

BIOC21 – Vertebrate Histology: Cells and Tissues

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Course Description:

This course summarizes the current understanding of histology of epithelial, connective, muscle, nervous, blood, and lymphatic tissues along with some of the hundreds of cell types that are found there. This course will help students to better understand how the organization of cells and tissues contributes to the function of the human body.

This course meets for five hours per week. There is a two hour lecture, and a three hour lab. Attendance to lectures is highly recommended because I will be covering a lot more than what will be posted in the lecture notes, and you will be responsible for everything covered in lecture.

Office Hours:

I will be available for office hours on **Mondays from 11:30-1:30pm**. Office hours will be held in **SW540B**.

If you can't make those hours, you can e-mail me to try to set up an appointment or e-mail me with questions which require short answers (I would prefer to answer anything requiring a longer explanation in person).

You will also be able to post questions on the course bulletin board. Your TAs and I will check it periodically, but I would like to encourage you post answers on the bulletin board to help your classmates – if you can answer someone's question, please do it.

Required Text:

The textbook below is a very good reference source, but it covers more detail than I will in this course. I probably will have to ask you to do some specific reading from this book due to the Thanksgiving holiday falling on one of our lecture days. You also may find it a useful resource to help you clarify material that you may have missed during lecture. Also, my lecture notes will include references to its figures (as well as the 5th Edition).

Histology: a Text and Atlas. 6th edition (5th or 4th editions are acceptable)
Author: Ross and Pawlina

Evaluation

1. Quizzes (10%):

You will be required to demonstrate some basic knowledge of the relevant material at the start of each lab (first 10 min of the lab). These quizzes are meant to ensure that you come in to the labs prepared and thus will benefit from them as much as possible. They will, therefore, focus on your knowledge of terminology, characteristic features and your ability to identify or label some of the structures that you might be looking at that day.

2. Participation (5%)

Starting in the second week of labs, your TA will give a number of students in each section a “pop quiz” in locating 5 structures from that lab and material covered in previous labs. Students will be chosen randomly by me and your TA will be notified that day which students they will be testing. Each student will get two of these “pop quizzes” throughout the term, each worth 2.5% of their total grade.

3. Slide Show Exams (10% each):

There will be two slide show exams, each worth 10% of your final mark. These will test your ability to identify cells, tissues, structures and organs based on pictures of microscope slides projected on a screen. The questions may also ask about functions or characteristic features of the item being shown. Each slide will be shown for 1 minute, and slides will be changed automatically (*I will not be able to go back to a previous slide*). These tests will be in a short answer and multiple choice format and will not be cumulative.

4. Term Test (30%):

There will be a term test worth 30% of your final grade. This test will mostly involve short answer questions and some bigger questions; it will also likely have a multiple choice component.

5. Final Exam (35%):

The final exam will be written in the exam period after the end of the term. It will account for 35% of your final mark and will cover material from the entire course. The questions will mostly consist of short answer questions and some longer questions. There will also likely be some multiple choice, fill -in-the-blank or True/False questions.

Attendance in the lab is expected, absence will result in loss of marks for the quiz written that day. Missing a quiz due to lateness will also result in the loss of that quiz mark. **Missed quizzes (including the “pop quizzes”) cannot be “made-up”**, so please make sure that you show up to the labs, and that you show up on time.

Proper documentation must be presented to the TA or course instructor as soon as possible after missing a lab or test. There will be no make-up exams. If you miss the Midterm, you must e-mail the instructor immediately, and submit a medical certificate within one week of the missed exam. The certificate must clearly state that in your doctor's opinion you were unable to write the exam. Once such a certificate is presented, the weight of the midterm will be added onto your final exam and you will be writing a comprehensive final exam worth 70% of the final grade.

Similarly, if you miss the first slide show exam, the weight of that exam will be added onto the second exam (provided that proper documentation is presented to the instructor). If you miss the second slide show exam and can provide valid documentation, the weight of that exam will be added onto your final exam and not onto the first slide show exam. If both exams are missed, you will receive a mark of zero for both tests regardless of whether documentation is presented for both.

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Please remember that by signing up for a course, you are making a commitment to be there. This means that you should not be making any travel plans that might affect your ability to attend labs or exams. Any such travel will not be treated as sufficient reason for missing exams.

Tentative Lecture Schedule

| # | Date | Topic | Textbook |
|---------|--------------|-------------------------------------|----------------------------|
| Week 1 | September 10 | Introduction | |
| Week 2 | September 17 | Epithelium | <i>Ross, Ch. 5</i> |
| Week 3 | September 24 | Connective Tissues | <i>Ross, Ch. 6 & 9</i> |
| Week 4 | October 1 | Cartilage and Bone | <i>Ross, Ch. 7</i> |
| Week 5 | October 8 | Independent Study: Bone Development | <i>Ross, Ch. 8</i> |
| Week 6 | October 15 | Muscle | <i>Ross, Ch. 11</i> |
| Week 7 | October 22 | Blood Vessels | <i>Ross, Ch. 13</i> |
| Week 8 | October 29 | Blood | <i>Ross, Ch. 10</i> |
| Week 9 | November 5 | Lymphatic Tissues | <i>Ross, Ch. 14</i> |
| Week 10 | November 12 | Central Nervous System | <i>Ross, Ch. 12</i> |
| Week 11 | November 19 | Peripheral Nervous System | <i>Ross, Ch. 12</i> |
| Week 12 | November 26 | Extra lecture time if necessary | |

** As stated previously, the textbook covers more detail than I expect of you; the chapters listed above are meant as a guide and a reference for clarification.

Tentative Lab Schedule

| | | Topic |
|----------|--------------|---------------------------|
| Week of: | September 10 | No Labs |
| Week of: | September 17 | Epithelium |
| Week of: | September 24 | Connective Tissues |
| Week of: | October 1 | Cartilage and Bone |
| Week of: | October 8 | Bone Development |
| Week of: | October 15 | Muscle |
| Week of: | October 22 | No Labs |
| Week of: | October 29 | Blood and Blood Vessels |
| Week of: | November 5 | Lymphatic Tissues |
| Week of: | November 12 | Central Nervous System |
| Week of: | November 19 | Peripheral Nervous System |
| Week of: | November 26 | No Labs |