, in a timely fashion, to identify the ways in which the academic consideration will be implemented.

**Examination Conflicts**
A student completing tests or examinations with flexible submission times (e.g., where one or more evaluation is a take-home assessment) cannot request alternative arrangements unless a conflict cannot be avoided by rescheduling writing the exam to a different time within the window specified by the instructor. This applies to direct conflicts as well as "heavy load" conflicts (e.g., three exams within a 23-hour period). The student should discuss any concerns about a potential conflict and/or request academic considerations with their academic counselling unit prior to the deadline to drop a course without academic penalty

In the case of online tests and examinations, use of a "Conflict Room," wherein student can write two proctored exams concurrently, will be interpreted as arrangements for continuous proctoring.

5. ***Contingency Plan for an In-Person Class Pivoting to 100% Online Learning***

In the event of a situation that requires this course to pivot to online content delivery, all remaining course content will be delivered entirely online, either synchronously (i.e., at the times indicated in the timetable) or asynchronously (e.g., posted on OWL for students to view at their convenience). The grading scheme will **not** change. Any remaining assessments will also be conducted online as determined by the course instructor

Note that disruptive behaviour of any type during online classes, including inappropriate use of the chat function, is unacceptable. Students found guilty of Zoom-bombing a class or of other serious online offenses may be subject to disciplinary measures under the Code of Student Conduct.

6. **Online Proctoring**

Tests and examinations in this course may be conducted using a remote proctoring service. By taking this course, you are consenting to the use of this software and acknowledge that you will be required to provide **personal information** (including some biometric data) and the session will be **recorded**. Completion of this course will require you to have a reliable internet connection and a device that meets the technical requirements for this service. More information about this remote proctoring service, including technical requirements, is available on Western's Remote Proctoring website at: https://remoteproctoring.uwo.ca.

7. **Grades**

Where possible assignment objectives and rubrics will be posted on OWL.
Generally, students can expect some form of feedback on their performance in a course before the drop date.

| | | |
|---|---|---|
| A+ | 90-100 | *One could scarcely expect better from a student at this level* |
| A | 80-89 | *Superior work that is clearly above average* |
| B | 70-79 | *Good work, meeting all requirements and eminently satisfactory* |
| C | 60-69 | *Competent work, meeting requirements* |
| D | 50-59 | *Fair work, minimally acceptable.* |
| F | below 50 | *Fail* |

**Rounding of Grades** (for example, bumping a 79 to 80%):
This is a practice some students request. The final grade documented is the grade that you have achieved. There is no rounding to the next grade level, or 'giving away' of marks. Please don't ask me to do this for you; the response will be "please review the course outline where this is presented".

**Appealing a Grade Within this Course**
You have the right to appeal any grade within this course. The grounds for a grade appeal

may be one or more of: medical or compassionate circumstances, extenuating circumstances beyond the student's control, bias, inaccuracy, or unfairness. All grounds advanced in a request for relief must be supported by a clear and detailed explanation of the reasons for the request together with all supporting documentation.

Appeals generally proceed in this order:

1. Course instructor (informal consultation)
2. Department Chair (submission of written request)
3. The Dean of the Faculty (submission of written request)

In the case of perceived procedural unfairness, steps 2 and 3 are carried out within the Department and Faculty offering the course. In the case of extenuating medical or compassionate circumstances that impact on a grade, steps 2 and 3 are carried out within a student's Home Department and Faculty.

A request for relief against a mark or grade must be initiated with the instructor as soon as possible after the mark is issued. In the event that the instructor is not available to the student, or fails to act, or if the matter is not resolved satisfactorily with the instructor, a written request for relief must be submitted to the Chair of the Department within three weeks of the date that the mark was issued. In the case of a final grade in a course, the written request for relief must be submitted to the Chair of the department by January 31st (for first-term half courses) or June 30th (for second-term half courses or full-year courses

8. **Support Services**

**Health and Wellness:**

Information regarding health and wellness-related services available to students may be found at http://www.health.uwo.ca/.

Students who are in emotional/mental distress should refer to Mental Health@Western (http://www.health.uwo.ca/) for a complete list of options about how to obtain help.

There are various support services around campus and these include, but are not limited to:
*Student Development Centre* -- *http://www.sdc.uwo.ca/ssd/*
*Ombudsperson Office* -- *http://www.uwo.ca/ombuds/*

9. **Student Code of Conduct**

The purpose of the Code of Student Conduct is to define the general standard of conduct expected of students registered at Western University, provide examples of behaviour that constitutes a breach of this standard of conduct, provide examples of sanctions that may be imposed and set out the disciplinary procedures that the University will follow. For more information, visit https://www.uwo.ca/univsec/pdf/board/code.pdf