BIO 582. Human Histology. 4 Credits
Spring 2023. Lecture and Laboratory
James Madison University

Instructor: Dr. Mark Gabriele
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Email / Voicemail: gabrieml@jmu.edu / 568-6333; email preferred

Office Hours: T 7:00-8:00pm (virtually)
W 10:00-12:00 (in-person)
* by appointment only if absolutely can't make above work

Section (0001):	Lecture:	TTh	9:35-10:50	Bioscience 2033	Gabriele
Section (1001):	Lab:	Th	2:00-5:00	Bioscience 2033	Gabriele

Required Texts: (1) *Histology: A Text and Atlas: With Correlated Cell and Molecular Biology*; Pawlina and Ross (8th Edition)
(2) *Atlas of Histology with Functional Correlations*; Eroschenko (13th Edition)

***both freely available through JMU Libraries at:**
https://pa-core.lwwhealthlibrary.com/books.aspx
Scroll down to Histology section
Choose Sign in via: Open Athens link.
Then Choose: Federation: OpenAthens Federation Institution: James Madison University

COVID NOTE: *Every lecture and lab will be in-person for the full duration of scheduled class time unless official mandates warrant otherwise. Recorded lectures will also be made available to you virtually for your asynchronous review. THIS DOES NOT MEAN YOUR ATTENDANCE TO SCHEDULED IN-PERSON LECTURES IS OPTIONAL. Daily attendance and active participation is mandatory and critical for your success. Lecture PowerPoints and asynchronous recordings will be uploaded to Canvas for the coming week by the end of the preceding weekend.*

For instruction on Canvas How-To tutorials, please visit http://guides.instructure.com/m/8470. For the Canvas Support email your name, JMU student ID, and a description of the issue(s) to Library Tech Support at letsupport@jmu.edu or 540-568-5312.

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 260, BIO270/BIO270L, BIO 290/BIO 290L, or BIO 370. Credit may not be earned in both BIO BIO 482 and BIO 582..*

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	15%	Lab Exam 3	15%
	Graduate Presentation, Participation, Professionalism, Attitude toward learning			10%

* all exams will be in-person except in the event of university shut-down
** if virtual exams are necessary, format is subject to change

*Graduate Specific Course Components:

1. Graduate lecture exams are more rigorous and include additional graduate essay portions.

2. Graduate students will be required to lead techniques classes on microscope alignment, embedding, sectioning, staining, and imaging.

3. Graduate students will prepare and give a formal oral presentation on a common histopathology of one of the normal organ systems covered during the semester.

COMMUNICATION AND CANVAS:
Please do not use Canvas as a means for getting in touch with me. Instead, please email me directly (gabrieml@jmu.edu). I try not to check my email outside of normal business hours. If we do not have balance, we have nothing. During normal business hours, I will try to respond to you quickly, but may not be able to respond right away - I might be in the middle of another teaching, research, or service commitment. **When I need to get in touch with you or send you an announcement outside of class, I will email you directly using your JMU @dukes email address.** I do not expect a reply from you outside of normal business hours, unless you wish. I'd like you to prioritize your work-life balance too as much as you can. That said, please reply as promptly as possible.

ELECTRONIC DEVICES:

Most of our time in class will be spent in discussion or listening to your classmates. If we are distracted by our electronic devices in class, we are physically present but not intellectually present. This is a "half presence" that is disrespectful to your classmates. Therefore, out of respect for each other, the default policy is that **all use of personal electronic devices (e.g. sending a quick text on a phone, checking smart watches for alerts/texts) is prohibited in class.** I will simply treat the unauthorized use of electronic devices as if you didn't participate for the day, clearly impacting that portion of your grade. I will not stop class to let you know this obvious fact. However, if your unauthorized use of electronic devices is especially disruptive, I will stop class and ask you to leave so that your physical presence becomes consistent with your intellectual presence. There are two noteworthy exceptions: (1) During certain class activities that require laptops or using the internet for course-related searches, all students are permitted to use any electronic devices at their disposal, and (2) If there is an activity where you feel the entire class would greatly benefit from appropriate electronic device use, you should ask for special permission. If granted, the entire class will be given this special permission.

ATTENDANCE: You are expected to attend all portions of the course (lecture and lab). Attendance is critical for you to perform well. However, performance will not be evaluated based on a record of attendance, so no grade penalty will be assessed directly for absences. If you are ill, please do not attend class in person. You are expected to report the reason for your absence (e.g. health-related, family emergency, or any other reason) by email prior to the absence. If that is not possible, you must make contact within 72 hours of the absence. Your proactive communication is required! As a condition of the Honor Code, you are required to be honest about any absence or face an Honor Code violation. Therefore, no documentation is required to prove your reason for absence.

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 videos, exams, handouts, and materials for this course, including those posted on Canvas as well as faculty and course websites, 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.

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 ≥60%; WF will be assigned for averages <60%.

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

OFFICE OF DISABILITY SERVICES:
James Madison University and its faculty are committed to providing an equal educational opportunity for all students. If you have a disability and need accommodations, please register with Disability Services located in the Student Success Center, Suite 1202. You may contact them by phone

at 540-568-6705 or through email (disability-svcs@jmu.edu) to have an accommodation letter sent to your faculty. If you have a documented disability that requires an accommodation, it is the student's responsibility to notify the faculty member **within the first two weeks of the semester** so that appropriate arrangements can be made.

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

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

INCLUSIVITY COMMITMENT
Being inclusive of all people and their respective backgrounds, values, points of view, and experiences is so vital and something that we will emphasize daily. Through our example we will promote positive change and underscore how diverse backgrounds and perspectives enrich our experiences and learning environments. We will set such an example by maintaining the highest expectations and moral standards in and out of the classroom – being present to each other and treating one another with respect. Microagressions will not be tolerated. Microaggressions are the everyday verbal, nonverbal, and environmental slights, snubs, or insults, whether intentional or unintentional, that communicate hostile, derogatory, or negative messages to target persons based solely upon their marginalized group membership (*from Diversity in the Classroom, UCLA Diversity & Faculty Development, 2014*). For examples see:
https://academicaffairs.ucsc.edu/events/documents/Microaggressions_Examples_Arial_2014_11_12.pdf

As part of my commitment to being inclusive and providing an inclusive environment in my classroom, I welcome and ask that you bring any instances of non-inclusivity to my attention either in person, electronically, or through appropriate anonymous feedback mechanisms.

BIO 582: Tentative Lecture Schedule

Note: Associated chapter readings listed here refer to:
Histology: A Text and Atlas: With Correlated Cell and Molecular Biology; Pawlina and Ross, 8th ed.

WEEK 1:	Jan 17th	Course overview, Intro to microscopy and histological methods (Chapter 1)
	Jan 19th	Epithelium, glands, and connective tissues (Chapters 4-6, 9)
WEEK 2:	Jan 24th	Cartilage (Chapter 7)
	Jan 26th	Bone (Chapter 7 and 8)
WEEK 3:	Jan 31st	Blood I (Chapter 10)
	Feb 2nd	Blood II Hematopoiesis (Chapter 10)
WEEK 4:	Feb 7th	NO CLASS - Assessment Day; watch Nervous Tissue Lecture Video (Chapter 12)
	Feb 9th	Muscle (Chapter 11)
WEEK 5:	Feb 14th	NO CLASS – RESEARCH CONFERENCE - Review for Unit I Exam
	Feb 16th	**UNIT I EXAM - Tissues**
WEEK 6:	Feb 21st	Review Exams, Intro to organ systems, Integumentary system, (Chapter 15)
	Feb 23th	Finish Integumentary system, (Chapter 15)
WEEK 7:	Feb 28th	Vascular system (Chapter 13)
	Mar 2nd	Vascular system continued (Chapter 13)
WEEK 8:	Mar 7th	Respiratory system (Chapter 19)
	Mar 9th	Respiratory system continued (Chapter 19)
WEEK 9:	Mar 14th	SPRING BREAK – NO CLASSES
	Mar 16th	SPRING BREAK – NO CLASSES
WEEK 10:	Mar 21st	Esophagus (Chapter 17)
	Mar 23rd	Stomach (Chapter 17)
WEEK 11:	Mar 28th	Small Intestine (Chapter 17)
	Mar 30th	Large Intestine, Rectoanal Junction (Chapter 17)
WEEK 12:	Apr 4th	Review for Unit II Exam
	Apr 6th	**UNIT II EXAM – Integument through Digestive**
WEEK 13:	Apr 11th	Review Exams, Accessory Digestive Glands; Liver, GB, & Pancreas (Chapter 18)
	Apr 13th	Accessory Digestive Glands; Liver, GB, & Pancreas (Chapter 18)
WEEK 14:	Apr 18th	Urinary System I (Chapter 20)
	Apr 20th	Urinary System II (Chapter 20)
WEEK 15:	Apr 25th	Male Reproductive System (Chapter 22)
	Apr 27th	Female Reproductive System (Chapter 23)
WEEK 16:	May 2nd	Finish Male and Female Reproductive Labs
	May 4th	Course Evaluations and Review for Final
WEEK 17:	May 9th	8:00-10:00 **UNIT III LECTURE EXAM – Cumulative**

BIO 582: Tentative Laboratory Schedule

Note: Associated chapter readings listed here refer to:
Atlas of Histology with Functional Correlations; Eroschenko, 13th ed.

WEEK 1:	Jan 19th	LAB 1: Epithelium, glands, and connective tissues (Chapters 4 & 5)
WEEK 2:	Jan 26th	LAB 2: Cartilage and Bone (Chapter 7)
WEEK 3:	Feb 2nd	LAB 3: Blood (Chapter 6)
WEEK 4:	Feb 9th	LAB 4: Muscle and Nervous Tissue (Chapter 8 & 9)
WEEK 5:	Feb 16th	**UNIT I LAB EXAM – Tissues**
WEEK 6:	Feb 23th	LAB 5: Integumentary System (Chapter 12)
WEEK 7:	Mar 2nd	LAB 6: Vascular System (Chapter 10)
WEEK 8:	Mar 9th	LAB 7: Respiratory System (Chapter 17)
WEEK 9:	Mar 16th	SPRING BREAK – NO CLASSES
WEEK 10:	Mar 23rd	LAB 8: GI TRACT I. Esophagus and Stomach (Chapter 14)
WEEK 11:	Mar 30th	LAB 9: GI TRACT II. Small and Large Intestine (Chapter 15)
WEEK 12:	Apr 6th	**UNIT II LAB EXAM – Integument through Digestive.**
WEEK 13:	Apr 13th	Lab 10: Accessory Digestive Glands; Liver, GB, & Pancreas (Chapter 16)
WEEK 14:	Apr 20th	LAB 11: Urinary System (Chapter 18)
WEEK 15:	Apr 27th	LAB 12: Male Reproductive System (Chapter 20) LAB 13: Female Reproductive System (Chapter 21)
WEEK 16:	May 4th	**UNIT III LAB EXAM – Cumulative**