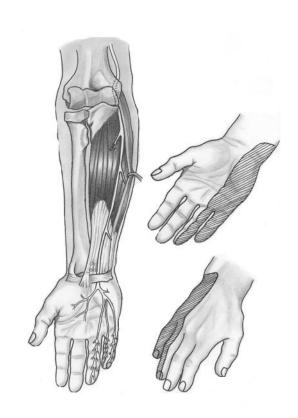
Western University Anatomy 2221: Functional Human Anatomy Fall 2019/Winter 2020



ANATOMY 2221: FUNCTIONAL HUMAN ANATOMY

INSTRUCTOR INFORMATION

Course Committee Chair: Dr. Brian Allman

Office: MSB 460, Medical Sciences Building

Phone: 519-661-2111 ext. 88689 Email: brian.allman@schulich.uwo.ca

Course Director for 2221: Dr. Michelle Mottola

Room 2214, 3M Centre

Phone 519 661-2111, ext. 85480 E-mail: mmottola@uwo.ca

Instructors: Dr. Brian Allman

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Dr. Michele Barbeau

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Dr. Katherine Willmore

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Dr. Michelle MottolaOffice: 3M Rm 2214

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Email: mmottola@uwo.ca

Organization:

There are **two lectures** and **one lab** per week. Where possible, the lecture material will explain and expand upon the topics covered in the subsequent lab. **The labs are designed as self-discovery experiences so that exploration is done by the student.** Professor(s) and Teaching Assistant(s) will supervise the labs, and help to facilitate learning, as needed. Doors to the lab shall remain locked at all times.

Lectures: Western Science Centre 55 Tuesdays & Thursdays, 2:30 - 3:30 p.m.

Labs: Dental Sciences Building 4001 Tuesdays <u>or</u> Thursdays, 3:30 - 5:30 p.m.

Teaching Assistants:

Each lab will have 2-4 graduate Teaching Assistants or volunteers - names TBA on the OWL site. **Office Hours:**

Professors are inclined to respond to email as "virtual office hours". If you would like to meet in person outside of official course time, it is expected that you will submit an email request.

OWL:

This site will be used primarily for lecture material, grades, announcements and calendar updates. Students with OWL issues should contact the Computer Support Centre at 519 661-3800

COURSE DESCRIPTION

NOTE: All course information including grades, assignment outlines, deadlines, etc. are available via OWL. Check the website regularly for course announcements.

Calendar Course Description (including prerequisites/anti-requisites):

The musculoskeletal, cardiovascular, respiratory, nervous, digestive, excretory, and reproductive systems with emphasis on locomotion and function.

Antirequisite(s): Anatomy and Cell Biology 2200A/B, Anatomy and Cell Biology 3200A/B, Health Sciences 3300A/B, Kinesiology 3222A/B, the former Anatomy and Cell Biology 3319.

Prerequisite(s): Grade 12U Biology (SBI4U) or equivalent.

Extra Information: 2 lecture hours, 2 laboratory hours. Restricted to students in the BSc Degree in Kinesiology.

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

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.

NOTE: If you wish to enroll in this course without the stated pre-requisite(s), you must obtain written approval from the course instructor. The approval should then be forwarded to your academic counsellor.

OBJECTIVES:

Upon completion of this course, students will be able to:

- Identify through cadaveric dissection the major structures of each of the body regions.
- Correlate structure and function as it applies to the gross anatomical features and overall function of the body systems
- Integrate basic physiological and biomechanical concepts to better understand the gross anatomical structure and function
- Provide practical examples of how the anatomical knowledge may be applied to the students' discipline
- Develop an ability to predict the anatomical basis for a number of injury mechanisms and congenital anomalies

COURSE MATERIALS

Lectures:

Posted on the OWL site are the lecture slides in e-format (e.g., pdf). It is expected that you use the notes in the e-format during lectures as a guide to your learning. **There are no required textbooks for this course.** That said, if a student chooses to supplement his/her learning with a textbook, here are some examples. Note, older/newer textbook editions would be acceptable.

Atlas of Clinical Gross Anatomy, Moses et al.

Human Anatomy: Color Atlas and Text, Gosling et al.

Labs:

Attendance in the labs is mandatory. Students are expected to attend all labs. Please let your instructor know if you plan to be absent. Dissections will be examined for completion each week. Posted on the OWL site are the lab instructions in e-format (e.g., pdf). Students are expected to print out a copy of the lab instructions and bring it to the lab each week. To assist in their lab dissections, students are required to use an atlas. There must be at least one atlas in use per group during the lab sessions. Some atlases are provided in the lab, but these must remain in the lab. If a student wishes to purchase an atlas, here are some examples. Note, older/newer atlas editions would be acceptable.

Atlas of Clinical Gross Anatomy, Moses et al.

Grant's Atlas of Anatomy, Agur & Dalley.

Atlas of Human Anatomy, Netter.

Color Atlas of Anatomy, Rohen, Yokochi, Lutjen-Drecoll

LAB TECHNICIANS:

Haley Linklater, Laboratory Supervisor: 519-661-2111 ext. 81540

Haley.Linklater@schulich.uwo.ca

Kevin Walker, Lab technician
519-661-2111 ext. x86831

kwalke56@uwo.ca

The Anatomy Learning Centre:

The Anatomy Learning Centre is located in **Room D4002** of the Dental Sciences Building, and it houses plastic models of most anatomical structures. The entrance code for the locked door will be given out during the first lab.

EVALUATION:

Course	Type of Exam	<u>Duration</u>	% of Final
<u>Grade</u>			
Kin 2221	Written Exam #1 (October 2019)	1 hour	15%
	Written Exam #2 (December 2019)	1 hour	15%
	Lab Practical Exam #1 (December 2019)	<1 hour	20%
	Written Exam #3 (February 2020)	1 hour	15%
	Written Exam #4 (April 2020)	1 hour	15%
	Lab Practical Exam #2 (April 2020)	<1 hour	20%

Written exams: The breakdown of questions will reflect the material covered by each professor (e.g., October written exam will be material covered by Dr. Allman; the December written exam will be material covered by Dr. Barbeau). The written exams are in a multiple-choice format, which will be graded using the Scantron system, and may be examined by computer software to check for unusual coincidences in answer patterns that may indicate cheating.

Lab practical tests will be in a "bell-ringer" format. More information about the bell-ringer format will be given in lab and lecture prior to Lab Practical Exam #1.

THERE WILL BE ONE MOCK BELLRINGER EXAM THAT THE STUDENTS WILL BE EXPECTED TO TAKE. THIS WILL OCCUR IN OCTOBER AFTER THE FIRST WRITTEN EXAM.

Course Evaluation:

A missed mid-term examination, without appropriate documentation will result in a zero (0) grade. Acceptable reasons might include hospital stays, serious illness, family emergencies (like serious accidents, illness or death) or similar circumstances

ASSESSMENT CONDITIONS

An **overall passing average** (according to your specific program) is required to pass the course. For example, a student may fail a Lab Practical Exam but still achieve an overall passing average.

Rounding of grades: According to the Schulich undergraduate science courses guidelines, decimal points will NOT be rounded to the next whole number (e.g., 69.4 to a 70%). Marks close to the next decade will **not be** rounded beyond the next single digit grade e.g., 68.5 **will not be** rounded to 70, nor will 69=70). In other words, you get what you achieved; however, the OWL grading software will automatically round up the grade submissions to a whole number.

• **Grade reweighting will not be considered** unless there are extenuating circumstances in accordance with formal academic accommodation. Students are discouraged from requesting that their grade on a particular exam be reweighted simply because they earned a

- mark that was less than they had hoped/expected. Such a request falls well below the level of professionalism that this course requires of its students.
- The date and nature of a make-up test/exam will be determined by the Instructor, in consultation with the student. Generally, make-up exams will be in the same format as the original exam. Written make up exams may be scheduled through Kinesiology.

TERM SCHEDULE as follows: (changes may be made during the Term, if needed)

TERM 1: INTRODUCTION, BACK & UPPER LIMB – Dr. Brian Allman

DATE	LECTURE TOPIC
Thursday, September 5, 2019	Intro to the Course; Anatomical Terminology; Tissues;
	Joints
Tuesday, September 10, 2019	Osteology
Thursday, September 12, 2019	Intro to Upper Limb; Muscles of the Scapula
Tuesday, September 17, 2019	Deep Back & Spinal Cord
Thursday, September 19, 2019	Pectoral Muscles & Axilla
Tuesday, September 24, 2019	Brachial Plexus
Thursday, September 26, 2019	Arm
Tuesday, October 1, 2019	Shoulder & Elbow Joints
Thursday, October 3, 2019	Anterior Forearm
Tuesday, October 8, 2019	Anterior Forearm & Carpal Tunnel
Thursday, October 10, 2019	Posterior Forearm
Tuesday, October 15, 2019	Hand
Thursday, October 17, 2019	Review
Friday, October 25, 2019	7:00 – 8:00 pm: Written Exam #1: Introduction, Back &
	Upper Limb; Location will be provided in class

DATE (Lab times specific for Cohort)	LAB TOPIC
Week of September 2, 2019	No labs
Week of September 9, 2019	Service; Osteology of Axial Skeleton & Upper Limb
Week of September 16, 2019	Superficial & Deep Back
Week of September 23, 2019	Spinal Cord; Pectoral Region
Week of September 30, 2019	Brachial Plexus; Arm
Week of October 7, 2019	Anterior Forearm; Shoulder & Elbow Joints
Week of October 14, 2018	Posterior Forearm; Hand
Tuesday, December 3, 2019	Lab Practical Exam #1: Kin Tuesday Cohort, 2:30 – 5:30
	pm
Thursday, December 5, 2019	Lab Practical Exam #1: Kin Thursday Cohort, 2:30 -
	5:30 pm

Lab Practical Exam #1 will include all of the lab material from the first term (September – December).

TERM 1: LOWER LIMB - Dr. Michele Barbeau

DATE	LECTURE TOPIC
Tuesday, October 22, 2019	Intro to Lower Limb; Pelvic Girdle; Lumbosacral Plexus
Thursday, October 24, 2019	Anterior & Medial Thigh
Tuesday, October 29, 2019	Medial & Lateral Thigh
Thursday, October 31, 2019	Gluteal & Posterior Thigh
Tuesday, November 12, 2019	Hip & Knee Joints
Thursday, November 14, 2019	Popliteal Fossa; Overview of Leg
Tuesday, November 19, 2019	Posterior & Anterior Leg
Thursday, November 21, 2019	Lateral Leg; Ankle Joint
Tuesday, November 26, 2019	Foot Arches; Joints; Ligaments
Thursday, November 28, 2019	Intrinsic Foot Muscles
TBD December Exam Period	Written Exam #2: Lower Limb; Location will be provided in class

DATE (Lab times specific for Cohort)	LAB TOPIC
Week of October 21, 2019	Anterior & Medial Thigh; (Lower Limb Osteology Self-Study)
Week of October 28, 2019	Gluteal & Posterior Thigh; Hip Joint
Week of November 11, 2019	Posterior Leg
Week of November 18, 2019	Anterior Leg; Knee Joint
Week of November 25, 2019	Foot
Tuesday, December 3, 2019	Lab Practical Exam #1: Kin Tuesday Cohort, 2:30 – 5:30 pm
Thursday, December 5, 2019	Lab Practical Exam #1: Kin Thursday Cohort, 2:30 – 5:30 pm

Lab Practical Exam #1 will include all of the lab material from the first term (September – December).

TERM 2: NECK & THORAX - Dr. Katherine Willmore

DATE	LECTURE TOPIC
Tuesday, January 7, 2020	Cranial Cavity and Cranial Nerves
Thursday, January 9, 2020	Facial Nerve
Tuesday, January 14, 2020	Trigeminal Nerve and Muscles of Mastication
Thursday, January 16, 2020	Meninges and Blood Supply to Head and Neck
Tuesday, January 21, 2020	Triangles of the Neck
Thursday, January 23, 2020	Root of the Neck
Tuesday, January 28, 2020	Thoracic Wall and Respiration
Thursday, January 30, 2020	Pleura and Lungs
Tuesday, February 4, 2020	Mediastinum
Thursday, February 6, 2020	Heart I
Tuesday, February 11, 2020	Heart II
Thursday, February 13, 2020	Posterior Mediastinum
Friday, February 28, 2019	7:00 – 8:00 pm: Written Exam #3: Neck & Thorax;
	Location will be provided in class

DATE (Lab times specific for	LAB TOPIC
Cohort)	
Week of January 6, 2020	Head and Neck and Thorax Osteology
Week of January 13, 2020	Cranial Nerves and Face
Week of January 20, 2020	Infratemporal Fossa and Blood Supply to Head and Neck
Week of January 27, 2020	Triangles of Neck and External Carotid Artery
Week of February 3, 2020	Root of Neck and Thoracic Wall and Pleura and Lungs
Week of February 10, 2020	Mediastinum and Heart
Thursday, April 2, 2020	Lab Practical Exam #2: Kin Tuesday & Thursday
	Cohorts,
	2:30 – 5:30 pm

Lab Practical Exam #2 will include all of the lab material from the second term (January – April).

TERM 2: ABDOMEN & PELVIS - Dr. Michelle Mottola

DATE	LECTURE TOPIC
Tuesday, February 25, 2020	Abdominal Wall; Inguinal Canal
Thursday, February 27, 2020	Inguinal Canal; Overview of Digestive System
Tuesday, March 3, 2020	Peritoneal Membranes; Abdominal Contents
Thursday, March 5, 2020	Abdominal Contents; Portal System
Tuesday, March 10, 2020	Posterior Abdominal Wall; Blood & Nerve Supply
Thursday, March 12, 2020	Urinary System & Kidneys
Tuesday, March 17, 2020	Bony Pelvis; Perineum
Thursday, March 19, 2020	Pelvic Nerves & Vessels
Tuesday, March 24, 2020	Male Pelvic Viscera
Thursday, March 26, 2020	Female Pelvic Viscera
Tuesday, March 31, 2020	Pregnancy + Review
TBD April Exam Period	Written Exam #4: Abdomen & Pelvis; Location will be provided in final exam schedule

DATE (Lab times specific for	LAB TOPIC
Cohort)	
Week of February 24, 2020	Abdominal Wall; Inguinal Canal
Week of March 2, 2020	Abdominal Contents
Week of March 9, 2020	Posterior Wall of Abdomen (contents will be removed)
Week of March 16, 2020	Pelvic Nerves & Vessels (prosections; intact cadaveric
	viscera)
Week of March 23, 2020	Pelvis; Perineum (prosections; intact cadaveric viscera)
Thursday, April 2, 2020	Lab Practical Exam #2: Kin Tuesday & Thursday
	Cohorts,
	2:30 – 5:30 pm

Lab Practical Exam #2 will include all of the lab material from the second term (January – April).

Course/University Policies

1. **Academic offences**: They are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site: https://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf

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.

2. Electronic Device Usage:

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 of the following electronic devices during ANY of the tests, quizzes, midterms, examinations, or other in-class evaluations: cellphones, smart phones, smart watches, smart glasses, audio players or recorders of any sort, video cameras, video games, DVD players, televisions, laptop/notebook/netbook computers, flashlights or laser pointers.

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. Please be respectful to your fellow students and turn the sound off. If the professor receives complaints from other students regarding noise or other disruptive behavior (e.g. watching videos on YouTube.com, updating your Facebook status, playing Solitaire), your classroom privileges will be revoked. 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.**

3. 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.

4. Support Services

There are various support services around campus and these include, but are not limited to:

- (a) Student Development Centre -- http://www.sdc.uwo.ca/ssd/
- (b) Student Health & Wellness -- http://www.health.uwo.ca/
- (c) Registrar's Office -- http://www.registrar.uwo.ca/
- (d) Ombudsperson Office -- http://www.uwo.ca/ombuds/
- 5. **Documentation for Academic Accommodation (Illness, Medical/Non-Medical Absences)**: http://www.westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectedCalendar=Live&ArchiveID=#Page_12

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

(a) Submitting a Self-Reported Absence (see below for conditions)

- (b) For medical absences exceeding 48 hours, submitting a Student Medical Certificate (SMC) signed by a licensed medical or mental health practitioner to their Academic Counselling in their Faculty of registration in order to be eligible for Academic Consideration; or
- (c) For non-medical absences exceeding 48 hours, submitting appropriate documentation (e.g., obituary, police report, accident report, court order, etc.) to Academic Counselling in their Faculty of registration in order to be eligible for academic consideration. Students are encouraged to contact their Academic Counselling unit to clarify what documentation is appropriate.

 Students seeking academic consideration **must communicate with their instructors no later than 24 hours** after the end of the period covered by either the self-reported absence or SMC, or immediately upon their return following a documented absence.

The following conditions are in place for self-reporting of medical or extenuating circumstances:

- (a) a maximum of two self-reported absences between September and April and one self-reported absence between May and August;
- (b) any absences in excess of the number designated in clause a above will require students to present a Student Medical Certificate (SMC) or appropriate documentation supporting extenuating circumstances to the Academic Counselling unit in their Faculty of registration no later than two business days after the date specified for resuming responsibilities.
- (c) The duration of the excused absence will be for a maximum of 48 hours from the time the Self-Reported Absence form is completed through the online portal, or from 8:30 am the following morning if the form is submitted after 4:30 pm;
- (d) The duration of the excused absence will terminate prior to the end of the 48 hour period should the student undertake significant academic responsibilities (write a test, submit a paper) during that time:
- (e) The duration of an excused absence will terminate at 8:30 am on the day following the last day of classes each semester regardless of how many days of absence have elapsed;
- (f) Self-reported absences will not be allowed for scheduled final examinations; for midterm examinations scheduled during the December examination period; or for final lab examinations scheduled during the final week of term;
- (g) Self-reporting may not be used for assessments (e.g. midterm exams, tests, reports, presentations, or essays) worth more than 30% of any given course;

For medical and non-medical absences that are not eligible for self-reporting Kinesiology students must submit an Academic Consideration Request form found online https://www.uwo.ca/fhs/kin/undergrad/files/accommodation_request.pdf in addition to an SMC or appropriate documentation in the event of a non-medical absence. These 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.

Special Examinations

A Special Examination is any examination other than the regular examination, and it may be offered only with the permission of the Dean of the Faculty in which the student is registered, in consultation with the Instructor and Department Chair. Permission to write a Special Examination may be given on the basis of compassionate or medical grounds with appropriate supporting documents. A Special Examination must be written at the University or an Affiliated University College no later than 30 days after the end of the examination period involved. To accommodate unusual circumstances, a date later than this may be arranged at the time permission is first given by the Dean of the Faculty. The Dean will consult with the instructor and Department Chair and, if a later date is arranged, will communicate this to Registrarial Services. If a student fails to write a scheduled Special Examination, permission to write another Special Examination will be granted only with the permission of the Dean in exceptional circumstances and with appropriate supporting documents. In such a case, the date of this Special Examination normally will be the scheduled date for the final exam the next time the course is offered.

Accommodation for Lab Bell-ringer exams. Accommodation for lab exams will be given only if acceptable and documented through the Office of Development Services. The lab exam must be given in the dissecting lab and accommodation will not be given to students if they seek extended time for bell-ringer questions.

6. **Grades**: Where possible assignment objectives and rubrics will be posted on OWL. Should you have a concern regarding the grade you received for an assignment or feel that it is unfair in any way, you must wait 24 hours from the receipt of the assignment to approach the instructor or TA. In doing so, please make an appointment and prepare in writing, with evidence, why you feel your grade is inappropriate. Please be aware that in requesting a grade reassessment, your grade could go up/down/or stay the same. Note that calculations errors (which do occur!) should be brought to the instructor's attention immediately.

At least three days prior to the deadline for withdrawal from a 1000- or 2000-level course without academic penalty, students will receive assessment of work accounting for at least 15% of the final grade.

- □ November 9th, 2019 (for first term half-courses)
- □ November 27th, 2019 (for full-year courses)
- □ March 4th, 2020 (for second term half-or full year courses)

A 80-89 Superior work that is clearly above average

B 70-79 Good work, meeting all requirements and eminently

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. **This practice will not occur here.** The edges of this course are clear and sharp. The mark attained is the mark you achieved and the mark assigned; there is no rounding to the next grade level, or 'giving away' of marks. <u>Please don't ask the instructors to do this for you; the response will be "please review the course outline where this is presented".</u>

7. **Classroom Behaviour**: Class will begin promptly at the time specified at the top of page two of this syllabus. In the event that you must arrive late, please enter the classroom with a minimal disturbance to the class. Please keep all electronic devices on silent and avoid distracting classmates.

8. 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

RESPECTFUL LEARNING ENVIRONMENT

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"We can all learn from each other. To encourage the free and open sharing of information and ideas, we must all work together to develop a respectful and supportive environment. Disrespectful or discourteous behaviour is inappropriate and unacceptable in the classroom."

9. ADDITIONAL INFORMATION AND RULES

Students may have access to the Lab and Learning Centre during regular hours of each week day, if no class is present. Due to security issues the building will lock down at 6pm each night and will not be open on weekends.

LAB RULES AND REGULATIONS:

- No visitors are allowed in the lab. This is a restricted area and only for those enrolled in the Anatomy course.
- Food and/or drink are not allowed in the Anatomy lab or Learning Centre.
- Lab coats and closed-toe shoes are required in the Anatomy lab. Safety glasses are required.
- Cameras or other recording devices are not permitted in the lab.
- Extra study hours outside of your designated lab time will be posted on the blackboard in the lab and on OWL. Please let Haley or Kevin (Lab technicians) know if you will be in the lab.
- See Haley about all lab equipment, lab coats and locker combinations.