

BIO 482. Human Histology. 4 Credits
Spring 2011
James Madison University

Instructor: Dr. Mark Gabriele
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Office Hours: Tuesday 1:00-4:00, Wednesday 10:00-12:00

Sections: Lecture: TTh 9:30-10:45AM Burruss 057
 Lab: Th 2:00-5:00PM Burruss 057

Required Texts: *Histology: A Text and Atlas*; Ross and Pawlina (5th or 6th Edition)
 diFiore's Atlas of Histology with Functional Correlations; Eroschenko (11th Edition)

Course Description: This course presents the microscopic structure of cells, tissues, and organs to explain normal physiological function and provides a basis for understanding disease mechanisms and altered cellular states. *Prerequisite: BIO 270 or BIO 290, or equivalent.*

GRADING POLICY: Three exams are scheduled for both lecture and laboratory. All exams are considered to be comprehensive in nature in that we will apply principles throughout the semester. Final letter grades will be assigned on a 10-point numerical basis (*i.e.* 100-90% = A; 89-80% = B; etc).

Undergraduate:	Lecture Exam 1	15%	Lab Exam 1	15%
	Lecture Exam 2	15%	Lab Exam 2	15%
	Lecture Exam 3	20%	Lab Exam 3	20%

HONOR SYSTEM: All students are expected to be familiar with and to abide by the University Honor Code at JMU. A complete description of the University Honor System can be found in the JMU Student Handbook.

ATTENDANCE: Attendance is absolutely critical to the successful completion of this course. You are expected to attend ALL lecture and laboratory sessions. Officially excused absences from laboratory must be approved **prior** to the absence. Make-ups for **lecture and laboratory exams** will be given for **officially excused absences ONLY** (official school business, illness with M.D. excuse, death in the family). If you are unable to attend a lecture exam, you must contact me directly **prior** to the scheduled exam time.

OFFICE OF DISABILITY SERVICES: Mission statement: James Madison University is committed to the full and total inclusion of all individuals and to the principle of individual rights and responsibilities. To this end, policies and procedures will ensure that persons with a disability will not, on the basis of that disability, be denied full and equal access to and enjoyment of academic and co-curricular programs or activities or otherwise be subjected to discrimination under programs or activities offered by the University.

This policy was developed to ensure equal access at the University for individuals with disabilities and to ensure full compliance with all pertinent federal and state legislation.

Students with disabilities who require reasonable accommodations to fully participate in course activities and/or meet course requirements must register with the Office of Disability Services (ODS) and contact the instructor to discuss access issues. ODS will provide the student with an Access Plan Letter that will verify individual need for services and make recommendations for accommodations to be used in the classroom. ODS is located in the Wilson Learning Center, Room 107; Phone: 568-6705.

COURSE OBJECTIVES:

Objective 1: To obtain a basic understanding of the morphology of the microscopic anatomy of the human body and correlate it with general function.

Objective 2: To be able to identify cells and tissues, as well as the ability to make observations and decisions to identify studied organ systems.

Objective 3: To relate the functions of those cells, tissues, and organ systems to their structures.

Objective 4: To learn to visualize a three-dimensional representation of the two-dimensional structure seen under the microscope.

Objective 5: To appreciate advantages / disadvantages of various types of microscopy and histological stains.

Objective 6: To become aware of variations from normal histological structure (histopathology).

BIO 482: Tentative Lecture Schedule

WEEK 1:	Jan 11 th Jan 13 th	Course overview, Intro to microscopy and histological methods (Chapter 1) Epithelium, glands, and connective tissues (Chapters 4-6, 9)
WEEK 2:	Jan 18 th Jan 20 th	Finish epithelium, glands, connective tissue. Cartilage (Chapter 7) Cartilage and Bone (Chapter 7 and 8)
WEEK 3:	Jan 25 th Jan 27 th	Blood I (Chapter 10) Blood II; Hematopoiesis (Chapter 10)
WEEK 4:	Feb 1 st Feb 3 rd	Muscle (Chapter 11) Nervous Tissue (Chapter 12)
WEEK 5:	Feb 8 th Feb 10 th	Review Tissues UNIT I EXAM - Tissues
WEEK 6:	Feb 15 th Feb 17 th	Assessment Day. NO CLASSES Intro to organ systems, Integumentary system, (Chapter 15)
WEEK 7:	Feb 22 nd Feb 24 th	NO CLASS – Research Conference Vascular system (Chapter 13)
WEEK 8:	Mar 1 st Mar 3 rd	Respiratory system (Chapter 19) Microscopy I: Focus and alignment of a compound microscope; Fluorescence.
WEEK 9:	Mar 8 th Mar 10 th	SPRING BREAK – NO CLASSES SPRING BREAK – NO CLASSES
WEEK 10:	Mar 15 th Mar 17 th	Esophagus and Stomach (Chapter 17) Stomach and Small Intestine (Chapter 17)
WEEK 11:	Mar 22 nd Mar 24 th	Small Intestine, Large Intestine, Rectoanal Junction (Chapter 17) Microscopy II: Capturing, scaling, and labeling digital images. Data acquisition/analyses
WEEK 12:	Mar 29 th Mar 31 st	UNIT II EXAM – Integument through Digestive Review for Lab Exam
WEEK 13:	Apr 5 th Apr 7 th	Accessory digestive glands; Liver, GB, and Pancreas (Chapter 18) Finish Accessory digestive glands (Chapter 18); Intro Urinary (Chapter 20)
WEEK 14:	Apr 12 th Apr 14 th	Urinary System I (Chapter 20) Urinary System II (Chapter 20)
WEEK 15:	Apr 19 th Apr 21 st	Male Reproductive System (Chapter 22) Female Reproductive System (Chapter 23)
WEEK 16:	Apr 26 th Apr 28 th	Slide Preparation (Embedding, Sectioning, and Mounting Tissue) Course evaluations; Honors Presentations, Review for Final
WEEK 17:	May 5 th	8:00-10:00am UNIT III EXAM – Cumulative

BIO 482: Tentative Laboratory Schedule

WEEK 1:	Jan 13 th	LAB 1: Epithelium, glands, and connective tissues (Chapters 2 & 3)
WEEK 2:	Jan 20 th	LAB 2: Cartilage and Bone (Chapter 4)
WEEK 3:	Jan 27 th	LAB 3: Blood (Chapter 5)
WEEK 4:	Feb 3 rd	LAB 4: Muscle and Nervous Tissue (Chapter 6 & 7)
WEEK 5:	Feb 10 th	UNIT I LAB EXAM – Tissues
WEEK 6:	Feb 17 th	LAB 5: Integumentary System (Chapter 10)
WEEK 7:	Feb 24 th	LAB 6: Vascular System (Chapter 8)
WEEK 8:	Mar 3 rd	LAB 7: Respiratory System (Chapter 15)
WEEK 9:	Mar 10 th	SPRING BREAK – NO LAB
WEEK 10:	Mar 17 th	LAB 8: GI TRACT I (Chapter 12)
WEEK 11:	Mar 24 th	LAB 9: GI TRACT II (Chapter 13)
WEEK 12:	Mar 31 st	UNIT II LAB EXAM – Integument through Digestive
WEEK 13:	Apr 7 th	Lab 10: Accessory Digestive Glands (Chapter 14)
WEEK 14:	Apr 14 th	LAB 11: Urinary System (Chapter 16)
WEEK 15:	Apr 21 st	LAB 12: Male Reproductive System (Chapter 18) LAB 13: Female Reproductive System (Chapter 19)
WEEK 16:	Apr 28 th	UNIT III LAB EXAM – Cumulative