

# Human Histology

## Biology 857 Summer 2018

Instructor: Dr. Marc C. Albrecht  
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I will be online by appointment. I encourage people to contact me by phone or Skype (Id: Dr.AatUNK) any time.

Required Text: Eroschenko, Victor. 2013. diFiore's Atlas of Histology with Functional Correlations 12<sup>th</sup> Ed. LWW publisher.

### Class Objectives:

This is a graduate-level class with the following objectives:

- Review cell structure and function in human cells
- Become familiar with the terminology and concepts of histology including microscopes, tissue staining, magnification effects, and tissue preparation techniques
- Learn the function and microanatomy of basic mammalian tissues types
- Be able to recognize specific tissue-level structures and cell types in the human body

### Class Structure:

The class will not use microscopes, but will be based the use of images for instruction. Everyone will be asked to learn and identify on tests: cell types, tissues types, and micro-anatomical structures from humans (or mammals if images are not from humans). The recorded lectures and PowerPoint presentations introduce cell types, the physiology of, and the function of these structures. The class will also cover aspects of histology such as sample preparation and tissue staining.

### Exams and Grading:

Grading in this class will be based on 1) class participation, 2) quizzes based on class material, and 3) a final exam.

### Grading:

Class Quizzes/Assign (20 pts * 10 quizzes)	200 pts
Participation (10 pts * 6 weeks, no points 1 <sup>st</sup> week or last week of course)	60 pts
Final Exam	<u>90 pts</u>
<b>Total Possible</b>	<b>350 points</b>

Grades will be assigned on the standard scale adopted by the UNK Biology Department:

A (90-100%), B+ (87-89%), B (83-86%), B- (82-80%), C+ (77-79%), C (73-77%),  
C- (70-72%), D+ (68-69%), D (63-67%), D- (60-62%), F (Below 60%)

## **Class Expectations:**

Participants are expected to participate in the online discussions in class, and access additional materials I make available through Canvas and the internet. A high-speed internet connection and familiarity with image file formats are recommended for this class. Participation is useful in this type of class, and therefore 2 substantive posts per week are expected to get full participation credit for each week.

Please download class material lecture videos, syllabus, and PowerPoints. If there are problems with this process the items can be requested on DVD.

## **Special Circumstances and UNK Policies**

### Withdraw (W) and Incomplete (I) Grades:

Until the conclusion of the 10th week of the semester, you may withdraw from any class and receive a grade of "W." This grade does not count toward your grade point average and merely indicates that you withdrew from (or "dropped") the class. No instructor can withdraw a student from the roster; that is, if you stop coming to class the instructor cannot withdraw you from the class. The instructor will be forced to assign you a failing ("F") grade for the class. Withdrawing from a class involves filling out a simple form that the instructor and student both sign and returning this form to the registrar's office by the withdraw deadline.

Under very unusual circumstances, a grade of incomplete ("I") may be issued. An incomplete is not a substitute for a "W" (withdraw), and it is not a substitute for a poor or failing grade. An incomplete is issued if circumstances beyond the student's control prevent the student from completing the required work for the class by the end of the semester (example: student is hospitalized during final exam week). If you qualify for an incomplete grade, it is expected that you will receive this grade in all your classes. An incomplete grade will give you an extension to complete outstanding work only; it is not an opportunity to "start over" in the class. All outstanding work must be completed within one year or the "I" grade automatically converts to a failing ("F") grade. An incomplete grade will be considered only during the final six weeks of the semester, after the deadline for receiving a "W" has passed.

### **Students with Disabilities or Those Who are Pregnant**

Students with disabilities or those who are pregnant are encouraged to contact me for a confidential discussion of their individual needs for academic accommodation. It is the policy of the University of Nebraska at Kearney to provide flexible and individualized reasonable accommodation to students with documented disabilities or those who are pregnant. To receive accommodation services for a disability, students must be registered with UNK Disabilities Services Coordinator, David Brandt, in the Academic Success Office, 163 Memorial Student Affairs Building, 308-865-8214 or by email [unkdso@unk.edu](mailto:unkdso@unk.edu). For those needing accommodation due to pregnancy, you need to visit with Student Health. The following link provides information for students and faculty regarding pregnancy rights. <http://www.nwlc.org/resource/pregnant-and-parenting-students-rights-faqs-college-and-graduate-students>

### **Reporting Student Sexual Harassment, Sexual Violence or Sexual Assault**

Reporting allegations of rape, domestic violence, dating violence, sexual assault, sexual harassment, and stalking enables the University to promptly provide support to the impacted student(s), and to take appropriate action to prevent a recurrence of such sexual misconduct and protect the campus community. Confidentiality will be respected to the greatest degree possible. Any student who believes she or he may be the victim of sexual misconduct is encouraged to report to one or more of the following resources:

**Local Domestic Violence, Sexual Assault Advocacy Agency** 308-237-2599

**Campus Police (or Security)** 308-865-8911

**Title IX Coordinator** 308-865-8655

Retaliation against the student making the report, whether by students or University employees, will not be tolerated.

**If you have questions regarding the information in this email please contact Mary Chinnock Petroski, Human Resources Director ([petroskimj@unk.edu](mailto:petroskimj@unk.edu) or phone 8655).**

## Biology 857 Histology Syllabus

This is the planned lecture schedule there may be deviations from this schedule, but the order of lectures will be the same.

Wk/ Date	Lectures
1	01 Histology: Introduction to class, Chp 1 Tissue Preparation
May 21	02a Chp 2 Microscopes and basic organelles, 02b Chp 3 Cells, Cell cycle
	<b>Q1: quizzes open Friday at 5:00 pm close Monday at 10 pm CT</b>
2	03a-d Mr. Simonson: Histology illustration and drawing
May 28	04 Chp 4 Epithelial tissue, 05 Chp 5 Connective tissue
	<b>Q2 (drawing assignment), Q3</b>
3	06 Chp 6 Hematopoietic tissue, 07 Chp 7 Skeletal tissue
June 4	08 Chp 8 Muscle tissue
	<b>Q4, Q5</b>
4	09 Chp 9 Nervous Tissue
June 11	10 Chp 10 Circulatory system, 11 Chp 11 Immune system
	<b>Q6</b>
5	12 Chp 12 Integumentary System, 13 Chp 13 Digestive system Pt 1
June 18	14 Chp 14 Digestive system Pt 2, 15 Chp 15 Digestive system Pt 3
	<b>Q7, Q8</b>
6	16 Chp 16 Digestive system Pt 4, 17 Chp 17 Respiratory system
June 25	18 Chp 18 Urinary system, 19 Chp 19 Endocrine system
	<b>Q9</b>
7	20 Chp 20 Male reproductive, 21 Chp 21 Female reproductive
July 2	<b>Q10</b>
8	22 Chp 22 Organs of special sense
July 9	<b>Final Exam: multiple choice and short answer</b>

# Orientation to Albrecht Canvas Use

## Version 2.01 Spring 2018

### UNK Biology Department

#### Introduction:

The UNK Biology Distance Master's program has many faculty participating. Part of the experience and challenge of the program is that, as in other professional situations, faculty are different from each other. Faculty have different lecture styles, different discussion board expectations, different grading priorities, and even different methods to deliver class material. I realize this might be confusing for people, but hopefully the various methods will demonstrate what works and what does not for you in your own careers. Please read this section as I try to clarify how I use Canvas in this class.

Please contact me with any questions about Canvas, the class materials or grading. Also note that the UNK e-Campus website does provide both Video Tutorials and Atomic Learning Tutorials on using Canvas, email, and MS Word see [this page](#).

#### A note about Expectations:

I approach this program with the goal of providing, as closely as possible, the level of experience I was fortunate enough to experience in my graduate career at some very good universities. This means that generally my expectations are high. By this I mean at least six hours of study time per week, a high degree of mastery of even complex material, and the persistence to do outside research and ask questions as needed. I will do my best to find, present, and interpret material I think is important and appropriate for the subject area of classes. I will also do my best to explain how the process of science works including experimental design, statistical testing, writing, and thought processes. I will also work to be as available as possible, and turn around posts, emails, and graded work as quickly as I can. For graded work this means 2 weeks or less.

It is my hope and expectation that everyone in this program is here because they enjoy biology and wish to become more knowledgeable about the subject and more proficient at teaching or researching.

Here is a quick checklist of points that may help you succeed in the course, based on my experience as a graduate student and professor:

1. **Have you prepared for class?** Have you read the material, not just once but twice? Have you looked up authors, concepts, or words you were not familiar with during the reading? Do you understand how this reading fits into the discipline in general, and why it was assigned? On primary literature papers have you noticed the author, date, and author's institution of the paper in addition to the data, statistical tests, and concepts in the paper?
2. Before asking an entire class what a word means **have you tried to look it up?** Did you try to find the word from appropriate, professional, recognized sources? Have you used the assignment itself, an index book section (if present), or another biology text you own? Wikipedia is also a good place to start, but not a good place to end.
3. Is the work you are turning in **reflective of you** as the professional you are working towards? Have you looked at it for mistakes? Do you have all the important concepts covered in your work? Is the

organization of the paper clear and useful? Have you put in thought and work on the figures and tables to make them clear, professional, and are they referenced correctly? Has the work been proofread for grammatical, factual, spelling, and formatting errors? Do you know that the formatting correct?

## **Canvas:**

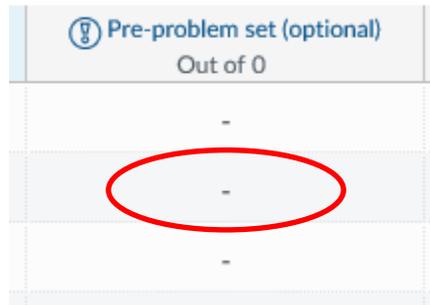
The main portal for the class work in the UNK Biology Distance Master's program is the learning management system (LMS) Canvas. Being familiar with the LMS is helpful for success in the program. Here are the components are the ones I use the most:

1. "Files":
  - a. This is where I place Powerpoint, pdf, and video files that are the lectures for classes.
  - b. These files should be **downloaded** (not streamed) for printing out or viewing. This means a right click, not a left click on most computers.
  - c. The video files are in MP4 format, this can be viewed by many video players.
  - d. Some of these files are large and should be downloaded on fast internet connections.
  - e. I may post other papers here as well as book sections or links to other sites, these are class materials and should be read and have notes made on them.
  - f. It is fine to download all files available at any time during the semester. There are no restrictions on what devices you use or how many times you use them. Please note these files are UNK files created by me in terms of authorship.
2. "Discussions":
  - a. This section of the LMS is how you will communicate with me and each other in the class.
  - b. In my classes Discussions are an important part of the class experience, there are lot of points associated with participation on Discussion Board
  - c. Typically, each discussion board is opened Monday around 9:00 am Central Time, and closed Sunday night around 10:00 pm Central Time (I reserve the right to change these times).
  - d. Because discussions are important, posts will be graded.
    - i. I expect at least **two** substantial postings each week and not both on Sunday night. Except for Biology 824 that requires **3** posts!
    - ii. *The quality of your contribution.* This is a somewhat subjective category, but the more thoughtful your comments the better the quality of discussion will be for the entire class. Your comments should be at least a few sentences. Conciseness and clarity are necessary to keep the reading load for the class to a reasonable level, i.e.: page long postings are discouraged. Your comments should be supported with information, file attachments or web sites, and should be relevant to the current topic of discussion. References are encouraged.
    - iii. *How well you interact as classmates.* Your responses should demonstrate that you are aware of the discussion that has been taking place. Go beyond stating "I agree" with someone with someone by stating your reasoning. Posts that say just "I agree" in one form or another will not be counted as posts for the week.
    - iv. *Be polite and professional* be polite and constructive in your responses to other students and me.
3. "Assignments":
  - a. Many, if not all, the assignments in the class will appear here, so please find this area of the LMS
  - b. There are two types of assignments I use most:

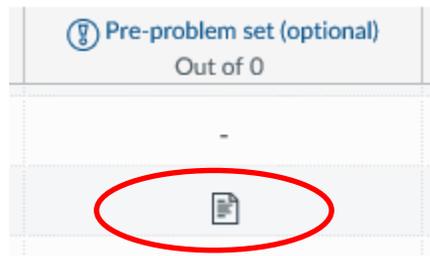
- i. Quizzes: these are timed tests, typically multiple-choice questions that are available for a limited amount of time. The time frame is usually open at Friday at 5:00 pm on the week they are assigned and closing on the following Monday at 10:00 pm Central Time. These tests must be completed online within their time limit (e.g. 30 minutes) once started.
- ii. Papers: I create assignments that are links through which you can upload documents. This system has the distinct advantage over email in that papers go directly to a 'space' that is specific to one person for one assignment. Users will see a paper icon in the Gradebook for the assignment when you have uploaded the document.
  - 1. This function also can be set to be available for a limited amount of time. See the syllabus or assignment description (or document detailing the assignment in the assignment description) for due dates. Typically, I post the assignments at least 1 week ahead of the deadline.

4. "Grades":

- a. This is the area of Canvas where grades are recorded and displayed, these are the actual grades I use, so check your grades often.
- b. Note the symbols in the gradebook. The responsibility is yours to make sure assignments are in on time, uploaded correctly, and that the correct file is uploaded. If the wrong file is uploaded, or the file is late, penalty of at least 10% will be assessed.
  - i. Empty assignment: this means no file has been uploaded, or test taken according to Canvas. You **do not** want to see this if you have taken a test or uploaded a file.



- ii. Paper icon: this means that Canvas has received a file, or that a test has been taken. A file that is uploaded may still be corrupt, or a person could still have uploaded the wrong file, but whatever it is, Canvas has it. This means I have to grade the assignment before you will see a grade. Any paper, and any test with subjective questions (such as fill-in, short answer) will have this symbol until graded.



- iii. Graded assignment: this is the grade for the assignment. It is what will be used in grade calculation.

Plagiarism Certificate Out of 10
10
10

- iv. Other symbols: I think there may be a failed upload symbol that looks like a broken paper icon, but I have not seen this icon recently and I am not sure how Canvas shows failed uploads. If you see something other than the images shown above please contact me immediately.

5. “Announcements”:

- a. These are pieces of information I post that I think will help people with the class or a particular assignment as a semester progresses. Please read these when I post them.
- b. I will post class information here, such as changes to the syllabus or answering a question that is coming up repeatedly.

6. Other Features:

- a. There are other features of LMS that I may try to use, I will notify you of this if I do.

7. Scientific Writing (**last but not least!**)

- a. I have included documents in Files/Scientific Writing folder to help with scientific writing. I hope to see the highest level of professional writing in assigned papers.
- b. I encourage everyone to work on improving their writing skills, as I continue to work on mine. Everyone in the program should have at least a few papers from primary journals from other classes or your own reading.
  - i. If not, get a few from the UNK library collection that you have access to as a UNK student on subjects you are interested in.
  - ii. Recent papers from a major journal should be read for style, voice, formatting. Such examples will show you how to build sentences, tables, figures, paragraphs, references, and abstracts. Everything you need to know is there.
- c. Also, you can always ask for feedback on sample writing before large assignments are due!
- d. Changing writing style or formatting seems easy for some students but hard for others. Not writing in scientific style or not formatting papers (or problem sets) correctly can cost a person a large number of points on assignments in a course. Please do your best with writing. This is why I have provided reference material and encourage people to read current literature articles for structure as well as content.

# Dr. Albrecht Class Policies

## Version 1.9 Spring 2018

### Introduction:

Every institution has its rules and policies and UNK and the Biology Department have them too. Because of the distance education environment, the degree of communication between student and faculty can be difficult, and misunderstandings do happen. Please keep in mind “talking” over the computer is not the same as face to face – several types of communication are lost. There is nothing quite like a conversation after class or in a hallway. Please be patient and allow more time than you might otherwise to get the solution you need. Here are my policies that will be in place for this class in addition to those of UNK and the Biology Department.

### Policies:

1. Paper formatting: all work turned should have the following formatting.
  - a. Size 12 font, 1” margins all around the page, page numbers present, no right justification for the text
  - b. Header information on the first page: name, class, date, assignment at least.
  - c. All text double-spaced with proper English spelling and grammar used. The writing should be simple, clear, scientific writing style. At the least this means: subject-verb-direct object structured sentences.
  - d. Tables must be labeled at the top and have captions that explain them.
  - e. Figures must be labeled at the bottom and have captions that explain them. No titles within the phase (graph) space which is the Excel default unfortunately.
  - f. All work turned in should have correct references. All citations must be “(author year)” format in the text (including figures and tables if they are adapted from existing work) with a full citation at the end of the paper. Papers should be listed alphabetically by last name of first author.
    - i. Citations **are** needed if textbook or lecture material is used (especially when quoted!). This is both the legal necessity and good practice for work beyond class.
    - ii. Full citations should be in a “References” section at the end of each paper and follow these formats, reverse indented and alphabetical by author.
    - iii. Each text citation should have a full citation in the Literature Cited section and each citation in the Literature Cited section must have at least one text citation.
  - g. **Failure of any of these policies will result in letter grade reductions.** For those of use familiar with rubrics, these are level one issues.
2. Citation Style Examples: further information here: <http://www.scientificstyleandformat.org/Tools/SSF-Citation-Quick-Guide.html>

a. Books:

Darling D. 2001. Life Everywhere: The maverick science of astrobiology. Basic Books. New York.  
206 pp.

b. Computer Programs:

Microsoft. 2010. Microsoft Excel Version 14.06112.5000. Redland, WA.

c. Journal Articles:

Chekalyuk A C, and M Hafez. 2008. Advanced laser fluorometry of natural aquatic environments. Limnological Oceanographic Methods 6: 591-609.

d. Websites:

Food and Agriculture Organization of the United Nations. 2006. Livestock impacts on the environment. URL: <http://www.fao.org/ag/magazine/0612sp1.htm>. Accessed Feb 26, 2014.

3. Late work/technical difficulties:

a. Late work will be subject to the following grade reductions:

- i. 10% reduction of grade for any work submitted after stated deadline
- ii. A further 10% grade reduction for each 24-hour period past the stated deadline

b. I understand that online classes demand attention to deadlines. However, this graduate program is *not* a self-paced one. This program is structured to academic terms and time frames (such as breaks) as the brick and mortar University of Nebraska system. In general people in the program show great dedication and hope this tradition continues.

c. Technical difficulties are part of the reality of the online world. Given that truism, do NOT wait to submit assignments until the last minute or hour of a deadline. Both you and I cannot be responsible for failures of power, computers, computer networks, or even Canvas. Do not procrastinate; *turn assignments in early*, so there is time to resubmit if there are any problems.

d. Important: please install and run some sort of anti-virus and anti-malware software on your computer. This is for all of us in the class, so that viruses are not spread through the class. Finally, a utilities program will help your computer run well by fixing registry files and defragmenting and optimizing hard drives:

- i. Microsoft Windows Defender (free):
- ii. maintenance software such as Glary Utilities (free)

4. Online etiquette:

a. **Please be respectful of others in the class, even me.** It is easy to be more confrontational via electronic post than in person. I understand conversations may become heated, and irony, even sarcasm may be attempted at times be used to make a point; however, such attempts are often not understood via posts. Please try to remain clear and kind at all times.

b. Posts I deem as offensive or inflammatory towards others or me will be removed from the discussion boards. If this becomes a continuing problem, grade reductions may result. I will keep copies of such posts.