

BIO 482. Human Histology. 4 Credits
Spring 2017. Lecture and Laboratory
James Madison University

Instructor: Dr. Mark Gabriele
Office: Bioscience Building, 2028-B
Email / Voicemail: gabrieml@jmu.edu / 568-6333; email preferred
Office Hours: T 2:00-3:30
W 9:30-11:00

Section (0001): Lecture: TTh 9:30-10:45 Bioscience 2033 Gabriele
Section (1001): Lab: Th 2:00-5:00 Bioscience 2033 Gabriele

Required Texts: *Histology: A Text and Atlas*; Ross and Pawlina (7th Edition)
diFiore's Atlas of Histology with Functional Correlations; Eroschenko (12th Edition)

GOALS OF THE COURSE:

- Goal 1: To obtain a basic understanding of the morphology of the microscopic anatomy of the human body and correlate it with general function.**
- Goal 2: To be able to identify cells and tissues, as well as the ability to make observations and decisions to identify studied organ systems.**
- Goal 3: To relate the functions of those cells, tissues, and organ systems to their structures.**
- Goal 4: To learn to visualize a three-dimensional representation of the two-dimensional structure seen under the microscope.**
- Goal 5: To appreciate advantages / disadvantages of various types of microscopy and histological stains.**
- Goal 6: To become aware of variations from normal histological structure (histopathology).**

NATURE OF COURSE CONTENT: Microscopic structure of cells, tissues and major organ systems of the body. Basic anatomical and physiological function is presented to emphasize the histological significance of the examined organ systems. *Prerequisite: BIO 270 or BIO 290, or equivalent.*

METHODS OF EVALUATION: 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; 79-70% = C; 69-60% = D; <60% = F).

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%

REQUIREMENTS OF THE COURSE:

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 or here: <http://www.jmu.edu/honor/code.shtml>

INTELLECTUAL PROPERTY: All exams, handouts, and materials for this course, including those posted on Blackboard and faculty and course websites (i.e. MDID), are intellectual property. Therefore, dissemination of any of these items, in whole or in part, through any extracurricular agency including other websites is a violation of the honor code and will be punished as such.

ATTENDANCE: Attendance is absolutely critical to the successful completion of this course. You are expected to attend ALL lecture, laboratory, and small group 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.

ADDING/DROPPING CLASSES:

Policies for adding and dropping courses can be found here: <http://www.jmu.edu/syllabus>

Requests to withdrawal after the university stated deadlines are strictly at the discretion of the instructor. **In extraordinary circumstances only**, the instructor may choose to use the WP/WF option for students unable to complete the course. WP will be assigned for a course average $\geq 70\%$; WF will be assigned for averages $< 70\%$.

ACADEMIC HONESTY:

Policies for academic honesty and plagiarism can be found here: <http://www.jmu.edu/syllabus>

OFFICE OF DISABILITY SERVICES:

Policies for disability accommodations can be found here: <http://www.jmu.edu/syllabus>

It is the student's responsibility to provide documentation from the Office of Disability Services to the lecture instructor to ensure that appropriate arrangements are made.

INCLEMENT WEATHER POLICIES

Policies for inclement weather can be found here: <http://www.jmu.edu/syllabus>

RELIGIOUS OBSERVATION ACCOMMODATIONS

Policies for religious observation accommodations can be found here: <http://www.jmu.edu/syllabus>

BIO 482: Tentative Lecture Schedule

WEEK 1:	Jan 10 th Jan 12 th	Course overview, Intro to microscopy and histological methods (Chapter 1) Epithelium, glands, and connective tissues (Chapters 4-6, 9)
WEEK 2:	Jan 17 th Jan 19 th	Finish epithelium, glands, connective tissue. Cartilage (Chapter 7) Cartilage and Bone (Chapter 7 and 8)
WEEK 3:	Jan 24 th Jan 26 th	Blood I (Chapter 10) Blood II; Hematopoiesis (Chapter 10)
WEEK 4:	Jan 31 st Feb 2 nd	Muscle (Chapter 11) Nervous Tissue (Chapter 12)
WEEK 5:	Feb 7 th Feb 9 th	Assessment Day. NO CLASSES UNIT I EXAM - Tissues
WEEK 6:	Feb 14 th Feb 16 th	NO CLASS – Research Conference Intro to organ systems, Integumentary system, (Chapter 15)
WEEK 7:	Feb 21 st Feb 23 rd	Finish Integumentary system, start Vascular system (Chapter 13) Finish Vascular system (Chapter 13)
WEEK 8:	Feb 28 th Mar 2 nd	Respiratory system (Chapter 19) Microscopy I: Focus and alignment of a compound microscope; Fluorescence.
WEEK 9:	Mar 7 th Mar 9 th	SPRING BREAK – NO CLASSES SPRING BREAK – NO CLASSES
WEEK 10:	Mar 14 th Mar 16 th	Esophagus and Stomach (Chapter 17) Stomach and Small Intestine (Chapter 17)
WEEK 11:	Mar 21 st Mar 23 rd	Small Intestine, Large Intestine, Rectoanal Junction (Chapter 17) Microscopy II: Capturing, scaling, and labeling digital images. Data acquisition/analyses
WEEK 12:	Mar 28 th Mar 30 th	Review for Lab Exam UNIT II EXAM – Integument through Digestive
WEEK 13:	Apr 4 th Apr 6 th	Accessory digestive glands; Liver, GB, and Pancreas (Chapter 18) Finish Accessory digestive glands (Chapter 18); Intro Urinary (Chapter 20)
WEEK 14:	Apr 11 th Apr 13 th	Urinary System I (Chapter 20) Urinary System II (Chapter 20)
WEEK 15:	Apr 18 th Apr 20 th	Male Reproductive System (Chapter 22) Female Reproductive System (Chapter 23)
WEEK 16:	Apr 25 th Apr 27 th	Slide Preparation (Embedding, Sectioning, and Mounting Tissue) Course evaluations, Student Presentations, Review for Final
WEEK 17:	May 4 th	10:30-12:30am UNIT III LECTURE EXAM – Cumulative

BIO 482: Tentative Laboratory Schedule

WEEK 1:	Jan 12 th	LAB 1: Epithelium, glands, and connective tissues (Chapters 2 & 3)
WEEK 2:	Jan 19 th	LAB 2: Cartilage and Bone (Chapter 4)
WEEK 3:	Jan 26 th	LAB 3: Blood (Chapter 5)
WEEK 4:	Feb 2 nd	LAB 4: Muscle and Nervous Tissue (Chapter 6 & 7)
WEEK 5:	Feb 9 th	UNIT I LAB EXAM – Tissues
WEEK 6:	Feb 16 th	LAB 5: Integumentary System (Chapter 10)
WEEK 7:	Feb 23 rd	LAB 6: Vascular System (Chapter 8)
WEEK 8:	Mar 2 nd	LAB 7: Respiratory System (Chapter 15)
WEEK 9:	Mar 9 th	SPRING BREAK – NO LAB
WEEK 10:	Mar 16 th	LAB 8: GI TRACT I (Chapter 12)
WEEK 11:	Mar 23 rd	LAB 9: GI TRACT II (Chapter 13)
WEEK 12:	Mar 30 th	UNIT II LAB EXAM – Integument through Digestive
WEEK 13:	Apr 6 th	Lab 10: Accessory Digestive Glands (Chapter 14)
WEEK 14:	Apr 13 th	LAB 11: Urinary System (Chapter 16)
WEEK 15:	Apr 20 th	LAB 12: Male Reproductive System (Chapter 18) LAB 13: Female Reproductive System (Chapter 19)
WEEK 16:	Apr 27 th	UNIT III LAB EXAM – Cumulative