

Health Sciences
4320B



Western
HealthSciences

HUMAN EMBRYOLOGY, DEVELOPMENT AND DISEASE

Course Instructor: Dr. Katelyn Wood, PhD

Winter 2022



Western University is committed to a **thriving campus**; therefore, your health and wellness matter to us! The following link provides information about the resources available on and off campus to support students: <https://www.uwo.ca/health/> Your course coordinator can also **guide you** to resources and/or services should you need them.

HS 4320B
Human Embryology, Development and Disease

The prerequisite for this course is HS 3300A/B or KIN 3222A/B. 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.

January – April 2022

COURSE OUTLINE

This course will study the development of the human from fertilization through to parturition. Clinical implications of congenital anomalies and developmental disorders will be discussed from a morphological perspective. An understanding of the origin of various tissues and organs will provide the student a better understanding of the normal anatomy of the adult human. There are 3 lecture hours per week, to be delivered in a blended format with some lectures posted asynchronously online, and others in-class. The course will investigate human development from multiple perspectives and students will be evaluated by examinations consisting of multiple choice and short answer questions.

COURSE OBJECTIVES

The purpose of this course is to provide the student with an advanced understanding of the key phenomena that occur during human development and the potential consequences that result due to anomalous developmental events.

Following completion of this course, students will be able to

- Describe key events during all stages of human development
- Illustrate the significance of coordinated development by offering examples of congenital and abnormal developmental occurrences
- Distinguish between the various stages of normal development or root causes of abnormal development

COURSE ADMINISTRATION

INSTRUCTOR: Dr. Katelyn Wood

OFFICE HOURS: Fridays at 9:30 – 10 AM online through Zoom. Due to the nature of the professoriate, there are times when unforeseen circumstances may prevent me from being present during scheduled office hours. I am always interested in hearing from students so feel free to contact me with some potential meetings times and I will respond with a mutually suitable date and time.

COURSE CONTACT: *Please NOTE: Your TA should be your first point of contact!

If your question cannot be answered by the TA, please direct all communication to me via email and/or the OWL forum system. I will endeavor to answer your e-mail within 24 hours during the hours of Monday to Friday from 9 AM to 5 PM. I will rarely respond to emails during the weekend. Some external email services may encounter SPAM blocking or filtering. It is essential that you use your UWO account, otherwise, important and timely information may not get to you if you are using another email service.

Web site address: <https://owl.uwo.ca/portal>, Log onto OWL using your user name and password. You must be registered in this course to have access to the site and you must have an account established with UWO. All course-related materials are delivered through OWL.

EXAMINATIONS

Exams will consist of short and long answer questions, case study and image-based questions from the lecture material.

MIDTERM EXAM: February 11 th 2022 (online)	35%	Short and long answer + case-study
FINAL EXAM: April	35%	Short and long answer + case-study
Lecture Review Quizzes - Various dates, see schedule below - 5 quizzes in total - Each quiz is worth 6% - Each quiz will be available for 24h	30%	An evaluation of understanding of material learned during various sections of the course. Quizzes are completed online through the tests and quizzes tab.

MAKE-UP EXAMINATIONS

You must contact me, your course instructor, if you missed an exam. You must provide proper documentation to the school office (academic counselor) as soon as physically possible (see university policies below for further instruction). The counselor will advise the course instructor of their support for or against course accommodation.

LECTURE REVIEW QUIZZES

Lecture review quizzes are to help students evaluate their understanding of course material to date.

No make up quizzes will be provided.

Information about late or missed evaluations:

- Missed assessments without a self-reported absence and/or approved submitted documentation to academic counseling will be given a grade of zero.
- A quiz cannot be submitted after it has been returned to the class, thus there are no make-up quizzes. With a SRA and approved documentation, weight will be redistributed to the next quiz.
- Missed exams with a SRA and approved documentation will be allowed to write a makeup exam. Only one makeup exam will be offered. After that, the exam weight will be redistributed to the final.

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.

All required short answers and exam answers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University. All papers submitted for such checking 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 The University of Western Ontario and Turnitin.com (<http://www.turnitin.com>).

REQUIRED TEXTBOOK

Moore, K.L., T.V.N. Persaud and M.G. Torchia. The Developing Human: Clinically Oriented Embryology; 11th Edition. Elsevier Saunders: Philadelphia, PA. 2020. Both online and printed versions are acceptable.

YOU ARE NOT REQUIRED TO KNOW ALL THE DETAILS IN THE TEXT. USE THE TEXT AS A REFERENCE AND REVIEW GUIDE. CONCENTRATE ON THE MATERIAL PERTAINING TO THE LECTURES AND WEB POSTINGS, UNLESS OTHERWISE SPECIFIED (e.g. A SECTION WITHIN A CHAPTER MAY BE ASSIGNED FOR READING). MANY OF THE DIAGRAMS USED IN THE LECTURES ARE FROM THE TEXT, SO IT WILL BE A VALUABLE TOOL.

COURSE SCHEDULE – WINTER 2022

*Please note, schedule is expected to change up until the first day of classes

Week	Date	Chapters	Topics	Assessment/Quiz/Midterm
1	January 4	1 and 2	Course Introduction Developmental Period Gametogenesis	
2	January 11	2 and 3	First week of Development Second week of Development	
3	January 18	4 and 5	Third week of Development 4-8 weeks of Development	January 20-21: Quiz 1
4	January 25	5 and 6	Germ Layers Embryonic Age Fetal Development	January 27-28: Quiz 2
5	February 1	7 and 20	Placenta Parturition Human Birth Defects	February 3-4: Quiz 3
6	February 8	8	Body Cavities	MIDTERM: February 11
7	February 15	10 and 11	Respiration Development Digestive System	February 17-18: Quiz 4
8	February 19-27	Reading Week		
9	March 1	11 and 12	Digestive System cont'd Urogenital System	
10	March 8	13	Cardiovascular System	March 10-11: Quiz 5
11	March 15	13 and 14	Cardiovascular System Skeletal System	
12	March 22	17	Nervous System	
13	March 29	15 and 16	Limb Development Musculature	

Course/University Policies

1. Statement on Use of Personal Response Systems (“Clickers”): If Personal Response Systems (“Clickers”) are used in the course, a reference to the Guidelines for their use (Guidelines are shown below). Instructors are to communicate clearly to students information on how clickers are used including: how the student’s privacy will be protected, how clickers may be used by the instructor for data gathering and for evaluating the students, and why they cannot be used by anyone but the student (since the students involved in misuse of a clicker may be charged with a scholastic offence).

2. 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.westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectedCalendar=Live&ArchiveID=#Page_20

A) Students must write their essays and assignments in their own words. Whenever students take an idea, or a 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). All required 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 for such checking 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 (<http://www.turnitin.com>)

B) 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. 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 In Person 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.**

4. Health and Wellness: As part of a successful undergraduate experience at Western, we encourage you to make your health and wellness a priority. Western provides several on-campus health-related services to help you achieve optimum health and engage in healthy living while pursuing your degree. 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.

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

1. *Student Development Centre* -- <http://academicsupport.uwo.ca/>
2. *Student Health & Wellness* -- <http://www.health.uwo.ca/>
3. *Registrar's Office* -- <http://www.registrar.uwo.ca/>
4. *Ombudsman Office* -- <http://www.uwo.ca/ombuds/>

6. Accommodation, Illness Reporting and Academic Considerations

http://www.westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectedCalendar=Live&ArchiveID=#Page_12

Accommodation Policies

Students with disabilities work with Accessible Education (formerly SSD) which provides recommendations for accommodation based on medical documentation or psychological and cognitive testing. The accommodation policy can be found here: [Academic Calendar - Western University \(uwo.ca\)](#).

Academic Consideration for Student Absence

<https://www.uwo.ca/fhs/kin/undergrad/academic/consideration/index.html>

Students will have up to two (2) opportunities during the regular academic year to use an on-line portal to self-report an absence during the term, provided the following conditions are met: the absence is no more than 48 hours in duration, and the assessment for which consideration is being sought is worth 30% or less of the student's final grade. Students are expected to contact their instructors within 24 hours of the end of the period of the self-reported absence, unless noted on the syllabus. Students are not able to use the self-reporting option in the following circumstances:

- for exams scheduled by the Office of the Registrar (e.g., December and April exams)
- absence of a duration greater than 48 hours,
- assessments worth more than 30% of the student's final grade,
- if a student has already used the self-reporting portal twice during the academic year

If the conditions for a Self-Reported Absence are *not* met, students will need to provide a Student Medical Certificate if the absence is medical, or provide appropriate documentation if there are compassionate grounds for the absence in question. Students are encouraged to contact their Faculty academic counselling office to obtain more information about the relevant documentation.

Students should also note that individual instructors are not permitted to receive documentation directly from a student, whether in support of an application for consideration on medical grounds, or for other reasons. **All documentation required for absences that are not covered by the Self-Reported Absence Policy must be submitted to the Academic Counselling office of a student's Home Faculty.**

For Western University policy on Consideration for Student Absence, see [Academic Calendar - Western University \(uwo.ca\)](#) and for the Student Medical Certificate (SMC), see: http://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf.

Religious Accommodation

Students should consult the University's list of recognized religious holidays, and should give reasonable notice in writing, prior to the holiday, to the Instructor and an Academic Counsellor if their course requirements will be affected by a religious observance. Additional information is given in the [Western Multicultural Calendar](#).

7. **Examination Conflicts:** A student with examinations having flexible submission times (e.g., where one or more examination is a take-home examination) 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 accommodation with their academic counselling unit prior to the deadline to drop a course without academic penalty

In the case of online examinations, an “Examination Conflict Room,” which may be assigned when a student is scheduled to write two proctored exams concurrently, will be interpreted as arrangements for continuous proctoring.

8. **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 my attention immediately.

Grade Descriptions:

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

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. Please don’t ask me to do this for you; the response will be “please review the course outline where this is presented”.

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

In the event of a COVID-19 resurgence during the course that necessitates the course delivery moving away from face-to-face interaction, 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

9. **Classroom Behaviour:** Synchronous classes will begin promptly at the time specified at the top of page one of this syllabus. In the event that you arrive late, please enter our virtual classroom with a minimal disturbance to the class. Please be sure you are muted prior to joining.

10. **Online Etiquette:** Some components of this course will involve online interactions. To ensure the best experience for both you and your classmates, please honour the following rules of etiquette:

- please “arrive” to class on time
- please use your computer and/or laptop if possible (as opposed to a cell phone or tablet)
- ensure that you are in a private location to protect the confidentiality of discussions in the event that a class discussion deals with sensitive or personal material
- to minimize background noise, kindly mute your microphone for the entire class until you are invited to speak, unless directed otherwise

- In order to give us optimum bandwidth and web quality, please turn off your video camera for the entire class unless you are invited to speak
- [suggested for cases where video is used] please be prepared to turn your video camera off at the instructor's request if the internet connection becomes unstable
- unless invited by your instructor, do **not** share your screen in the meeting

The course instructor and/or TAs will act as moderator for the class and will deal with any questions from participants. To participate please consider the following:

- if you wish to speak, use the “raise hand” function and wait for the instructor to acknowledge you before beginning your comment or question
- remember to unmute your microphone and turn on your video camera before speaking
- self-identify when speaking.
- remember to mute your mic and turn off your video camera after speaking (unless directed otherwise)

General considerations of “netiquette”:

- Keep in mind the different cultural and linguistic backgrounds of the students in the course.
- Be courteous toward the instructor, your colleagues, and authors whose work you are discussing.
- Be respectful of the diversity of viewpoints that you will encounter in the class and in your readings. The exchange of diverse ideas and opinions is part of the scholarly environment. “Flaming” is never appropriate.
- Be professional and scholarly in all online postings. Cite the ideas of others appropriately.

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.

11. Online Learning Support: If you require support with online learning tools and resources, please refer to the Faculty of Health Sciences Online Teaching and Learning Support [Jira request links](#) for students

12. 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>