

ANATCELL 9560, 2024-25**Human Anatomy & Embryology****Course Outline****1. Course Description:**

A study of human anatomy and embryology for MSc Clinical Anatomy and MSc Pathology Assistant students. The course consists of dissection and tutorials in gross anatomy, as well as tutorials in embryology. Students should expect to spend at least 6 hours per week in the lab and up to 4 hours per week in tutorials.

2. Course Objectives:

By the end of the 9560 course the student will be able to:

1. Describe the normal gross and developmental anatomy of all the major body regions and systems according to their identification on cadavers, as well as functional and clinical relevance.
2. Apply their anatomical knowledge to develop a diagnostic reasoning approach to basic clinical and pathological scenarios.
3. Develop stronger problem-solving, communication and collaboration skills through classroom discussions, group work and verbal assessments.

3. Instructors and Regions:

Course Coordinator	Contact Information
Katherine Willmore	kwillmo2@uwo.ca

Instructors	Contact Information	Region
Katherine Willmore	kwillmo2@uwo.ca	Head & Neck
Stephen Renaud	srenaud4@uwo.ca	Thorax & Back
Charles Rice	crice@uwo.ca	Limbs/MSK
Tyler Beveridge	tbeverid@uwo.ca	Abdomen & Pelvis

Teaching Assistants	Contact Information
Alyssa Moore	amoor66@uwo.ca
Sidney Wright	swrig25@uwo.ca

Course weight: 2.0

Textbook requirements: (or equivalent)

1. *Moore's Essential Clinical Anatomy*, 7th ed. Agur & Dalley, 2023: ISBN 978-1975174248, or an equivalent text of your choice
2. An atlas of your choice. Atlases are available in the lab. Dissectors will be required and are also supplied in the lab.
3. *Langman's Medical Embryology*, 15th ed., Sadler, 2023: ISBN 978-1496383907

Technical Requirements (if classes are required to be online):



Stable internet connection



Laptop or computer



Working microphone (optional)



Working webcam (optional)

Evaluation of Student Performance:

Assessment is by formative oral examinations during laboratory sessions, and a final VIVA. Attendance is not taken but clinical anatomy students must maintain an overall 80% in the course (see [student handbook](https://www.schulich.uwo.ca/anatomy/graduate/forms) <https://www.schulich.uwo.ca/anatomy/graduate/forms>) and all components of the course must be completed to pass.

Formative oral examinations: 80% of final mark.

Students are expected to prepare for laboratory sessions by remaining up-to-date with the course material and laboratory dissections. As such, students will be routinely evaluated during laboratory sessions using formative oral examinations. Oral examinations during each unit (head/neck; back/thorax; MSK/limbs; and abdomen/pelvis) are equally weighted, such that the average marks for oral examinations during each unit contribute 20% of the final mark. The structure of formative evaluations and number of quizzes may differ between units and will be up to the discretion of the instructor.

Formative oral examinations that take place during laboratory sessions:

Head & Neck: 20% of final mark

Back & Thorax: 20% of final mark

Limbs/MSK: 20% of final mark

Abdomen & Pelvis: 20% of final mark

*In the unlikely event where frequent formative evaluations are no longer possible (e.g. the anatomy lab is temporarily inaccessible or physical distancing guidelines preclude close interactions between instructor and student), an online assessment(s) may be substituted. The content, format, and delivery of this online assessment will be up to the discretion of the instructor. The online assessment may receive different marks weighting than formative oral examinations, but the total grade contribution for the unit to the overall course will remain at 20%.

Final VIVA: 20% of final mark.

A VIVA (formal oral examination) will take place during the last half of April 2025 (date to be determined). The exam will consist of one-on-one interactions with course instructors containing a dissected body and/or prosected specimens. Students will be expected to demonstrate an advanced understanding of anatomy and embryology by answering questions asked by the instructors, and be able to integrate their knowledge to explain complex body systems and clinical scenarios. As above, should unforeseen difficulties arise in which an in-person VIVA is not possible, an online assessment may be used.

Policy on Accommodation for Medical Illness

Students are expected to attend all classes and laboratory sessions. If a student is not able to attend class times, they must contact the course instructor or coordinator and excuse themselves 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://student.uwo.ca>

See “additional precautions” below.

- **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. When documentation is required for missing an exam or test, such documentation must be submitted by the student directly to the instructor.
- 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 exam will be given a verbal 1:1 lab test.

DISSECTING ROOM REGULATIONS

1. The following are **mandatory** in the lab:
 - i. **Lab coat** - should be used in the anatomy lab only. It must be reasonably clean at all times.
 - ii. **Disposable gloves** – for handling cadaveric material. These will be provided to you in the lab.
 - iii. **Safety glasses**.
 - iv. **Close-toed footwear** – sandals must not be worn.
 - v. **Surgical mask** – these will be provided to you in the lab.
2. For health reasons, no food or drinks can be taken into the dissecting room.
3. Cadaveric material must not be removed from the dissecting room.
4. You are not permitted to take anyone into the dissecting room without the special permission of the course instructor, lab manager, or Chair of the Department of Anatomy & Cell Biology.
5. Cameras are not allowed in the dissecting room.
6. Report any injuries acquired in the lab to a faculty or staff member as soon as possible. First aid materials are available.
7. Handle specimens and models with care. When not in use, please ensure that specimens are covered up or placed in their correct containers.
8. If there are any concerns, please contact the Anatomy Lab Manager: Haley Linklater: haley.linklater@schulich.uwo.ca

Additional precautions: All students are required to abide by safety measures determined at the University, Faculty and Department levels. The safety guidelines may vary throughout the year based on unforeseen circumstances outside of the university’s control. Within reason, accommodation will be provided for any student exhibiting symptoms related to COVID-19 or other illnesses that interfere with learning capability and/or have a high likelihood of being readily transmitted to other individuals.

What it Means to Work with Cadaveric Specimens

During the year you will have the privilege of working with cadaveric specimens. You must treat them with respect at all times.

Understandably, many students feel uneasy about the prospect of working with cadaveric material. In order to prepare you for the experience, there will be a short service of remembrance, held in the lab on the first day of class. It is a time to thank the donors and to reflect on what their gift means to your education. For some students, this will be their first experience of death and dying and many have found the service very useful in coming to terms with mortality. There will also be an orientation session about laboratory procedures at the beginning of the course.

At the end of the year (typically in May), there will be a memorial service to which families and friends of the donors are invited. This is very much a student-centred service, with readings and personal reflections from students about what the gifts of the donors have meant to them. Medical, dental and health sciences students take part in the service and it has been an incredibly moving and meaningful experience for both the families and the students. It is expected that students enrolled in this course will attend the memorial service. It is also recommended and appreciated for students in this course to contribute as volunteers for the memorial service.

Statement of 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:
https://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholoff.pdf.

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).”

9560 Schedule 2024-25

Head & Neck – Kat Willmore

Wk 1 – Sept 9-12 – Neck

Wk 2 – Sept 16-19 – Pharyngeal arches, Face and Scalp

Wk 3 – Sept 23-26 – Infratemporal fossa

Wk 4 – **Sept 30 Truth and Reconciliation**, Oct 2-3 – Cranial cavity

Wk 5 – Oct 7-10 – Cranial cavity; Orbit

Wk 6 – **Oct 14 Thanksgiving**, Oct 16-17 – Pharynx and palate

Wk 7 – Oct 21-24 – Nasal cavities, Tympanic Cavity

Wk 8 – Oct 28-31 – Oral cavity

Wk 9 – Nov 4-7 – Larynx

Thorax & Back – Steve Renaud

Wk 1 – Nov 11-14 – Back, spinal cord and peripheral nervous system

Wk 2 – Nov 18-21 – Thoracic wall; heart

Wk 3 – Nov 25-28 – Embryology of heart; Embryology of arterial system

Wk 4 – Dec 2-5 – Lungs/pleura; Mediastinum

Wk 5 – Dec 9-12 – Embryology of venous system

Wk 6 – Dec 16-19 – Review

Limbs/Musculoskeletal (MSK) – Charles Rice

Wk 1 – Jan 6-9 – Upper limb intro – review back/shoulder & pectoral regions; axilla, brachial plexus; shoulder joints and arm

Wk 2 – Jan 13-16 – Elbow, forearm and wrist

Wk 3 – Jan 20-23 – Wrist and hand

Wk 4 – Jan 27-30 – Lower limb intro; anterior and medial thigh; hip joint and gluteal region

Wk 5 – Feb 3-6 – Posterior thigh, knee and leg

Wk 6 – Feb 10-13 – Leg, ankle and foot

Abdomen & Pelvis – Tyler Beveridge

Wk 1 – **Feb 17 Family Day**, Feb 19-20 – Anterior Abdominal wall; Peritoneum & foregut

Wk 2 – Feb 24-27 – Liver, pancreas, portal system

Wk 3 – Mar 3-6 – Intestines; Suprarenal retroperitoneum

Wk 4 – Mar 10-13 – Kidneys & Ureters, Infrarenal retroperitoneum

Wk 5 – Mar 17-20 – Posterior Abdominal Wall, Abdominopelvic embryology

Wk 6 – Mar 24-27 – Pelvis & Perineum; Pelvic fascia & neurovasculature

Wk 7 – Mar 31-Apr 3 – Genitalia & reproductive organs; Functional sexual anatomy

Wk 8 – Apr 7-10 – Reproductive embryology; Early Embryology

Wk 9 – Apr 14-17 – Extra time, review

Last 2 weeks of April: Final VIVA (date to be determined)