

ANAT 315: CLINICAL HUMAN MUSCULOSKELETAL ANATOMY

General Information

Course and Section #:	ANAT 315 - 001
Term and Year:	Fall 2021
Course schedule:	Lectures: Tuesday and Thursday; 8:35am - 9:25am Laboratory: Wednesday (section 002) -- 9:35-11:25 am and Friday (section 003); 9:35 - 11:25am – LOCATION: Strathcona Anatomy & Dentistry Building, rm 2/49
Number of credits	3 credits

Course Director / Instructor Information

Name and Title:	Dr. Nicole Ventura, Associate Professor
Office:	SADB, rm. 2/22 (514-398-3722)
E-mail:	nicole.ventura@mcgill.ca
Virtual office hours:	Refer to Course Calendar in MyCourses
Communication plan:	1. Virtual office hours via ZOOM 2. Discussion board via MyCourses 3. E-mail for specific course inquiries (anticipated response time: 2-3 days)

TA Information

Names:	Mr. Ethan Bazos & Miss Dona Bachour
E-mails:	ethan.bazos@mail.mcgill.ca & dona.bachour@mail.mcgill.ca
Laboratory Section:	Ethan - Wednesday labs; Dona - Friday Labs
Communication plan:	1. In-person anatomy laboratory time 2. Discussion boards via MyCourses

Course Overview

Anatomy & Cell Biology: The regional human gross anatomy of the skeleton, joints, muscles and neurovascular structures of the body as it relates to physical and occupational therapists and kinesiologists. Laboratories include the study of prepared cadaveric specimens and the completion of a cadaveric-dissection.

Course Description

Clinical Human Musculoskeletal Anatomy (ANAT 315) is designed to provide students with detailed knowledge of human gross anatomy as it relates to the musculoskeletal system, discussing both the structural and functional relationships of the structures within this system of the body. Particular emphasis will be placed on the following topics: skeletal morphology, muscle identification and function, joint classification and movement in addition to

the neurovascular supply of the musculoskeletal system beginning with the trunk, followed by the upper limb and ending with the lower limb. This course also entails a weekly laboratory component whereby students will have the opportunity to study and explore the human body through both cadaveric prosections and dissection.

Instructor Message Regarding Course Delivery Format

The blended-learning approach in ANAT 315 will provide students with the same knowledge set as if it was being delivered exclusively in person. Student engagement is of particular interest and it is my priority to provide students with interactive virtual lecture formats alongside in-person, hands-on laboratory content to foster and support their learning. Creating an anatomy community whereby students feel comfortable participating, asking and answering questions is of great importance. Recognizing the challenges associated with online lecturing, I plan to provide students in this course with all of the resources necessary to be successful, while encouraging students to be independent learners. I look forward to getting to know students better during in-person course time.

Learning Outcomes

By the end of this course, students will be able to ...

1. Comfortably use anatomical terminology to describe structural characteristics, specimen/image orientation, location and types of movement.
2. Outline and discuss the major components and morphological features of the axial and appendicular skeletons.
3. Discuss and describe the classifications and movements of the joints of the trunk and limbs of the body. Describe the reinforcing and associated structures of these joints.
4. Identify the muscles of the trunk and limbs of the body, describe their function and outline their organizational relationship to other structures.
5. Outline the skeletal attachments (origins and insertions) of the muscles of the trunk, upper and lower limbs.
6. Identify the neurovascular structures of the trunk, upper and lower limbs. Outline their course through the body and describe the function they provide at their peripheral target (type of innervation or blood supply).
7. Carry out problem solving and critical thinking techniques to apply anatomical theory to common clinical implications.
8. Demonstrate and carry out proper dissection techniques.
9. Demonstrate professional respect and responsible care of human specimens.

Please refer to each individual lecture file for topic/content specific learner objectives.

Instructional Method

Lectures:

ANAT 315 will utilize a “flipped classroom” approach, whereby students will be responsible for watching selected pre-recorded lectures posted to MyCourses (flexible activity) and later participate in fixed (synchronous) question and answer (Q&A) sessions on Zoom that will focus on the clinical application of content topics. All course lecture content will be recorded and posted to myCourses. It is the expectation that students will attend and actively participate in fixed virtual sessions and online discussion forums on myCourses.

Laboratories:

All ANAT 315 laboratory sessions will be held in-person in the anatomy laboratory (SADB rm 2/49). Students are **REQUIRED to attend only the lab section to which they have been assigned and respect their learning-group assignment as well**. The expectation is that students actively participate during in-person laboratory sessions on a weekly basis; this demands that students prepare before coming to lab. Labs will be carried out in a small groups and discussions will be facilitated by Teaching Assistants (TAs) and Undergraduate Course Assistants (UCAs).

PLEASE NOTE: The lab component is an integral part of this course; it is therefore **essential for students to participate fully in both components of this course in order to comprehend the material and to optimize success**. Should a student be unable to participate in their weekly lab section indefinitely for a particular reason, **they will not be able to complete the course**. Students will be required to consult with their student affairs advisor to discuss alternative solutions. Labs will involve the review of cadaveric prosections (already dissected material) and students will also complete a group dissection on the lower extremity. **Students are therefore, required to wear a lab coat, gloves, closed toe shoes and safety glasses and abide by the safety rules and regulations of the Anatomy lab at all times**. It is expected that all students come to the lab prepared to work on the self-study activities during their **assigned** laboratory section. **All students must read and electronically sign off on the Code of Conduct Form via MyCourses**. Students will not be provided access to course content on MyCourses, without confirmation of their signing to the Anatomy Laboratory Code of Conduct.

Technologies We Will Use:

- [myCourses](#)
- Zoom web conferencing tool - Information for students can be found [here](#).
- Polling @ McGill (also known as the Student Response System or SRS, or previously known as clickers) is a technology-supported questioning strategy to assess students' learning and encourage active classroom participation. At McGill, we are using a web-based polling system, called TurningPoint Cloud. During a class with polling questions, students respond from their personal device (smartphone, tablet, or laptop) - [FAQs for Students](#)
 - Please visit the Polling @ McGill [website](#) to set-up your FREE account to participate. This participation will not be graded. This type of informal assessment will help give you an idea of the types of questions found on your exams!
- [3D4 Medical - Complete Anatomy app](#):
 - *Please refer to the Announcements in myCourses for the steps in obtaining your FREE license for the Complete Anatomy app.*

Expectations for Student Participation

While fixed (synchronous) activities in ANAT 315 are not mandatory to attend, it is **strongly encouraged** that students participate in the weekly Q&A sessions and, more importantly, weekly in-person anatomy laboratories. This is a challenging and content heavy course. These sessions will guide you in your study of anatomy and enhance your understanding of the material. Having personal audio will be an important component of these sessions as you will be asked to participate in small group discussions. Students may also be asked to participate with their video on for various course activities such as palpations or body movements. Students who do not

feel comfortable putting their video on will not be required to do so. Please check myCourses and your email regularly for any course updates.

It is the expectation that students conduct themselves in a **professional and respectful** manner. The University recognizes the importance of maintaining teaching spaces that are respectful and inclusive for all involved. To this end, offensive, violent, disrespectful or harmful language arising in contexts such as the following may be cause for disciplinary action: (1) Username (use only your legal or preferred name - first and last), (2) Visual backgrounds, (3) “Chat” boxes. Additionally, any of the above-mentioned behaviours will not be tolerated in the context of small group discussions.

Recordings of Sessions

Please read the Guidelines on Remote Teaching and Learning [<https://www.mcgill.ca/tls/instructors/class-disruption/strategies/guidelines-remote>] and the course outline for this course in myCourses. You will be notified through a ‘pop-up’ box in Zoom if a lecture or portion of a class is being recorded. By remaining in sessions that are recorded, you agree to the recording, and you understand that your image, voice, and name may be disclosed to classmates. You also understand that recordings will be made available in myCourses to students registered in the course.

All fixed (synchronous) lectures will be recorded and made available in myCourses so that students who log off will be able to watch the recording later. Laboratory sessions are not recorded.



Required/Recommended Course Materials

Textbook Resources: These resources are **not required**. The instructor’s recommendations are below. Students are encouraged to purchase a textbook that suits their study needs and habits.

- Gilroy, Anatomy an Essential Textbook, Second Edition, Thieme, New York, 2013 (**Highly Recommended**)
- Gilroy, Atlas of Anatomy, Third Edition, Thieme, New York, 2016 (recommended/optional)
- Rohen, J.W., Yokochi, C., Lutjen-Dreoll, E. (2015). Anatomy: A Photographic Atlas, 9th ed. Lippincott Williams & Wilkins. (**Highly Recommended**)

Textbooks have been put on reserve at the Libraries; earlier versions of these textbooks are adequate. Other texts such as Netter’s Atlas and Moore’s Clinical Anatomy are also sufficient for this course.

The Library provides online access to course materials in its [Course Reserves](#) system. The Library links to online materials (both e-books and e-journal articles.)

Virtual Anatomy App: 3D4 Medical - Complete Anatomy 2022. This is a **recommended** course material. Students will be provided with a FREE license by the University. Instructions to acquiring the app can be found on myCourses. This will assist you in studying for the course.

Other materials to consider/acquire:

- While not a requirement, students may be asked to participate in small group discussions, and at times be asked to put their camera on. As such, some type of reliable web camera and microphone would be useful to allow for effective and efficient student communication. The camera on a tablet, computer, or smartphone would be adequate along with the devices built in microphone or a set of headphones with microphone capability
- To participate in anatomy laboratory sessions, students will need to bring with them the following list of items, many of which can be purchased at the University Bookstore.
 1. a lab coat (preferably knee length)
 2. ocular protection (safety glasses or a face shield)
 3. gloves (purchase a box or two, you likely use multiple pairs per lab)
 4. close-toed shoes
 5. combination/key lock – as your personal bags/belongings are not permitted inside the anatomy laboratory, you can store them in lockers in the Strathcona building

Learner Assessment/Evaluation

Students will **NOT** be allowed to write exams prior to the scheduled date. The final exams will be cumulative. The midterm and final practical exams will include both lecture and lab material.

The passing grade in the Faculty of Medicine and Education is 55%.

ASSESSMENT	ASSESSMENT DETAIL & DEADLINES	% OF FINAL GRADE
Midterm	Available between October 18-19 (completed online via myCourses) Included content: Lectures 1-11 + Introductory lecture series; Labs 1-3 Time for completion: 2 hours (should only take 1.5 hours to complete)	25%
Lab Quizzes	Quiz 1 → Content: labs 1-3; available between Oct 4 – Oct 8 Quiz 2 → Content: labs 4-6; available between Nov 1 – Nov 5 (completed online via myCourses)	10% (5% each)
Oral Lab Exam	Dec 1 – Wednesday Lab Section only; held during scheduled lab time Dec 3 – Friday Lab Section only; held during scheduled lab time	10%
Final Lab Exam	Deadline for Submission: TBD Content: Cumulative – all laboratory content	20%
Final Exam	Deadline for Submission: TBD Content: Cumulative approach, slightly more focused on lectures 12-23	35%

*In-course exams and quizzes will be submitted via myCourses with the exception of the oral lab exam. **All online assessments will begin and end at 12:00am on the specified dates above.** Please familiarize yourself with the following link: [FAQs for students using myCourses: Assignments.](#)*

Department of Anatomy & Cell Biology Midterm Exam/In-Course Assessment Deferral Policy

A midterm exam or other in-course assessment (i.e. quiz, assignment, paper, etc.) in a course administered by the Department of Anatomy & Cell Biology may only be deferred in the case of a **justified absence** due to serious illness or significant extenuating circumstances AND when **valid documentation** is received by the Course Coordinator within **FIVE** working days of the original midterm exam or due date.

If the deferral request is accepted by the Course Coordinator, students may be offered one or both of the accommodations below, depending on the grading structure of the course:

- (a) Add the weight of the in-course assessment to another course component
- (b) Write a deferred midterm exam/submit a deferred assessment which will be scheduled/due within 10 days of the original midterm exam/due date

MIDTERM EXAMS: If choosing the following above option...

- (a) The weight of midterms will be added to the final exam
- (b) Deferred midterms will be written in the week immediately following the original midterm dates.

LAB QUIZZES: Students will only be able to add the weight of a deferred lab quiz to the remaining lab quizzes equally. If both lab quizzes are deferred, the weighting will be added to the weight of the Final Lab Exam.

Writing a lab quiz outside of the provided timeframe **will not be permitted**.

Grading Policy for the Department of Anatomy & Cell Biology

The Department of Anatomy & Cell Biology will **NOT** revise/upgrade marks except on sound academic grounds. Once computed, the marks in this course will **NOT** be altered/increased arbitrarily. Decimal points will be "rounded off" as follows: if the final aggregate mark is computed to be 79.5%, the mark will be reported as 80% (an A-); a final aggregate mark of 79.4% will be reported as 79% (a B+). These marks are **FINAL and non-negotiable**.

Please see the full policy, including information on valid documentation requirements, here:

<https://mcgill.ca/anatomy/undergraduate/policies-resources>

University Policy on Reassessments and Rereads

Please see the eCalendar for policies regarding reassessments of coursework and rereads of final exams:

www.mcgill.ca/study/university_regulations_and_resources/undergraduate/gi_final_examinations

Research Participation

Near the mid-point of this semester, you will be invited to participate in an educational research study being conducted by Dr. Sean McWatt in the Department of Anatomy and Cell Biology. **Those who choose to participate in the study will receive a 1% bonus grade on the Laboratory Exam in ANAT 315.** You will also have the opportunity to complete an alternate assignment in order to obtain the bonus grade or decline to participate without penalty (no bonus grade awarded). More information on the study and your rights and responsibilities as a participant will be shared in class and on myCourses.

COVID-Related Protocols

- Before coming to campus you should ask yourself the following Daily Health Check questions found [here](#). If you answer 'YES' to any of these, please **STAY HOME!**
- If you are experiencing COVID-compatible symptoms or have been in contact with an individual who as tested positive for COVID, please **STAY HOME** and follow public health directives concerning quarantine.
- Students in need of academic considerations **will be required to declare their specific COVID-19 related request for academic considerations through a single online form** – this form can be accessed in MINERVA under the “Personal” tab.

McGill Policy Statements

Language of Submission

“In accord with McGill University’s Charter of Students’ Rights, students in this course have the right to submit in English or in French any written work that is to be graded. This does not apply to courses in which acquiring proficiency in a language is one of the objectives.” (Approved by Senate on 21 January 2009)

Note: In courses in which acquiring proficiency in a language is one of the objectives, the assessments shall be in the language of the course.

« Conformément à la Charte des droits de l’étudiant de l’Université McGill, chaque étudiant a le droit de soumettre en français ou en anglais tout travail écrit devant être noté (sauf dans le cas des cours dont l’un des objets est la maîtrise d’une langue). »

Academic Integrity

“McGill University values academic integrity. Therefore, all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the Code of Student Conduct and Disciplinary Procedures” (see [McGill’s guide to academic honesty](#) for more information). (Approved by Senate on 29 January 2003)

« L’université McGill attache une haute importance à l’honnêteté académique. Il incombe par conséquent à tous les étudiants de comprendre ce que l’on entend par tricherie, plagiat et autres infractions académiques, ainsi que les conséquences que peuvent avoir de telles actions, selon le Code de conduite de l’étudiant et des procédures disciplinaires (pour de plus amples renseignements, veuillez consulter le [guide pour l’honnêteté académique de McGill](#)). »

Additional Statements:

- “The [University Student Assessment Policy](#) exists to ensure fair and equitable academic assessment for all students and to protect students from excessive workloads. All students and instructors are encouraged to review this Policy, which addresses multiple aspects and methods of student assessment, e.g. the timing of evaluation due dates and weighting of final examinations.”
- “Note that to support academic integrity, your assignments may be submitted to text-matching or other appropriate software (e.g., formula-, equation-, and graph-matching).”
- “© Instructor-generated course materials (e.g., handouts, notes, summaries, exam questions) are protected by law and may not be copied or distributed in any form or in any medium without explicit permission of the instructor. Note that infringements of copyright can be subject to follow up by the

University under the Code of Student Conduct and Disciplinary Procedures.”

- *“As the instructor of this course I endeavor to provide an inclusive learning environment. However, if you experience barriers to learning in this course, do not hesitate to discuss them with me and the [Office for Students with Disabilities](#), 514-398-6009.”*
- “McGill University is on land which has long served as a site of meeting and exchange amongst Indigenous peoples, including the Haudenosaunee and Anishinabeg nations. We acknowledge and thank the diverse Indigenous people whose footsteps have marked this territory on which peoples of the world now gather.”

« L’Université McGill est sur un emplacement qui a longtemps servi de lieu de rencontre et d’échange entre les peuples autochtones, y compris les nations Haudenosaunee et Anishinabeg. Nous reconnaissons et remercions les divers peuples autochtones dont les pas ont marqué ce territoire sur lequel les peuples du monde entier se réunissent maintenant. »
- “Content warning: Please be aware that some of the course content may be disturbing for some students. It has been included in the course because it directly relates to the learning outcomes. Please contact the instructor if you have specific concerns about this.”
- “[End-of-course evaluations](#) are one of the ways that McGill works towards maintaining and improving the quality of courses and the student’s learning experience. You will be notified by e-mail when the evaluations are available. Please note that a minimum number of responses must be received for results to be available to students.”
- “In the event of extraordinary circumstances beyond the University’s control, the content and/or evaluation scheme in this course is subject to change.”
- Additional policies governing academic issues which affect students can be found in the McGill Charter of Students’ Rights (see [document](#)).
- McGill has policies on sustainability, paper use and other initiatives to promote a culture of sustainability at McGill. (See the [Office of Sustainability](#).)
- Guidelines for the use of mobile computing and communications (MC2) devices in classes at McGill have been approved by the APC. Consult the [Guidelines](#) for a range of sample wording that may be used or adapted by instructors on their course outlines.

This syllabus is an important document and should be saved for future reference. It may be needed for credit transfer, employment, certification, or licensing purposes.