



**Anatomy 2221/9501/9524: Functional Human Anatomy  
for Kin, PT, OT**

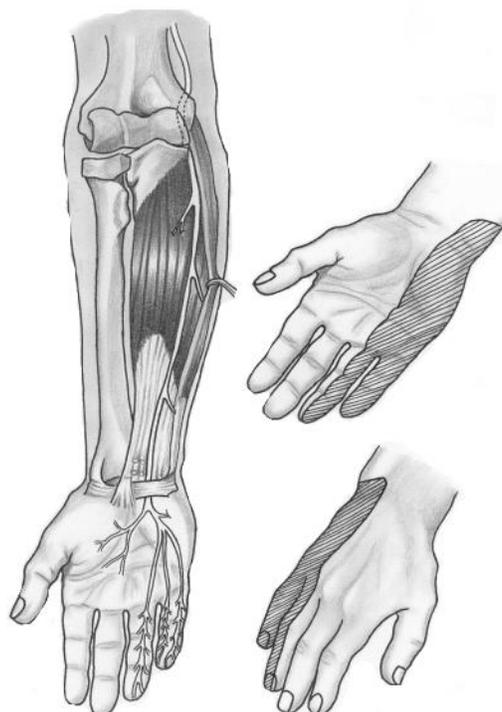
**Anat 2221, Kinesiology: Full year 2016-2017**

**Anat 9501, School of Physical Therapy:**

**Two terms Sept -Feb, 2016-2017**

**Anat 9524, School of Occupational Therapy:**

**Fall term Sept - Dec, 2016**



## **Anatomy 2221/9501/9524: Functional Human Anatomy for Kin, PT, OT**

### **1. The overall course OBJECTIVES are 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' varied disciplines (kinesiology, physical therapy (PT) and occupational therapy (OT))
- Develop an ability to predict the anatomical basis for a number of injury mechanisms and congenital anomalies
- Have fun

### **2. COURSE INFORMATION**

**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** with the laboratory assistant supervising and helping only on request. 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**                **Anatomy 9501 - Wednesdays, 2:30 4:30p.m.**

**Anatomy 2221 - Tuesdays or Thursdays,  
3:30 - 5:30 p.m.**

**Anatomy 9524 - Fridays 8:30 - 10:30 a.m.**

#### **Requisites:**

Required course for each of Anat 2221, 9501, 9524

Prerequisite(s): for Kin - Grade 12U Bio; enrollment in MScPT or MScOT or BSc stream of Kin

Corequisite(s)

Antirequisite(s): Anat 3319

#### **Senate regulation regarding the student's responsibility regarding requisites:**

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.

### 3. 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](mailto:brian.allman@schulich.uwo.ca)

**Course Director:**

**Dr. M. Johnson**

**Anatomy 9501, 9524**

Office: MSB487, Medical Sciences Building  
 Phone 519 661-2111, Ext 86756  
 E-mail: [Marjorie.johnson@schulich.uwo.ca](mailto:Marjorie.johnson@schulich.uwo.ca)

**Course Director:**

**Dr. M. Mottola**

**Anatomy 2221:**

Room 2214, 3M Centre  
 Phone 519 661-2111, Ext 85480  
 E-mail: [mmottola@uwo.ca](mailto:mmottola@uwo.ca)

**Instructors:**

**Dr. M. Barbeau**

Office: MSB491, Medical Science Building  
 Phone: 519-661-2111 Ext. 86756  
 E-mail: [mbarbeau@uwo.ca](mailto:mbarbeau@uwo.ca)

**Dr. Brian Allman**

Office: MSB 460, Medical Sciences Building  
 Phone: 519-661-2111 ext. 88689  
 Email: [brian.allman@schulich.uwo.ca](mailto:brian.allman@schulich.uwo.ca)

**Dr. Michelle Mottola**

Office: 3M Rm 2214  
 Phone 519 661-2111, Ext 85480  
 Email: [mmottola@uwo.ca](mailto:mmottola@uwo.ca)

**Teaching assistants: each lab will have 2-4 graduate teaching assistants or volunteers - names TBA on the course web site**

**Office Hours:**

Primarily, we have an open door policy and do respond to email as "virtual office hours". It is always good practice to call or email ahead of time if you would like to meet in person.

**OWL/Sakai:**

This site will be used primarily for lecture material, grades, practice quizzes, announcements and calendar updates.

Students with Sakai issues should contact the Computer Support Centre at 519 661-3800 or fill out the webform: <https://servlet.uwo.ca:8081/vistahelpdesk/controller.jsp>.

**4. COURSE MATERIAL****Required Course Notes:**

These are posted on Sakai in pdf format. It is expected that you use the notes in the e-format during lectures as a guide to your learning. **Extra reading from the recommended textbooks will greatly improve your learning. Please print out the lab instructions and bring them to lab each week.**

**RECOMMENDED TEXTBOOK: older versions are acceptable**

**Atlas of Clinical Gross Anatomy**, 2005, Moses et al., Elsevier Mosby, Philadelphia ISBN 0323037445

OR

**Human Anatomy: Color atlas and text**. 2008, 5<sup>th</sup> edition. Gosling et al., Mosby-Wolfe, London ISBN:9780723434511 - Older editions are sufficient

**LAB BOOKS:**

An atlas **is required** for labs. **Note:** there must be at least one atlas per group during the lab sessions. ***Some atlases are provided in the lab and these must remain in the lab.***

**Atlas Recommended if not using Moses et al (above)**

**Grant's Atlas of Anatomy**, 2005, 11<sup>th</sup> edition, Agur & Dalley, Lippincott, Williams & Wilkins, Baltimore.

OR

**Atlas of Human Anatomy**, 2003, 3<sup>rd</sup> edition, Netter, Novartis, East Hanover, N.J.

OR

**Color Atlas of Anatomy**, 5<sup>th</sup> edition, 2002, Rohen, Yokochi, Lutjen-Drecol, LWW

**AUDIO-VISUAL AIDS:**

Look for additional resources on the course web site home page under Practice Activities, Helpful Links and Videos.

**THE ANATOMY LEARNING CENTRE: WHERE AND WHAT IS IT?** The Anatomy Learning Centre is located in **Room D4002** of the Dental Sciences Building.

It contains plastic models of most anatomical structures. The entrance code for the door will be given out during the first lab.

**5. EVALUATION: see schedule (pgs 8-13) for dates**

<u>Course</u>	<u>Type of Test/Exam</u>	<u>Duration</u>	<u>% of Final</u>
<b>Anatomy 9501</b>	Lab Practical 1	1 hour	15%
	Lab Practical 2	1 hour	20%
	Term I Written Test	2.5 hours	30%
	Term II Lab Practical 3	1 hour	15%
	Term II Written Exam	1 hour	20%
<b>Anatomy 9524</b>	Lab Practical 1	1 hour	20%
	Lab Practical 2	1 hour	20%
	Online case quizzes	NA	25%
	Final Written Exam	2.5 hours	35%
<b>Anatomy 2221</b>	Lab Practical 1	1 hour	15%
	Lab Practical 2	1 hour	15%
	Term I Written Test	2.5 hours	25%
	Term II Lab Practical 3	1 hour	10%
	Term II Lab Practical 4	1 hour	10%
	Term II Written Exam	2.5 hours	25%

**Written multiple choice exams will be graded using the Scantron system. Multiple-choice exams may be examined by computer software to check for unusual coincidences in answer patterns that may indicate cheating.** Lab practical tests will be verbal exams (VIVAs), where students are given 10 min to answer questions imposed by an examiner. More information about the VIVA format will be given in lab and lecture prior to the first lab practical. The written exams are cumulative within each term, not across terms. The breakdown of questions will reflect the material covered. (ie. Dec written will be 50:50

back/upper and lower limb and the April final will be 50:50 head/neck/thorax and abdomen/pelvis.) Online case quizzes may be attempted by all but they will only count toward the OT student grades.

## 6. ASSESSMENT CONDITIONS

- A minimum of 80% **attendance** is required for the labs. Documentation is required for attendance less than 80%. Any attendance less than 80% without documentation will result in an automatic loss of 5% of the overall course grade.
- An **overall passing average** (according to your specific program) is required to pass the course. In other words, a student may fail a lab component but still have 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 (eg. 69.56 to a 70%). Marks close to the next decade will **not be** rounded beyond the next single digit grade eg. 68.5 **will not be** round 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.
- **Minimum average** of 65% is required for 9524 students (OT program requirement)

### Absence from course commitments

#### A. Absence for medical illness or non-medical reasons:

Students must familiarize themselves with the Policy on Accommodation for Medical Illness: <https://studentservices.uwo.ca/secure/index.cfm>

- **Documentation for medical or non-medical reasons**, according to the **Policy on Accommodation for Medical Illness** is required for absences from tests or exams. Documentation is not required for work worth less than 10% of the total course grade (ie. individual lab sessions). When documentation is required for missing an exam or test, such documentation must be submitted by the student directly to the appropriate Faculty Dean's office and not by the instructor.
- It will be the Dean's office that will determine if accommodation is warranted.
- The date and nature of a make-up test/exam will be determined by the instructor, in consultation with the student. Generally, students who miss a lab test will be given a verbal 1:1 lab test or re-weighting of grades will be considered. Written tests/exam will be made up by a written test/exam.

#### Statement from the Dean's Office

If you are unable to meet a course requirement due to illness or other serious circumstances, you must provide valid medical or other supporting documentation to the Dean's office as soon as possible and contact your instructor immediately. It is the student's responsibility to make alternative arrangements with their instructor once the accommodation has been approved and the instructor has been informed. In the event of a missed final exam, a "Recommendation of Special Examination" form must be obtained from the Dean's Office immediately. For further information please see:

<http://www.uwo.ca/univsec/handbook/appeals/medical.pdf>

**PT Attendance:**

Students in the MSc PT are expected to attend all classes and laboratory sessions. If a student must be absent from regularly scheduled class times he/she is expected to contact the course instructor/manager and the School of PT main office and excuse himself/herself from that class or lab. A student requiring academic accommodation due to illness, should use the Student Medical Certificate when visiting an off-campus medical facility or request a Record's Release Form (located in the Dean's Office) for visits to Student Health Services.

The form can be found at:

[https://studentservices.uwo.ca/secure/medical\\_document.pdf](https://studentservices.uwo.ca/secure/medical_document.pdf)

The Policy on Accommodation for Medical Illness is also available on the BMSUE secure site:

[www.uwo.ca/bmsc](http://www.uwo.ca/bmsc)

**B. 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.

**7. PLAGIARISM**

Senate regulations **require ALL** instructors to include the following statements on plagiarism, cheating and proficiency in English in the course outline:

“Students must write their essays and assignments in their own words. Whenever students take an idea or passage from another author, they must acknowledge their debt both by using quotation marks where appropriate and by proper referencing such as footnotes or citations. Plagiarism is a major academic offence (see Scholastic Offence Policy in the Western Academic Calendar).”

**8 . TERM SCHEDULE** as follows: (changes may be made during the term if needed)

**TERM 1 2016-17  
INTRODUCTION, BACK, SPINAL CORD, AND LIMBS**

**INTRO – Dr. Allman**

**Lecture Schedule**

<b><u>Date</u></b>	<b><u>Topic</u></b>	<b><u>Page # (Gosling -G; Moses -M)</u></b>
Thurs. Sept. 8	Introduction to the course, anatomical terminology, tissue/fascia	G2-11, M2-5
Tues. Sept. 13	Superficial back & Deep Back	G404-409; M322-333
Thurs. Sept 15	Vertebra, Spinal cord	G20-23; M297-298

**UPPER LIMB – Dr. Allman**

**Lecture Schedule**

Tues. Sept. 20	Intro to Upper limb, Muscles of the Scapula	G72-75; M158- 159 G100-105, M184-195
Thurs. Sept. 22	Pectoral Muscles and Axilla	G31-32,76;M160-171 G 77-80; M 172-
Tues. Sept. 27	Brachial Plexus	G 80-81; M 172-183
Thurs. Sept 29	Arm	G82-85, 106- 107 M 210-223
Tues. Oct 4	Shoulder and Elbow Joint	G115-122 M 196-209, M 224-225
Thurs. Oct. 6	Forearm Flexors	G86-90, M224-239
Tues. Oct. 11	Forearm Flexors and Carpal tunnel	G 123-126;M240-249 M260- 273
Thurs Oct. 13	Extensors and Wrist/Hand	G108-114; M250-259
Tues. Oct. 18	Hand	G90-99; M 274-291
Thurs. Oct. 20	Review or catch-up	

**Back and Upper Limb Lab Schedule**

<b><u>Date</u></b>	<b><u>Topic</u> – see lab instructions found on the course web site</b>
Week of Sept. 12	Service, Osteology of axial skeleton and upper limb
Week of Sept. 19	Superficial back & Deep back
Week of Sept. 26	Spinal cord and Pectoral region
Week of Oct. 3	Brachial Plexus, Arm
Week of Oct. 10	Flexor Region of Forearm, Shoulder/Elbow
Week of Oct. 17	Extensor Region of Forearm, Hand
<b>Tues Oct 25</b>	<b>Lab Practical 1: Kin, Thurs group 2:30 and Tues group 3:30 time slot</b>
<b>Wed Oct 26</b>	<b>Lab Practical 1: PT, 2:30 pm</b>
<b>Fri Oct 28</b>	<b>Lab Practical 1: OT, 8:30am</b>

**LOWER LIMB****Lecture Schedule – Dr. Michele Barbeau**

<b><u>Date</u></b>	<b><u>Topic</u></b>	<b>Page (Moses)</b>
<b>New Undergraduate Fall Break Oct 27-28</b>		
Tues. Nov 1	Intro lower limb, pelvic girdle	486
Thurs. Nov. 3	Lumbosacral plexus Anterior and Medial thigh	488-499
Tues Nov. 8	Medial and Lateral thigh	488-499
Thurs. Nov. 10	Gluteal & Posterior thigh	512-523
Tues. Nov. 15	Hip and knee joint	500-511, 524
Thurs. Nov. 17	Popliteal fossa, leg overview	524-539
Tues. Nov. 22	Posterior & anterior leg	540-549
Thurs. Nov. 24	Lateral leg and ankle joint	540-549:560-573
Tues. Nov. 29	Foot arches, joints, ligament	560-573
Thurs. Dec 1	Intrinsic foot muscles	574-593

Lower Limb Lab Schedule

<u>Date</u>	<u>Topic</u>
Week of Oct. 31	Anterior/Medial thigh dissection, self-study lower limb osteology
Week of Nov. 7	Gluteal and Posterior thigh, Hip Joint
Week of Nov. 14	Posterior Leg dissection
Week of Nov. 21	Anterior leg and knee
Week of Nov 28	Foot
<b>Tues Dec 6</b>	<b>Lab Practical 2: Kin Tues groups- 3:30 and Thurs groups 2:30</b>
<b>Wed Dec 7</b>	<b>Lab Practical 2: PT, 2:30pm</b>
<b>Fri Dec 9</b>	<b>Lab Practical 2: OT, 8:30am</b>
<b>Dec. 10-22</b>	<b>Mid-year exam period. Exam date TBA</b>

## TERM 2 2016-17

### NECK & THORAX – Dr. Johnson

#### Lecture Schedule

<u>Date</u>	<u>Topic</u>	<u>Textbook</u>
		<b>refer to corresponding chapters in Gosling</b>
Thurs. Jan 5	Skull, Brain, Brain Stem	Chapter 7 pg 369-378
Tues Jan 10	Brain stem, Cranial nerves, Cn VII	pg 333 + 340 - 350
Thurs Jan 12	CnVII, CnV, Muscles Mastication, TMJ	pg 333 - 339
Tues Jan 17	Blood Supply to Head & Neck	pg 321, 325,328-332, 338
Thurs Jan 19	Triangles of Neck	pg 322 - 329
Tues Jan 24	Carotid Triangle and root of neck	pg 328 - 332
Thurs Jan 26	Thoracic wall, respiration, breasts	Chapter 2, pg 26-35
Tues Jan 31	Pleura and lungs	pg 36 - 42
Thurs Feb 2	Mediastinum, pericardium	pg 43 - 45, 57 - 60
Tues Feb 7	Heart and coronary circulation	pg 45 - 52
Thurs Feb 9	Conductivity and lymphatics	pg 53 - 56
Tues Feb 14	Posterior mediastinum	pg 61 - 63
Thurs Feb 16	Posterior thoracic wall	pg 63, 22, 197-199
<b>Spring Break/Study Week</b>		<b>Feb 20-26</b>
<b>Tues Feb 28</b>	<b>Lab Practical 3: Kin Tues groups 3:30 and Thurs groups 2:30</b>	
<b>Wed Mar 1</b>	<b>PT final (1:30 pm) written and Lab Practical</b>	

[Lab Schedule](#) and instructions will be on the course website:

<u>Date</u>	<u>Topic</u>	<u>Course Lab Notes</u>
Week of Jan 9	Osteology of skull, meninges	follow lab notes
Week of Jan 16	Brain, Muscles of Face, CnVII	
Week of Jan 23	Muscles Mastication, Cn V, TMJ	
Week of Jan 30	Triangles of Neck & Blood supply	
Week of Feb 6	Thoracic Wall, Pleural Cavity & Lungs	
Week of Feb 13	Middle Mediastinum – Heart and Posterior Mediastinum	
<b>Week of Feb 20</b>	<b>STUDY WEEK</b>	
Week of Feb 27	<b>Lab Practical 3 - PT Wed Mar 1 and Kin groups Tues Feb 28</b>	

### ABDOMEN & PELVIS – Dr. Mottola

#### Kin students only

#### Lecture Schedule

<u>Date</u>	<u>Topic</u>	<u>Textbook Pages</u> (M = Moses et al. 2005) (G= Gosling et al. 2008)
Thurs Mar 2	Abdominal Wall & Inguinal Canal	M - 422-431 G - 136-137; 140-147
Tues Mar 7	Inguinal Canal & Overview of Digestive System	M - 423-24; 429; 431; 402-05 G - 146-151; 138
Thurs Mar 9	Peritoneal Membranes & Abdominal Contents	M - 390-91; 402-05 G - 152-158
Tues Mar 14	Abdominal Contents & Portal System	M - 386-398; 402-416 G - 164-179
Thurs Mar 16	Posterior Abdominal Wall & Blood/Nerve supply	M - 372-74; 376-82; 392; 417-18 G - 190-206

Tues Mar 21	Urinary System & Kidneys	M - 373; 387-88; 396 G - 186-189
Thurs Mar 23	Bony Pelvis & Perineum	M - 436-38; 445-447; 470-481 G - 214-217; 232-234
Tues Mar 28	Pelvic Nerves & Vessels	M - 459; 437-438; 441-444 G - 235-239
Thurs Mar 30	Male Pelvic Viscera	M - 450-451; 453-459 G - 240-243; 226-231
Tues April 4	Female Pelvic Viscera	M - 450-52; 460-465 G - 246-247; 219-225
Thurs April 6	Wrap lecture	
<b>Friday April 7</b>	<b>Lab Practical 4</b>	

[Lab Schedule](#) and instructions will be found on the web site:

<u>Date</u>	<u>Topic</u>	<u>Online Course Lab Notes</u>
Week of Mar 6	Abdominal wall & Inguinal canal	Abdominal wall lab
Week of Mar 13	Abdominal contents	Abdominal contents
Week of Mar 20	Posterior wall of Abdomen (contents will be removed)	Posterior wall
Week of Mar 27	Pelvis, blood vessels, nerves use prosections and intact viscera in cadaver	Pelvis Perineum
Week of April 3	Pelvis & perineum use prosections and intact viscera in cadaver	Pelvis Perineum
<b>Friday April 7</b>	<b>Lab Practical 4: Tues group 5:30pm and Thurs group 7:00pm</b>	
<b>Exams begin April 9-30<sup>th</sup></b>		

## 9. ADDITIONAL INFO 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:**

1. Food and/or drink are not allowed in the Anatomy lab or Learning Centre.
2. Lab coats and closed-toe shoes are required in the Anatomy lab. Safety glasses are required.
3. The security system locks down the building at 6pm every night, and the lab will not be accessible on the weekends.
4. Extra study hours outside of your designated lab time will be posted on the blackboard in the lab. Please let Haley or Kevin know if you will be in the lab.
5. See Haley about all lab equipment, lab coats and locker combinations.

#### **Statement on 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, at the following Web site:  
<http://www.uwo.ca/univsec/handbook/appeals/schloff.pdf> .

#### **Support Services:**

Registrarial Services: <http://www.registrar.uwo.ca>

Academic Counselling (Science and Basic Medical Sciences):  
<http://www.uwo.ca/sci/counselling/index.html>

Student Development Services: <http://westernusc.ca/services/>

Students that are in emotional/mental distress should refer to Mental Health@Western  
<http://www.uwo.ca/uwocom/mentalhealth/> for a complete list of options about how to obtain help”.

## **10. Respectful Learning Environment**

Atmosphere Copyright © 2005 Lippincott Williams & Wilkins

*“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.”*