Organization of Cells and Tissues
GMS 6635
Course Syllabus

Course Number: GMS 6635

Credit Hours: Three (3) credit hours

Course Format: This course is tailored for graduate students. This is a “flipped” course involving online lectures and onsite labs. Each week there will be two one-hour lectures and one one-hour laboratory preview to view online and a two hour onsite laboratory session to attend. The faculty meets once a week with students in a laboratory format reviewing histological specimens on slides viewed by microscope or online viewed by computer. The flexibility of online lectures is combined with faculty-led, small group histological exercises.

Course Description:
The Organization of Cells and Tissues will cover the microscopic structure and function of human cells and tissues that comprise the organ systems. The Organization of Cells and Tissues is correlated with diagnostic imaging (e.g., electron microscopy and immunohistochemistry) of normal and pathologic tissues.

Prerequisites:
This graduate-level course is designed to meet the needs of students who want to acquire a basic foundation of knowledge regarding human cell and tissue biology. This course requires a strong foundation in science courses related to biology, chemistry, and/or biochemistry.

Contacts:
If you have questions about the course or its content contact the Course Director, Dr. William A. Dunn, Jr, Professor, Department of Anatomy & Cell Biology, University of Florida College of Medicine, PO Box 100235, Gainesville, FL 32610-0235; 352-293-9007; dunn@ufl.edu.

Schedule: The course GMS6635: Organization of Cells and Tissues is offered Fall 2015 and subsequent Fall semesters.

Course Goals:
The goals of the course are three-fold: (1) to provide a foundation of the fundamental concepts of the microscopic anatomy of the human body; (2) to develop an understanding of how organ integrity and functions are maintained by the organization of cells and tissues; and (3) to promote critical thinking of the clinical consequences of cellular disorders and tissue-related diseases, intracellular pathogens, cancer and diabetes.
Learning Outcomes:
Upon completion of this course, students will be able to:
1. demonstrate an understanding of the microscopic organization and relationships of cells, tissues and organs of the human body;
2. identify cells and tissues and describe their functions;
3. develop problem solving skills to evaluate both normal and pathologic structure and function of cells and tissues that comprise the organs of the human body; and
4. demonstrate critical thinking skills to describe possible pathologic outcomes of dysfunctional cells and tissues.

Learning Resources:
1. Recorded lectures with PowerPoint presentations, learning exercises, the laboratory manual, and other multimedia resources will be accessible via the course website.
3. Practice on-line quizzes that consist of multiple-choice questions will be available for each module of study.
4. Histology exercises combined with light and electron microscopy images will be used to identify subcellular structures, cells, and tissues.
5. A two-hour microscope session utilizing either a multi-headed microscope or an online microscope field-of-view projected to the class will occur on a once weekly basis.

Examinations and Grading:
The grades will be based on the examinations and laboratory discussions. Each examination will cover the content of one of 4 modules consisting of 50 multiple-choice questions (each valued at 1 point) and will be time limited for 90 minutes. Each exam will be worth 50 points. Students will take all examinations under supervision of a proctor.

Module One: Introduction to the Histology (50 points)
Overview of Microscopic Anatomy: Cells, Tissues, & Organs
Epithelium & Connective Tissue
Integumentary System
Skeletal System
Muscular System

Module Two: Nervous, Sensory, Endocrine and Lymphatics Systems (50 points)
Nervous System
Eye & Ear
Endocrine System
Lymphatic System
Module Three: Thoracic and Abdomen (50 points)
   Cardiovascular System
   Respiratory System
   Digestive System I
   Digestive System II

Module Four: Pelvis (50 points)
   Urinary System
   Male Reproductive System
   Female Reproductive System

Laboratory Participation (50 points)
   Peer-Based Learning and Microscopic Identification
   Critical Thinking Skills

Module examinations (4 x 50 points) + laboratory interaction (50 points) = Total points possible 250 points. Your final grade will be the total number of points earned / 250 (%).

Grading Scale:
   A   93-100%
   A-  90-92%
   B+  87-89%
   B   83-86%
   B-  80-82%
   C+  77-79%
   C   73-76%
   C-  70-72%
   D+  67-69%
   D   63-66%
   E   <63%

I = An incomplete grade will be given if a student fails to complete the course as scheduled.

Grading Policy:
There are no make-up examinations unless otherwise granted by the course coordinator prior to an examination date. If personal circumstances prevent the taking of an examination, it is the student’s responsibility to contact the course coordinator. Failure to take an examination without prior permission will be recorded as a 0.

Religious Holy Days:
Notify me of your pending absence at least fourteen days prior to the date of observance of a religious holy day. If you must miss an examination in order due to a religious holy day, I will give you an opportunity to complete the examination within a reasonable time after the absence.
Video and Reading Assignments:
The course is divided into 4 modules. Each module consists of selected chapters with specific reading assignments in Ross & Pawlina. For each module students will: (1) review the learning objectives and corresponding lecture notes; (2) read and complete the assignments as given; (3) view the online lectures and laboratory exercises; (4) complete the online module quizzes; (5) participate in the “in-class” laboratory sessions; and (5) complete the Histological Reviews at the end of each module.

Course Schedule:

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Video Assignments (On-Line)</th>
<th>Reading Assignments</th>
<th>Learning Opportunities (In-Class)</th>
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<tbody>
<tr>
<td>1</td>
<td>20 Aug – 24 Aug</td>
<td>Overview of Histology: 1.1 Lecture 1.2 Lecture 1.3 Laboratory 1.4 Quiz</td>
<td>Ross &amp; Pawlina, Chap #1 &amp; #4</td>
<td>Laboratory (2 hr), Friday Aug 24 1-3 pm DG-41</td>
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<tr>
<td>2</td>
<td>27 Aug – 31 Aug</td>
<td>Epithelium and Connective Tissue 2.1 Lecture 2.2 Lecture 2.3 Laboratory 2.4 Quiz</td>
<td>Ross &amp; Pawlina, Chap #5 &amp; #6</td>
<td>Laboratory (2 hr), Friday Aug 31 1-3 pm DG-41</td>
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<tr>
<td>3</td>
<td>3 Sept – 7 Sept</td>
<td>Integumentary System 3.1 Lecture 3.2 Lecture 3.3 Laboratory 3.4 Quiz</td>
<td>Ross &amp; Pawlina, Chap #15</td>
<td>Laboratory (2 hr), Friday Sept 7 1-3 pm DG-41</td>
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<tr>
<td>4</td>
<td>10 Sept – 14 Sept</td>
<td>Skeletal System 4.1 Lecture 4.2 Lecture 4.3 Laboratory 4.4 Quiz</td>
<td>Ross &amp; Pawlina, Chap #7 &amp; #8</td>
<td>Laboratory (2 hr), Friday Sept 14 1-3 pm DG-41</td>
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<tr>
<td>5</td>
<td>17 Sept – 21 Sept</td>
<td>Muscular System 5.1 Lecture 5.2 Lecture 5.3 Laboratory 5.4 Quiz</td>
<td>Ross &amp; Pawlina, Chap #11</td>
<td>Laboratory (2 hr), Friday Sept 21 1-3 pm DG-41</td>
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Module 1 Histological Review

Module #1 Examination – Monday, 24 September

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<tr>
<th>Week</th>
<th>Date</th>
<th>Video Assignments (On-Line)</th>
<th>Reading Assignments</th>
<th>Learning Opportunities (In-Class)</th>
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<tr>
<td>6</td>
<td>24 Sept – 28 Sept</td>
<td>Nervous System 6.1 Lecture 6.2 Lecture 6.3 Laboratory 6.4 Quiz</td>
<td>Ross &amp; Pawlina, Chap #12</td>
<td>Laboratory (2 hr), Friday Sept 28 1-3 pm DG-41</td>
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<tr>
<td>7</td>
<td>1 Oct – 5 Oct</td>
<td>Eye and Ear 7.1 Lecture 7.2 Lecture 7.3 Laboratory 7.4 Quiz</td>
<td>Ross &amp; Pawlina, Chap #24 &amp; #25</td>
<td>Laboratory (2 hr), Friday Oct 5 1-3 pm DG-41</td>
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<tr>
<td>8</td>
<td>8 Oct – 12 Oct</td>
<td>Endocrine System 8.1 Lecture 8.2 Lecture 8.3 Laboratory 8.4 Quiz</td>
<td>Ross &amp; Pawlina, Chap #21</td>
<td>Laboratory (2 hr), Friday Oct 12 1-3 pm DG-41</td>
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<tr>
<td>9</td>
<td>15 Oct – 19 Oct</td>
<td>Lymphatic System 9.1 Lecture 9.2 Lecture 9.3 Laboratory 9.3 Quiz</td>
<td>Ross &amp; Pawlina, Chap #14</td>
<td>Laboratory (2 hr), Friday Oct 19 1-3 pm DG-41</td>
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Module 2 Histological Review

Module #2 Examination – Monday, 22 October
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<tr>
<th>Module 3 Histological Review</th>
<th>Module 3 Examination – Monday, 19 November</th>
<th>Module 4 Histological Review</th>
<th>Module 4 Examination – Monday, 10 December</th>
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</thead>
<tbody>
<tr>
<td>10.1 Lecture</td>
<td>14.1 Lecture</td>
<td>15.1 Lecture</td>
<td>16.1 Lecture</td>
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<td>10.2 Lecture</td>
<td>14.2 Lecture</td>
<td>15.2 Lecture</td>
<td>16.2 Lecture</td>
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<tr>
<td>10.3 Laboratory</td>
<td>14.3 Laboratory</td>
<td>15.3 Laboratory</td>
<td>16.3 Laboratory</td>
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<tr>
<td>10.4 Quiz</td>
<td>14.4 Quiz</td>
<td>15.4 Quiz</td>
<td>16.4 Quiz</td>
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<tr>
<td>Ross &amp; Pawlina, Chap #10 &amp; #13</td>
<td>Ross &amp; Pawlina, Chap #20</td>
<td>Ross &amp; Pawlina, Chap #22</td>
<td>Ross &amp; Pawlina, Chap #23</td>
</tr>
<tr>
<td>Laboratory (2 hr), Friday Oct 26 1-3 pm DG-41</td>
<td>Laboratory (2 hr), TBA Thanksgiving Holiday</td>
<td>Laboratory (2 hr), Friday Dec 30 1-3 pm DG-41</td>
<td>Laboratory (2 hr), Friday Nov 7 1-3 pm DG-41</td>
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**Attendance:**
The online material will be completed at the student’s own pace. However, the student is expected to keep up with the assignments and online activities in order to participate in the laboratory sessions, which are mandatory. A student’s overall success is based upon following the course schedule for learning the assigned materials and practicing the recommended exercises. Students are strongly encouraged to develop self-discipline to view all the online lectures and to complete all text readings, exercises, and practice examinations.

**Academic Integrity:**
Please review the University’s complete policy regarding academic dishonesty, found online in the student handbook: [http://www.dso.ufl.edu/judicial/pdffiles/handbook2003.pdf](http://www.dso.ufl.edu/judicial/pdffiles/handbook2003.pdf)

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, which can be found on the Health Science Center Library’s web page: [http://www.library.health.ufl.edu/services/copyright.htm](http://www.library.health.ufl.edu/services/copyright.htm)

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

Counseling Services:
University of Florida’s Counseling and Wellness Center provides professional counseling services to students, faculty and staff; administers tests; and presents workshops on topics promoting personal and professional growth. Services are free to University of Florida students and confidential. The student Counseling and Wellness Center is located at 3190 Radio Road, and the phone number is 392-1575/1576. The faculty and staff Employee Assistance Program is located in Room 245 of the Infirmary, and the phone number is 392-5787. The Counseling & Testing Center is open Monday through Friday, 8-5pm on all days that the University is officially open. If you have a mental health emergency during the times that the Counseling & Wellness Center is not open, the line will go to the crisis services line or direct the caller to the number for the crisis services line. If you are worried about someone who is acting differently, please do call the Counseling and Wellness Center.
**Resources for Learning & Life at UF:**
The University of Florida has numerous resources to provide assistance and support for your lifelong learning.

UF Natural Disaster/Hurricane Emergency Plan
[http://www.ehs.ufl.edu/disasterplan/](http://www.ehs.ufl.edu/disasterplan/)

University Relations
[http://www.urel.ufl.edu](http://www.urel.ufl.edu)

The Dean of Students Office
[http://www.dso.ufl.edu/](http://www.dso.ufl.edu/)

Department of Housing and Residence Education
[http://www.housing.ufl.edu/](http://www.housing.ufl.edu/)

The Trauma Response Team
[http://www.dso.ufl.edu/TRT/](http://www.dso.ufl.edu/TRT/)

University of Florida Police Department
[http://www.police.ufl.edu/](http://www.police.ufl.edu/)

University of Florida Physical Plant Division
[http://www.ppd.ufl.edu/](http://www.ppd.ufl.edu/)

University of Florida Counseling Center
[http://www.counsel.ufl.edu/](http://www.counsel.ufl.edu/)

University of Florida Division of Human Resources
[http://www.hr.ufl.edu/](http://www.hr.ufl.edu/)

Student Health Care Center
[http://www.shcc.ufl.edu](http://www.shcc.ufl.edu)

Sexual Trauma/Interpersonal Violence Education

Employee Assistant Program
[http://www.eap.ufl.edu/](http://www.eap.ufl.edu/)

Alachua County Crisis Center
[http://www.alachuacounty.us/Depts/CSS/CrisisCenter/Pages/CrisisCenter.aspx](http://www.alachuacounty.us/Depts/CSS/CrisisCenter/Pages/CrisisCenter.aspx)