

Draft Syllabus

Human Histology (146:322)

Spring 2022

Instructor: Dr. Kathleen Scott

Reviews: TBA

Office: ARC 312

Office Hours: TBA or by appointment

Email: scott@biology.rutgers.edu (please use rather than sending through Canvas)

Course Description: Histology is the study of the structural organization of cells, tissues and organs at the microscopic level. This course will cover tissue and organ microanatomy, with the overarching goal of relating structure to function. The study of histology requires not only an understanding of structure and function, but also the ability to recognize and identify tissues and organs in digital images of microscope slides. For this reason, the lectures and labs will be highly integrated; as you learn about the tissues and organs in lecture, you will also study and learn to identify them in lab. Lectures and labs will cover the four basic tissue types (epithelium, connective tissue, muscle, and nerve) and the organ systems (integumentary, digestive, respiratory, urinary, male and female reproductive, endocrine, and sensory systems). The goals for the course, and their alignment with the goals of the CBN department are:

Course Goals for Human Histology Students

- Understand the organization and structure of each basic tissue type, and the structure of the cells that make up that tissue.
- Understand the function of each basic tissue type, and the relationship of cell and tissue structure to function.
- Understand the structure and function of organs and organ systems.
- Develop an understanding of the three-dimensional structure of organs by observing and interpreting multiple sections using different stains and microscopy techniques, and relate this structure to function.
- Be able to synthesize information from multiple histological preparations and understand the role of histology in framing and addressing research questions across many disciplines.

Department Goals for CBN Majors

- Master factual and conceptual knowledge in cell biology and neuroscience that will provide a solid foundation for success in advanced training and professional careers.
- Develop an ability to summarize, integrate and organize information.
- Use scientific reasoning to evaluate the potential for current research and new discoveries to improve our understanding of cell biology and neuroscience and its relevance to human health and to our society.

Mode of Instruction: This course will be offered in person at the hours and locations shown below. You will be using online resources in lab and uploading lab exercises, so a laptop and a cell phone camera or scanner will be useful. Technology permitting, lectures will be recorded and posted on the course Canvas site, but labs will not be recorded.

Lecture: MW 2:00-3:20 pm LSH B117

Labs (beginning on Tuesday January 25):

Section 01: Tuesday 2:00-5:00 NH-B130

Section 02: Thursday 7:30-10:30 NH-B130

Section 03: Thursday 2:00-5:00 NH-B130

Section 04: Friday 2:00-5:00 NH-B130

Schedule of Lectures, Laboratories, Quizzes and Exams

Week	Day	Date	Lecture	Junqueira	Wheater (opt)
1	Wed	1/19	Introduction	Ch. 1-3	Ch. 1; App. 1,2
			No Lab		
2	Mon	1/24	Epithelium	Ch. 4	Ch. 5
	Wed	1/26	Loose Connective Tissue	Ch. 5,6	Ch. 4
			<i>Lab 1: Cytology, Histological Techniques</i>		
3	Mon	1/31	Skeletal Connective Tissues I	Ch. 7	Ch. 10
	Wed	2/2	Skeletal Connective Tissues II	Ch. 8	Ch. 10
			Lecture Quiz 1: Sunday, Feb 6, 5 pm to Monday Feb 7, 5 pm		
			<i>Lab 2: Epithelium, Loose Connective Tissue, Dense Connective Tissue (practice lab quiz)</i>		
4	Mon	2/7	Skeletal Connective Tissues III	Ch. 8	Ch. 10
	Wed	2/9	Nervous System	Ch. 9	Ch. 7
			<i>Lab 3: Cartilage, Bone (Lab Quiz 1)</i>		
5	Mon	2/14	Nervous System	Ch. 9	Ch. 7
	Wed	2/16	Catch-up and Review		
			Lecture Quiz 2: Thursday, Feb 17, noon to Friday Feb 18, noon		
			<i>Lab 4: Peripheral Nervous System, Central Nervous System (Lab Quiz 2)</i>		
6	Mon	2/21	EXAM I		
	Wed	2/23	Muscle	Ch. 10	Ch. 6
			<i>Lab: PRACTICAL I</i>		
7	Mon	2/28	Circulatory System	Ch. 11	Ch. 8
	Wed	3/2	Blood	Ch. 13	Ch. 3
			<i>Lab 5: Muscle, Circulatory System, Blood (part 1)</i>		
8	Mon	3/7	Immune System	Ch. 14	Ch. 11
	Wed	3/9	Integumentary System	Ch. 18	Ch. 9
			Lecture Quiz 3: Thursday, Mar 10, noon to Wednesday Mar 11, noon		
			<i>Lab 6: Blood (part 2), Lymphatic, Integumentary Systems (Lab Quiz 3)</i>		
***** Spring Break *****					
9	Mon	3/21	Digestive System	Ch. 15	Ch. 13, 14
	Wed	3/23	Digestive System	Ch. 16	Ch. 14, 15
			<i>Lab 7: Digestive System</i>		
10	Mon	3/28	Special Senses	Ch. 23	Ch. 21
	Wed	3/30	Catch-up and Review		
			Lecture Quiz 4: Thursday, March 31, noon to Friday April 1, noon		
			<i>Lab 8: Digestive System, Special Senses (Lab Quiz 4)</i>		

11	Mon 4/4	EXAM II			
	Wed 4/6	Respiratory System	Ch. 17	Ch. 12	
		Lab: PRACTICAL II			
12	Mon 4/11	Urinary System	Ch. 19	Ch. 16	
	Wed 4/13	Urinary System	Ch. 19	Ch. 16	
		Lab 9: Respiratory, Urinary Systems			
13	Mon 4/18	Female Reproductive System	Ch. 22	Ch. 19	
	Wed 4/20	Female Reproductive System	Ch. 22	Ch. 19	
		Lecture Quiz 5: Thursday, Apr 21, noon to Friday April 22, noon			
		Lab 10: Reproductive Systems (Lab Quiz 5)			
14	Mon 4/25	Male Reproductive System	Ch. 21	Ch. 18	
	Wed 4/27	Endocrine System	Ch. 20	Ch. 17	
		Lab 11: Endocrine System (Lab Quiz 6)			
15	Mon 5/2	Catch-up and Review			
		Lecture Quiz 6: Sunday, May 1, 5 pm - Monday May 2, 5 pm			

Final Exam: Scheduled University time period for Exam Group C
Final Lab Practical: TBA

Required Text: Junqueira's Basic Histology, 15th edition, by A. L. Mescher (ISBN 978-1-260-02617-7). This text is available free on-line through the Rutgers University Libraries subscription to the AccessMedicine database. To access this text from off-campus, go to <http://libraries.rutgers.edu> click on "Databases" and then "AccessMedicine" and scroll through the texts at the top of the screen. If you are on-campus you can go directly to: <https://accessmedicine.mhmedical.com/book.aspx?bookid=2430> . The appropriate reading for each topic is indicated in the syllabus.

Recommended Text/Atlas: An atlas is an excellent resource for the study of histology, and there are many available. Wheater's Functional Histology by Young, O'Dowd & Woodford - 6th Edition (ISBN: 978-0-7020-4746-6) is highly recommended. This text is also available free through the Rutgers Libraries website; click on "Databases" and then "ClinicalKey" and search for Wheater's Functional Histology. The link to the text will appear in a box at the top right. The appropriate reading for each topic is indicated in the lecture schedule. The introductions to the chapters are an excellent overview of each topic. The figure captions explaining each slide are very detailed, but can help you achieve an in-depth understanding of the structures. They are best used to help you understand a particular tissue after we have studied it in lecture and lab.

Course Website: Canvas

Resource Website: <http://lifesci.dls.rutgers.edu/~babiarez/drbsrev.htm>

Labs: The lab manual will be posted on-line in the Canvas module for each week. Your TA will introduce the material at the beginning of each lab period, and notes for those presentations will be posted on Canvas. Each week there will be a lab exercise that you will be expected to complete during the lab.

Attendance: Students are expected to attend all lectures and laboratories for the full class period. Lecture attendance will be monitored via short in-class questions, which will count a total of 15 points toward your

grade; note that you must answer the question to receive full credit for attending the lecture. It is difficult to make up laboratory material, so lab attendance is mandatory. Missed labs must be made up by attending another lab section during the same week. If you know you will miss a lab, please contact Dr. Scott to arrange to attend another lab section. If you cannot attend another lab you will have to study the slides yourself. Students who will miss class or lab should report their absence through the Absence Reporting System (<https://sims.rutgers.edu/ssra/>) to indicate the date and reason for your absence. Please remember that even if you are not in class you will still be responsible for all announcements and material covered, and that reporting an absence does not excuse it.

Examinations: The material in this course is divided into three units. At the conclusion of each unit there will be a lecture (hour) exam and a practical exam covering the material in that unit. The last lecture and lab practical exams (which are not cumulative) will be given during the final exam period. There will be one take home exam toward the end of the semester. You are expected to take all lecture and lab exams when they are scheduled, so please plan accordingly. If you believe you have a legitimate exam conflict, you must notify Dr. Scott at least one week in advance. Make-up exams will be given only in special circumstances, and only for students who have received permission before the exam. All exams will be based on the material covered in lecture and lab.

Lecture Quizzes: Regular quizzes on lecture material will be given on Canvas, and the schedule for these quizzes is listed in the syllabus. Quizzes must be taken during the scheduled 24 hour period. A total of 50 points from lecture quizzes (one of the 6 quizzes will be dropped) will count toward your grade. There will be no make-ups for any of these quizzes since the lowest grade will be dropped. If you feel you have a legitimate conflict for the entire period the quiz is available, you must notify Dr. Scott in advance of the quiz opening time.

Lab Exercises: Lab exercises will count for a total of 50 points toward your grade. In each lab there will be a short exercise designed to help you organize and learn the lab material. This exercise must be completed during lab and there will be no make-ups, except for excused absences. There will be eleven assignments, each worth 5 points, and the lowest grade will be dropped.

Lab quizzes: Short lab quizzes worth 5 points each will be given six times during the semester; the quiz schedule is available in the syllabus. Each quiz is worth five points, and the lowest grade will be dropped. There will be no make-ups for these quizzes; if you miss a quiz for any reason it will count as your dropped quiz. If you are given permission to attend another lab because of a conflict you will be able to take the quiz with that section.

Grading: Your final grade will be based on the percentage of total points you accumulate through all of the above assignments. The total points available are as follows:

<u>Course Work</u>	<u>Points</u>
Hour Exams (3 @ 100 pts)	300
Practical Exams (3 @ 100 pts each)	300
Take home exam	30
Lecture Quizzes (5 best of 6 @10 pts ea)	50
Lab Quizzes (5 best of 6 @ 5 pts ea)	25
Lab Exercises (10 best of 11 @5 pts ea)	50
Lecture in-class questions	15
Total Points	770

Grades will be based on the following scale: A= 90-100% of total points; B= 80-89%; C = 70-79%; D= 55-69%; F <55%. Plus grades will be assigned to the highest parts of the B and C ranges, but only to students who have attended lecture and lab on a regular basis. There will be no extra credit work, and no retests will be given. If you believe there are extenuating circumstances that may affect your performance on a particular exam, please discuss those with Dr. Scott before the exam.

Academic Honesty: Rutgers University takes academic dishonesty very seriously, as do I. By enrolling in this course, you assume responsibility for familiarizing yourself with the [Academic Integrity Policy](#) and the possible penalties (including suspension and expulsion) for violating the policy. As per the policy, all suspected violations will be reported to the Office of Student Conduct. Academic dishonesty includes (but is not limited to): cheating, plagiarism, aiding others in committing a violation or allowing others to use your work, failure to cite sources correctly, fabrication, using another person's ideas or words without attribution, re-using a previous assignment, unauthorized collaboration, or sabotaging another student's work. Use of external website resources such as Chegg.com or others to obtain solutions to homework assignments, quizzes, or exams is cheating and a violation of the University Academic Integrity policy. Posting homework assignments, quizzes, or exams to external sites without the instructor's permission may be a violation of copyright and may constitute the facilitation of dishonesty, which may result in the same penalties as plain cheating. If you are unsure whether something constitutes a violation of the Academic Integrity Policy, please consult the instructor. All students will need to sign the Rutgers Honor Pledge on every major exam, assignment, or other assessment as follows:

On my honor, I have neither received nor given any unauthorized assistance on this examination (assignment, paper, quiz, etc.).

Students with Disabilities: Any students with disabilities should contact Dr. Scott about accommodations that are necessary for your learning needs, and provide a copy of your LOA. Students with disabilities requesting accommodations must follow the procedures outlined at <https://ods.rutgers.edu/students/registration-form>.

Letters of recommendation: If you want to request a letter of recommendation you must do so within one week of the end of the semester. I will only write letters for students who I feel I know well through regular course interactions (lecture attendance, office hours, reviews, lab work); I will not do interviews or review resumes or other material. It is not necessary that you receive a high grade, but it is necessary that I be able to speak positively about your approach to this course. Please note that I will only write confidential letters (i.e, you have waived access).

Inclement weather and class cancellations: We will have class/lab unless classes are officially cancelled. In the case of inclement weather, lecture and lab meetings may be shifted to remote synchronous instruction. In that case, I will post an announcement in Canvas, and a Zoom link. If an exam is scheduled, I will also post information on Canvas and send everyone e-mail, so be sure to check your official e-mail address.

Student-Wellness Services

Just In Case Web App

<http://codu.co/cee05e>

Access helpful mental health information and resources for yourself or a friend in a mental health crisis on your smartphone or tablet and easily contact CAPS or RUPD.

Counseling, ADAP & Psychiatric Services (CAPS)

(848) 932-7884

17 Senior Street, New Brunswick, NJ 08901

www.rhscaps.rutgers.edu/

CAPS is a University mental health support service that includes counseling, alcohol and other drug assistance, and psychiatric services staffed by a team of professional within Rutgers Health services to support students' efforts to succeed at Rutgers University. CAPS offers a variety of services that include: individual therapy, group therapy and workshops, crisis intervention, referral to specialists in the community and consultation and collaboration with campus partners.

Crisis Intervention:

<http://health.rutgers.edu/medical-counseling-services/counseling/crisis-intervention>

Report a Concern: <http://health.rutgers.edu/do-something-to-help>

Violence Prevention & Victim Assistance (VPVA)

(848) 932-1181

3 Bartlett Street, New Brunswick, NJ 08901

www.vpva.rutgers.edu

The Office for Violence Prevention and Victim Assistance provides confidential crisis intervention, counseling and advocacy for victims of sexual and relationship violence and stalking to students, staff and faculty. To reach staff during office hours when the university is open or to reach an advocate after hours, call 848-932-1181.

Disability Services

(848) 445-6800

Lucy Stone Hall, Suite A145, 54 Joyce Kilmer Avenue, Piscataway, NJ 08854 / <https://ods.rutgers.edu>

Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation:

<https://ods.rutgers.edu/students/documentation-guidelines> . If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please complete the Registration form on the ODS web site at: <https://ods.rutgers.edu/students/registration-form> .

Scarlet Listeners

(732) 247-5555

<http://www.scarletlisteners.com>

Free and confidential peer counseling and referral hotline, providing a comforting and supportive safe space.