

Syllabus Spring 2016 - Biology 320: Histology

Instructor: Dr. Isaure de Buron **Office hours:** by appointment (please email)
Office: Off campus (Ft Johnson) **Phone:** 953-3615 **E-mail:** deburoni@cofc.edu
Lectures: HWWE 305; T and R: 8:30- 9:45 am
Laboratory HWWE 208: T (L01) 11:30 am 2:29 pm or T (L02) 2:30-5:29 pm

Week of	Topic of lecture	Lab (T)
Jan 7	Review – cell	
12, 14	Basic histo-techniques Epithelial tissue	Basic Histo-techniques
19, 21	Connective tissue Nerve tissue	Epithelial tissue
26, 28	Muscle tissue R: Quiz 1 (through CT)- Catch up day	Connective Tissue
Feb 2, 4	Cartilage Bone	Muscle tissue & Nerve tissue
9, 11	Blood R: Quiz 2 (through cartilage)- Circulatory system	Cartilage
16, 18	Circulatory system cont' R: Lab Test 1 (through blood) during lecture time	Bone & Blood
23, 25	Q&A: lab test R: Lecture Test 1 (through circulatory system)	Circulatory system
March 1, 3	Integument Lymphoid system	Integument
8, 10	Spring Break – No class	
15, 17	Lymphoid system cont' Endocrine system	Lymphoid system
22, 24	T: Quiz 3 (through lymphoid) -Digestive system I	Endocrine system
29, 30	Digestive system II R: Lecture Test 2	Digestive system I
April 5, 7	Respiratory system	Digestive system II
12, 14	Urinary system R: Quiz 4 – Q&A	Respiratory & Urinary systems
19	T: Lab test part 1 (during lecture time - comprehensive)	Lab Test 2 part 2 (comprehensive)

Friday April 22: Reading Day

Tuesday April 26 – 12:00-3:00 pm - Final Lecture Examination (comprehensive)

NOTE: This is a tentative schedule and it is subject to change.

Textbook - Recommended: Junqueira's Basic Histology by Mescher (Mc Graw Hill) – Text and Atlas

Web Material: All PowerPoint lecture outline/partial notes will be posted on OAKS. **However, these notes are not meant to substitute for lecture attendance.** Additional material, including line drawings, micrograph highlighting, and more extensive information on topics outlined in the notes will be supplied in the lectures. **Some books and atlases have supplementary material on line (self quizzes, extra micrographs...).** Use all opportunities to utilize this material and increase your knowledge.

Laboratory: Requested: The recommended textbook, which is also an atlas and/or any other **recent color atlases** such as:

- Atlas of descriptive histology by Ross, Pawlina, and Barnash (Sinauer Pub.)
- Color Atlas of Histology by Gartner and Hiatt (Lippincott Williams & Wilkins Pub)
- Wheater's Functional Histology (Churchill Livingstone)-
- Histology: Interactive Virtual Microscope (CD, Churchill Livingston).

Students **must bring to the laboratory their atlas, and/or the CD along with their laptop.** Students should also bring to the laboratory plain white paper for drawing. Some students find useful to bring color pencils. **No make-up labs will be given.** Students are responsible for all materials presented during labs missed. **Missing three labs will result in a "WA" grade.**

Course objectives: This course is designed for students who are planning to major in biology and are interested in the medical, veterinary, or other health related fields. The course includes lectures and laboratories that involve the intensive use of microscopes. The course emphasizes the identification of animal tissues with an emphasis on human and other mammal tissues and an understanding of their function in the major human anatomical systems.

What you should know before you get started (taken in part from studentconsult.com):

- **Histology is not only about visually identifying various cell and tissue types, but also being able to describe the differences, and understand why certain cells have the appearance they do, which is directly related to their function.** For example, respiratory epithelial cells lining the bronchi in the lungs have cilia that are constantly in motion to help clear the airways of mucous and debris. The cells of the uterine tube also have cilia. However, these serve to propel the oocyte along the tube towards the uterus. The cilia in both tissues look the same and function similarly, but have a different role in the body.
- Learning how every type of cell in the body works and how these cells form the different tissues and specific organs seems an extremely daunting task. **But if you keep in mind that there are only four basic tissues, it is simply a matter of learning how these tissues are combined to form organs, which is related to their function.**
- **Histology is about microscope slides and micrographs and requires a lot of repetition.** You will be required to visually identify various cell types, tissues types or organs from a series of slides or micrographs. **There is no magic: this takes time and practice.** The more time you spend looking at images in histology atlases the better the learning will be and the better you will be prepared for the tests. Therefore, you must purchase an atlas, a textbook/atlas combination, or/and a virtual microscope CD and that you bring one of them in the laboratory. Also, a series of DVDs is on reserve at the library and serve as virtual laboratory. **Please do not wait the day before a test to use them (this is an advice given to you by me AND by former students in the class).**
- Some students try to memorize the color patterns based on the type of stain used or a slide number or whether a slide has a broken corner. **Do not do this.** This is waste of your time and brains. I have a special box of slides and test images that you will have never seen before. In any case, **it will be much easier and enjoyable for you to learn how to recognize tissues and organs than memorizing useless artifacts.**

Testing: Examinations will be a combination of multiple choice questions, fill-in the blanks, short answers, drawings, and labeling as well as identification of tissues from photographic images.

Quizzes comprise ~ 5-10 questions and are given during the **10 first minutes of class.** A lecture will be given after quizzes are taken.

Lecture tests comprise ~ 40 questions, will **start at 8:45 am.** **No quiz or test will be allowed to be taken later than 10 minutes after it is distributed to the class.** The lowest quiz grade (including a zero) will be dropped. **The final examination will be cumulative and will start at noon. No late arrivals will be accepted.** The laboratory tests will include identification of cell structures, tissues, and organs, both from microscope slides and 35 mm slides (viewed in PowerPoint). **Quizzes and tests missed for non-excused absences will be graded zero and no make-up tests will be given.**

Grading:	Examination 1:	15%	A-: 90-93%	A: 94 -100 %	
	Examination 2:	15%	B-: 80- 83 %	B: 84-86%	B+: 87 - 89 %
	Final comprehensive examination:	20%	C-: 70-73 %	C: 74-76%	C+: 77- 79 %
	Quiz (lowest grade dropped): each 5%	15%	D-: 60-63 %	D: 64-66%	D+: 67-69%
	Lab test 1:	10 %	F: < 60 %		
	Lab test 2:	25%			

Attendance: PowerPoint lecture notes available on the web are not meant to substitute for attending. Attendance in lectures and laboratories is expected. **Missing 3 laboratories will result in a WA grade. Students are responsible for all material and announcements made in class and laboratory.** These announcements may include changes in the course syllabus, material to review for examinations, and examination dates.

Policies: You are expected to do all work in accordance with the principles of **the Honor Code. Cell phones, pagers, and any other electronic devices must be turned OFF when in class and taking quizzes and tests. No hats may be worn when taking quizzes and tests. Written proof verifying an acceptable reason for an excused absence will be required** before being excused from attending a laboratory session or taking a quiz or a test. **Quizzes and tests missed for non-excused absences will be graded zero.**