

# GMS 5604 Medical Human Embryology

## Course Syllabus Spring 2026

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### COURSE DETAILS & GENERAL INFORMATION

<b>Course Number:</b>	GMS 5604
<b>Credit Hours:</b>	Three (3) credit hours
<b>Course Format:</b>	This online course is tailored for asynchronous distance learners.
<b>Course Schedule:</b>	The course is offered every semester, including the summer.

**Spring 2026:** January 12 – April 24, 2026 (see course schedule for specifics)

### Course Description

This Medical Human Embryology course is designed to provide the understanding of the anatomical relationships of major structures within the thorax, abdomen, head/neck, and back/limbs regions of the body. Congenital malformations associated with given organ systems will also be discussed.

### Prerequisites

This advanced medical anatomy course will require a strong science foundation of five (5) full-semester science courses related to Biology, Chemistry, and/or Physics. Students are expected to have already taken GMS5605 Online Medical Human Anatomy.

### Contacts

If you have questions about the course or its content contact the **Course Coordinator**, Dr. Lauren Butaric ([Lbutaric@ufl.edu](mailto:Lbutaric@ufl.edu)), Associate Professor, Department of Physiology and Aging. For technical questions or concerns, contact Phi Nguyen ([pnguyen8080@ufl.edu](mailto:pnguyen8080@ufl.edu)).

**Time Commitment:** This course will require about 90 hours of time total, or about 6 hours per week, allocated between different course activities (i.e., video lectures, quizzes, and overviews).

### Course Goals

The goals of this online course are to:

1. identify the major developmental events associated with each organ system of the human body
2. discuss mechanisms that lead to malformations associated with each organ system.

### Learning Outcomes

At the end of the course, students will be able to:

1. describe the sequence of events leading in implantation and organogenesis.
2. describe developmental processes associated with each organ system
3. list and describe the major malformations associated with each organ system.

### Learning Resources

1. Required Text:
  - a. **Sadler, TW, Langman's Medical Embryology, Lippincott Williams & Wilkins. 15<sup>th</sup> edition** (197517996X); **OR 14<sup>th</sup> edition** (ISBN-10: 1975114841); **OR 13<sup>th</sup> edition** (ISBN 10: 9351296245). *Note, pre-recorded materials in this course relate to the 14<sup>th</sup> and 13<sup>th</sup> editions. Page numbers referenced may be different.*

2. Required software:

a. **Rarey, K.E., Romrell, LJ, Clinical Human Embryology, Online DxR.**

Purchase Available online: <http://www.dxrgroup.com/product/cheufl/>

Contact Person: Diane Tennyson, Account Executive, DxR Development Group, Inc.,  
1840 Innovation Drive, Suite 112, Carbondale, IL 62903, 800-453-8040,  
[sales@dxrgroup.com](mailto:sales@dxrgroup.com) or [support@dxrgroup.com](mailto:support@dxrgroup.com)

3. Unit overviews, recorded lectures with PowerPoint presentations, and other multimedia resources will be provided on the course Canvas web site. The information in the required text and software are coordinated with online lecture materials.
4. Practice (not-graded) on-line quizzes that consist of multiple-choice questions will be available for each module of study.
5. Clinical exercises in anatomical injuries, musculoskeletal disorders, pulmonary diseases, gastrointestinal abnormalities, and renal pathophysiology will be used to promote critical thinking.

## COURSE SCHEDULE

SPR 2026 Weeks	Topics	Pre-Recorded Lecture Videos	Quiz
<b>MODULE 1</b> <b>Introductions</b>	Introductions to course	0. Course and Resources Overview	Honor Lock
<b>Wk 1: Jan 12 - 16</b>	Early Embryology (Weeks 1-4)	1.1A Fertilization & Implantation 1.1B Bilaminar & Trilaminar discs	1.1
<b>Wk 2: Jan 19 - 23</b>	Fetal Development	1.2A Differentiation of Trilaminar Disc 1.2B Anomalies of the Trilaminar Disc 1.3A Fetal Development 1.3B Placenta	1.2 & 1.3
<b>Wk 3: Jan 26 - 30</b>	Skeletal Development	1.4A Development of Skeleton 1.4B Anomalies of Skeletal Develop.	1.4
<b>Wk 4: Feb 2 - 6</b>	Muscular & Limb Development	1.5A Muscle & Dermatomes 1.5B Development of Limbs	1.5
<b>Module 1 Exam Opens Friday Feb 6</b>			
<b>MODULE 2</b> <b>Wk 5: Feb 9 - 13</b>	Pharyngeal Arches	2.1A Pharyngeal Arches & Clefts 2.1B Pharyngeal Pouches	2.1
<b>Wk 6: Feb 16 - 20</b>	Face & Brain	2.2A Face & Palate 2.2B Brain & Cranial Nerves	2.2
<b>Wk 7: Feb 23 - 27</b>	Spinal Cord & Nervous System	2.3A Spinal Cord & Spinal Nerves 2.3B Autonomic Nervous System	2.3
<b>Wk 8: Mar 2 - 6</b>	Ear & Eye	2.4A Development of Eye 2.4B Development of Ear	2.4
<b>Module 2 Exam Opens Friday March 6</b>			
<b>MODULE 3</b>	Thorax I	3.1A Development of Thoracic Cavity	3.1

<b>Wk 9: Mar 9 - 13</b>		3.1B Development of Lungs	
<b>Wk 10: Mar 16- 20</b>	Thorax II	3.2A Anomalies of Respiratory System 3.2B Development of Heart	3.2
<b>Wk 11: Mar 23 - 27</b>	Vasculature	3.3A Development of Arteries 3.3B Development of Veins/Lymph	3.3
<b>Wk 12: Mar 30 - Apr 3</b>	Abdomen	3.4A Development of GI System 3.4B Anomalies of GI System	3.4
<b>Module 3 Exam Opens Friday April 3</b>			
<b>MODULE 4</b>	Urinary System	4.1A Development of Urinary System	4.1
<b>Wk 13: Apr 6 - 10</b>		4.1B Anomalies of Urinary System	
<b>Wk 14: Apr 13 - 17</b>	"Male" Reproductive System	4.2A Development of Male Repro. 4.2B Anomalies of Male Repro.	4.2
<b>Wk 15: Apr 20-24</b>	"Female" Reproductive System	4.3A Development of Female Repro. 4.3B Anomalies of Female Repro.	4.3
<b>Module 4 Exam Opens Friday April 24</b>			

## COURSE POLICIES AND GRADING

### Examinations and Grading

Your grade in this course will be based on **four multiple-choice exams**, one for each module. Exams are not cumulative.

- **Exam Format:** Each exam includes **50 multiple-choice questions**, worth **2 points each**, for a total of **100 points per exam**.
- **Delivery:** Exams will be administered **online** during a scheduled weekend window: Friday 8:00 AM to Sunday 11:59 PM (Eastern Time). See course schedule for details.
- **Timing:** Once you begin an exam, you will have **1.5 hours (90 minutes)** to complete it.
- **Honor Lock:** Students must take all examinations at a computer with a web camera. Exams will be secured and proctored using HonorLock. More about HonorLock: [Getting Started with HonorLock](#); [HonorLock Student Prep](#); [HonorLock Student Privacy](#)

### Course Grading Scale

Four module examinations = Total 400 possible points

<b>A</b>	93–100% (372–400pts)	<b>C+</b>	77–79% (308–319 pts)	<b>D+</b>	67–69% (268–279pts)
<b>A-</b>	90–92% (360–371 pts)	<b>C</b>	73–76% (292–307pts)	<b>D</b>	63–66% (252–267 pts)
<b>B+</b>	87–89% (348–359 pts)	<b>C-</b>	70–72% (280–291pts)	<b>D-</b>	59–62% (236–251pts)
<b>B</b>	83–86% (332–347 pts)			<b>E</b>	<59% (0–235pts)
<b>B+</b>	80–82% (320–331 pts)				

I = An incomplete grade will be given if a student fails to complete the course as scheduled. Visit [UF Grading Policies Website](#) for more information.

### Make-Up Exam Policy

Students are required to take all four modular examinations. Make-up exams are given only under special circumstances. If the student is unable to take a scheduled modular examination, the course director must be notified before the examination. In addition, a written letter of explanation (emails allowed), requesting that the absence from the exam be excused, must be presented before the exam or immediately afterwards. An excused absence is allowable when: 1) the student is hospitalized and/or has been advised by a licensed medical practitioner or hospital not to attend the exam, 2) if there is a documented death of an immediate family member, or 3) the examination falls on a religious holiday. All excused absences will be considered on an individual basis by the course director. With the exception of highly extenuating circumstances, failure to follow the prescribed procedures will result in a grade of zero for that exam. Further information about the policies for attendance and religious holidays for The University of Florida can be found in the [Attendance section of the UF Catalog](#).

### **Assignments**

The course is divided into 4 modules. Each module consists of selected chapters with specific reading assignments. For each module students will: (1) review the learning objectives and corresponding lecture notes; (2) read and complete the assignments as given; (3) complete any given interactive exercises associated with each module; (4) take online practice examinations; and (5) take the scheduled, online module examination.

### **Attendance**

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found in the [Attendance Section of the UF Catalog](#). A student's overall success, however, is based upon following the course schedule for learning the assigned readings and practicing the recommended exercises. Students are strongly encouraged to develop self-discipline to complete all text readings and online exercises, including the practice examinations.

### **Academic Integrity**

Please review the University's complete policy regarding academic dishonesty, found online in the [Student Handbook](#).

Students are expected to abide by the University's Academic Honesty Policy, and to adhere to the following pledge:

*"We, the member of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity."*

On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied:

*"On my honor, I have neither given nor received unauthorized aid in doing this assignment."*

According to the UF Student Guide, Academic dishonesty includes the following.

- Cheating - copying another's work for academic gain.
- Plagiarism - representing another's work as your own.
- Bribery - offering, giving, soliciting, or receiving goods or services of value for academic gain.
- Misrepresentation - altering facts (e.g., signing an absent classmate's name to an attendance sheet).

- Conspiracy - planning with others to commit academic dishonesty.
- Fabrication - making up information to avoid punishment or other difficulty.

### **Copyright Information**

Please also review the use of copyrighted materials from the [UF Library](#).

### **Accommodation Policy**

Students requesting classroom accommodation must first register with the Dean of Students' office, 202 Peabody Hall, 352-392-1261. The DSO will provide documentation to the student who must then provide this documentation to the instructor.

### **Student Support Services**

As a student in a distance learning course or program you have access to the same student support services that on campus students have. For course content questions contact your instructor.

For any technical issues you encounter with your course please contact the UF computing Help Desk at 352-392-4357. For hours visit the [Help Desk Website](#).

For a list of additional student support services please visit the [Distance support website](#).

### **Special Accommodations**

Students requesting disability-related academic accommodations must first register with the [Disability Resource Center](#).

The Disability Resource Center will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation.

### **Complaints**

Should you have any complaints with your experience in this course please visit the [Distance Complaints Website](#) to submit a complaint.

### **Online Course Evaluation Process**

Students are expected to provide feedback on the quality of instruction in this course based on 10 criteria. These evaluations are conducted [Online](#). Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at [UF's Evaluations Website](#).

## **UF ACADEMIC POLICIES and CAMPUS RESOURCES**

Please visit the [UF online website](#) for full academic policies and resources.

### **Health and Wellness**

- [UF Whole Gator Resources](#): Visit for resources that are designed to help you thrive physically, mentally, and emotionally at UF.
- *U Matter, We Care*: If you or a friend is in distress, please contact [umatter@ufl.edu](mailto:umatter@ufl.edu) or 352-392-1575 so that a team member can reach out to the student.
- [Counseling and Wellness Center](#): 352-392-1575;
- *Sexual Assault Recovery Services (SARS)*. Student Health Care Center, 352-392-1161.

- [University Police Department](#), 352-392-1111 (or 9-1-1 for emergencies).

### **Academic Resources**

- *E-learning technical support:* Contact the [UF Computing Help Desk](#) at 352-392-4357 (select option 2) or via e-mail at [helpdesk@ufl.edu](mailto:helpdesk@ufl.edu).
- [Career Connections Center](#): Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services.
- [Library Support](#): Various ways to receive assistance with respect to using the libraries or finding resources. Call 866-281-6309 or email [ask@ufl.libanswers.com](mailto:ask@ufl.libanswers.com) for more information.