

VS 331 Histology Syllabus

Instructor Information

Instructor: Dr. Shari Lanning

Email: Shari.Lanning@colostate.edu (Responses to email will be provided within 48 hours during weekdays.)

Cell phone: 970-692-7105 (Work cell phone specifically for you to text or call me, so use it!!! ;))

Course Prerequisites

Students must have taken at least **one college-level course in general biology**.

Course Description

Histology (microanatomy) is the study of the structure and function of cells, tissues, and organs. Particular emphasis is placed on histology at the light microscopic level. The course uses hundreds of high-resolution photographs and images of human and domestic animal tissues.

Histology laboratories involve finding and identifying histological structures at low, medium, high, and oil immersion views utilizing a cutting-edge virtual microscope program. Students will have unlimited access to the virtual microscope as they develop their understanding of tissues in the course.

This course can be used to prepare individuals for material covered in: dental, pre-medical, pre-health, pre-clinical, and pre-veterinary programs. Careful attention has been given to include subjects that are essential to understanding the coursework involved in these programs.

Histology VS 331 topics include, but are not limited to:

- Epithelium
- Connective tissue
- Blood cells
- Muscle
- Nervous system
- Cardiovascular system
- Immune system

- Gastrointestinal system
- Respiratory system
- Urinary system
- Endocrine system
- Reproductive systems

Course Objectives

1. Describe and define the biology of the cells and cell structures covered in this course and how they relate to function of the cell, tissue, and/ or organ.
2. Describe and define normal cell and structure function as it relates to the histology of that structure.
3. Define, describe, and identify organization of normal cells into tissues.
4. Define, describe, and identify organization of normal tissues into organs.
5. Define and describe the effect and relationship cells, tissues, and organs have on/ with various systems within the body.

Textbook

There is no required textbook for this course. This course is a mix of human and animal histology. I want to stress that **I test ONLY from my online lectures and labs (Canvas and OlyVIA), NOT from outside sources.**

Open access book you may find helpful:

<https://www.intechopen.com/books/histology>

Some recommended websites for labs:

1. <http://www.histologyguide.org> (Links to an external site.)Links to an external site.
2. <http://histologyatlas.wisc.edu/> (Links to an external site.)Links to an external site.
3. <https://digitalhistology.org/> (Links to an external site.)
4. <https://secondlook.med.umich.edu/> (Links to external site. App download available.)

Course Content

This course is delivered completely online. There are 4 units in the course, each with a comprehensive exam. As you will see when the course unfolds, we use the knowledge and terminology of the first Unit over and over throughout the course. A quick review of major concepts should get you through the comprehensive material. Each unit contains several lectures and labs, which are listed as icons you can select from the Homepage. Use the *lecture schedule and Quizzes to pace* yourself through the material.

1. Lectures

The lectures are webpages with images and course content. The first part of each lecture consists of a list of objectives and a lecture outline. All the information you need to know for exams is contained within the body of the online lectures. Lectures consist of a series of slides accompanied by text. I tried to duplicate my casual lecture style and have included stories or "asides" that I usually include in class. These "asides" are in green text that indicates they are extraneous material. There are also some clinical examples that I have outlined with a box and green text. Each lecture is followed by a required "Quiz" that is meant to test your knowledge of the lecture and see where you may need to go back to review material, give you an example of the level of exam questions that may be asked, and allow numerous low stakes activities to better prepare you for the exam and buffer exam grades (if needed).

2. Labs

The labs are accessible from the homepage, click on the microscope icon in sequence with lectures. A "lab guide" is provided that contains lists of features you should know and recognize. ***Note: I have recently edited and expanded the lab guides. If you find any errors, please let me know ASAP.***

Please follow the link on the Homepage titled "How to access the virtual labs and manipulate images" for detailed information about how to access and use the OlyVIAweb virtual microscope.

I have also provided screen capture/audio "**guided tours**" that you may use as *supplemental* material. These captures are simply me "driving" around the slides and pointing out what you should see.

3. Quizzes

You can select the Quiz from the last page of any lecture. You can also find these all listed in the "Quizzes" tab on the left. The Quizzes consist of several questions that provide you with feedback about whether you learned the major concepts in the lecture. The Quiz will give you immediate feedback about your ability to learn this way. If you are not happy with your initial Quiz score, you have the option of taking the quiz one additional time (a total of two attempts with a minimum of 24 hour apart). Different questions will be available for each attempt. This is to encourage students to learn from their initial mistakes, review the material they need additional instruction for the next 24 hours, and attempt the assessment again. **These are graded and will be part of your final grade. No late submissions will be accepted.**

4. Assignments

There are four laboratory identification assignments, one with each corresponding unit of the course. You will be presented with an image from lab and asked to identify the tissue and properties of that tissue. Images are taken from your laboratory images and objectives are taken from your laboratory objectives. The purpose of this assignment is to allow students to practice identification of tissues and properties within their course and module objectives

before their unit examination. All assignments must be submitted in Canvas. **These are graded and will be part of your final grade.** No late submissions will be accepted.

5. Video/Audio Captures of Lectures and Labs

The above-described lectures and labs are the primary way in which important material will be delivered in this course. However, to offer a visual/ auditory method for those students who benefit from this learning style, I have recorded videos of each lecture to provide a guide for the material. **It must be emphasized that the guides are not meant to be a replacement for the written narrative lectures.** Plus, I can make quick edits to the written lectures, but it takes a while to re-record that same video lecture, so the content of the written lecture and video capture might be very slightly different. The video-tape links are available at the top of the page of each lecture.

6. Review Materials

You will find a link to Quizlet, Mind Maps, and Echo360 at the top of each page to help you review material for each lecture. **They are supplemental and optional. NONE OF THESE WILL BE INCLUDED IN YOUR CLASS GRADE.** Enjoy!!

Active Learning Techniques

This course utilizes various teaching modalities, including active learning techniques. Active learning techniques can include, but are not limited to Think Pair Share, case studies, 1- minute papers, round tables, debates, and more. You can find more about Active Learning from [The Institute for Teaching and Learning](#).

Your accommodations from the SDC may work well for “traditional” lecture and quiz/ exam- based courses, but you might find that it does not address specific situations that arise with active learning techniques. You are encouraged to view the assignments in this course and discuss them with your instructor BEFORE they are implemented in this course to decide if you will need additional accommodations. You are encouraged to be proactive with regards to your accommodation, versus being reactive, to avoid stress and delays in learning.

Examination, Quizzes, Assignments and Grading

A total of 455 points come from the 4 exams (240 points), 15 weekly quizzes (155 points), 4 Unit Assignments (60 points).

1. EXAMS--240 points

There will be **4 online examinations** in this class. Each exam consists of multiple-choice lecture and multiple-choice lab questions (images). You access course exams via the "Quizzes" icon on the left of the homepage (more later). Dates for exams can be found under the "Course Schedule" icon on the homepage (more later). The following exam information is very important. **Please read this thoroughly!**

Exams must be taken between within the time frame in the course schedule. The exam automatically closes at 5 PM MST, so make sure you start the exam early enough to give yourself time to complete it.

Exams are **closed book, closed note (closed access to any version of course content), closed electronics of any kind other than your login to the exam itself.** The last question of each exam is an Honor Pledge asserting that you have not received or given any unauthorized assistance in this exam. By submitting the exam after reading the pledge, you have pledged that you did not give or receive any assistance during the exam.

Under NO circumstances, should you print an exam. Printing examinations at any time during the entire course will result in an F grade for the course

All exams must be taken and submitted online. Each examination will be comprehensive, including the final examination (as outlined below).

Questions for each student's exam are Multiple Choice format. The laboratory questions present a fixed image under a microscope with a pointer and a question (images will be taken from the course). The lab questions are also multiple choice. **After you "submit" your exam, you will immediately receive your score.**

The exams typically are composed as described below. These are approximate breakdowns and may vary a bit from the number of lab/ lecture and review questions.

Any student caught cheating on an exam or quiz will receive a zero for that assignment and will be reported to the Academic Integrity Office.

Unit 1	Lectures 1-12 and Labs cell anatomy-- cartilage & bone	60 pts.	Approximately 40 multiple-choice questions, 20 lab.
Unit 2	Lectures 1-23 and Labs cell anatomy--skin	60 pts.	Approximately 35 multiple-choice questions, 20 lab, to include 5-6 review questions from exam 1.
Unit 3	Lectures 1-33 and Labs cell anatomy--urinary tract	60 pts.	Approximately 35 multiple-choice questions, 20 lab, to include 5-6 review questions from exams 1 and 2.
Unit 4	Lectures 1-41 and Labs cell anatomy-- reproductive system	60 pts.	Approximately 35 multiple-choice questions, 20 lab, to include 5- 6 multiple-choice review questions from exams 1-3.
	Total Exam Points Possible	240 pts	

Exam Accessibility

This course utilizes LockDown Browser® and Respondus Monitor® for assessments. Please review the Respondus [Student Quick Start Guide](#). "LockDown Browser is a locked browser for use with quizzes in Canvas. It prevents you from printing, copying, going to another URL, or accessing other applications during an assessment. If a Canvas quiz requires that LockDown Browser be used, you will not be able to take the quiz with a standard web browser."

During use of Lockdown Browser in this course, you will not be able to utilize outside applications that might normally be used for your accommodation. You are encouraged to take the Lockdown Browser practice quiz to see if your application works while Lockdown Browser is engaged. If you are having trouble engaging the application this may be an indication that you will not be able to use it during the graded assessment. You are encouraged to view the affected assessments in this course and discuss them with your instructor BEFORE they are implemented in this course to decide if you will need additional accommodations. You are encouraged to be proactive with regards to your accommodation, versus being reactive, to avoid stress and delays in learning.

From Lockdown Browser:

Compatibility with Other Accessibility Technologies

The VPAT demonstrates that LockDown Browser and Respondus Monitor meet the basic standards for web accessibility. But that's only part of our story. Some assistive technologies have toolbars or features that compromise a locked browser environment. That's why Respondus works with third-party accessibility vendors to ensure seamless compatibility and exam security. Some of these partnerships include:



Make Up Policy

Exams are scheduled on specific dates listed in the Course Schedule (see link on the homepage). You **MUST** take the exam on these dates. If you are unable to take the exam on the dates/ times listed in the schedule, please contact me immediately and we can discuss if you have options for taking the exam prior to the listed date/ time.

Once Quizzes and Assignments close, they will not be reopened. All Quizzes and Assignments are open for numerous weeks and can be completed at any time during those open weeks. Please make sure you complete the quizzes, exams, and assignments on or by the due dates listed in Canvas.

Universal Design for Learning/ Accommodation of Needs

I am committed to the principle of universal learning. This means that our classroom, our virtual spaces, our practices, and our interactions be as inclusive as possible. Mutual respect, civility, and the ability to listen and observe others carefully are crucial to universal learning. If you are a student who will need accommodations in this class, please contact me to discuss your individual needs. Any accommodation must be discussed in a timely manner. A verifying memo from [The Student Disability Center](#) may be required before any accommodation is provided.

The Student Disability Center (SDC) has the authority to verify and confirm the eligibility of students with disabilities for most accommodations. While some accommodations may be provided by other departments, a student is not automatically eligible for those accommodations unless their disability can be verified and the need for the accommodation

confirmed, either through SDC or through acceptable means defined by the particular department. Faculty and staff may consult with the SDC staff whenever there is doubt as to the appropriateness of an accommodative request by a student with a disability.

The goal of SDC is to normalize disability as part of the culture of diversity at Colorado State University. The characteristic of having a disability simply provides the basis of the support that is available to students. The goal is to ensure students with disabilities can be as successful as they have the capability to be.

Support and services are offered to student with functional limitations due to visual, hearing, learning, or mobility disabilities as well as to students who have specific physical or mental health conditions due to epilepsy, diabetes, asthma, AIDS, psychiatric diagnoses, etc. Students who are temporarily disabled are also eligible for support and assistance.

Any student who is enrolled at CSU, and who self-identifies with SDC as having a disability, is eligible for support from SDC. Specific accommodations are determined individually for each student and must be supported by appropriate documentation and/or evaluation of needs consistent with a disability. SDC reserves the right to ask for any appropriate documentation of disability to determine a student's eligibility for accommodations as well as in support for specific accommodative requests. The accommodative process begins once a student meets with an accommodations specialist in the SDC.

2. QUIZZES- 155 points

There will be **16 online quizzes** in this class. The first "quiz" is a course agreement. Each additional quiz will be a combination of multiple choice, and true/false type questions. Images from that lecture may be used in the quiz.

You access course quizzes via the "Quizzes" icon on the left of the homepage (same for exams). Dates for quizzes can be found under the "Course Schedule" icon on the homepage (more later). Quizzes are available from the first day of the course until the date/ time listed in the schedule. There will be no make-ups or extensions allowed for Quizzes.

Quizzes are closed book, closed note (closed access to any version of course content), closed electronics of any kind other than your login to the quiz itself.

Each quiz will only cover the content covered in its associated lectures and are intended to test your knowledge of the lecture so you can determine if further review of the material is needed prior to the exams. There will be NO cumulative material represented in the quizzes.

If you are not happy with your initial Quiz score, you have the option of taking the quiz one additional time (a total of two attempts). Different questions will be available for each attempt. This is to encourage students to learn from their initial mistakes, review the material they need additional instruction, and attempt the assessment again.

Under NO circumstances, should you print a quiz. Printing quizzes at any time during the entire course will result in an F grade for the course. I can track printing to individual students

as well as specific computers, so please do not print quizzes. If you are or become aware of past quizzes that are available to students (from before I had this tracking mechanism), please report this to me immediately, as it would give an unfair advantage to a few students in the class.

After you "submit" your quiz, you will immediately receive your score and a one-time opportunity to view your quiz.

3. ASSIGNMENTS

Each unit will have assignments associated with them. The assignments will open with each unit and close the day of the exam associated with the unit. Each assignment is worth 15 points. See instructions and details under "Assignments" tab in Canvas.

4. GRADES

Your final grade will be generated from scores on the 4 examinations (240 pts), Quizzes (155 points), and Assignments (60 points) and any extra credit that may be offered in the course.

With special permission from the instructor, and under certain circumstances beyond the student's control, if the student is unable to complete the course in the designated time period, a grade of "Incomplete" may be assigned. At Colorado State University, an incomplete grade converts automatically to an F on the transcript if the course is not satisfactorily completed within a year of the time the incomplete is awarded. **It is against CSU policy to give a grade of "I" (Incomplete) to a student who has a grade of D or F at the time of the request.**

Artificial Intelligence (AI) Use Policy for Coursework

Purpose and Guidelines

Artificial Intelligence (AI) tools, including but not limited to ChatGPT, Claude, Copilot, and other Generative AI (GenAI) systems, can be valuable aids in academic work. However, their use must align with ethical academic practices and learning objectives.

This course follows the AI Assessment Scale (AIAS) framework, which categorizes AI usage into five levels (Perkins, Roe, & Furze, 2024). The level assigned to each assignment will be clearly indicated by the instructor, dictating how and to what extent AI can be utilized. Students are expected to adhere to the following guidelines when using AI in coursework.

AI Use Levels in Coursework

Each assignment will be assigned an AI use level from the following scale:

1. No AI (Level 1): AI use is strictly prohibited. Work must be completed independently without AI assistance.
2. AI-Assisted Planning (Level 2): AI may be used for brainstorming, generating outlines, and structuring work, but no AI-generated content should appear in the final submission.

3. AI-Assisted Task Completion (Level 3): AI can be used for drafting, editing, and refining work. However, students must critically engage with AI-generated content and provide a reflection on how it was used.
4. Full AI (Level 4): AI is fully integrated into the assignment, and students are expected to leverage AI tools effectively. AI use must be explicitly acknowledged and cited.
5. AI Exploration (Level 5): Students are encouraged to push the boundaries of AI use, experimenting with innovative applications while maintaining academic integrity. Proper documentation of AI interactions is required.

Transparency and Documentation

- Citation Requirement: If AI is used (Levels 3-5), students must properly cite AI contributions. This includes specifying which AI tool was used, how it was used, and how its output was modified.
- AI Usage Statement: For any assignment that permits AI use, students must submit a brief statement detailing:
 - The AI tools used.
 - The specific role AI played in the assignment.
 - Any modifications or critical engagement with AI-generated content.
- Retaining AI Transcripts: For assignments at Levels 3-5, students should save and be prepared to submit chat transcripts or logs of their AI interactions upon request.
- Academic Integrity: Misrepresenting AI-generated work as entirely human-created in a restricted-level assignment (Levels 1-2) constitutes academic dishonesty.

How to Cite AI in Your Work

When citing AI tools, use the following format (adjust as needed based on citation style):

APA:

OpenAI. (2024). ChatGPT (Version 4) [Large language model]. <https://chat.openai.com/>

MLA:

OpenAI. ChatGPT, version 4, 2024, <https://chat.openai.com/>.

Chicago:

OpenAI. ChatGPT (Version 4). 2024. <https://chat.openai.com/>.

For in-text citations, refer to AI-generated content as you would for any external source (e.g., ChatGPT (OpenAI, 2024) suggested that...).

Final Notes

Students should approach AI as a learning aid, not a substitute for critical thinking and original work. The goal is to foster ethical AI literacy, preparing students for responsible AI use in academic and professional settings.

If you have questions about AI use in a specific assignment, consult the instructor before submission.

Reference

Perkins, M., Roe, J., & Furze, L. (2024). The AI Assessment Scale Revisited: A Framework for Educational Assessment. arXiv. <https://doi.org/10.48550/arXiv.2412.09029>

E-mail

It is very important that you check email and announcements in Canvas every day for important information. Any changes in the scheduling of course exams or other important information will be sent via email and announcements within Canvas.

Academic Integrity Policy

Under NO circumstances, should you print an exam, either during the exam or afterwards when I open it for your review. Printing examinations at any time during the entire course will result in an F grade for the course. You should not communicate with other students in the course about the exam until the exam has closed.

This course will adhere to the CSU [Academic Integrity/Misconduct](#) policy as found in the General Catalog and the [Student Conduct Code](#).

Academic integrity lies at the core of our common goal: to create an intellectually honest and rigorous community. Because academic integrity, and the personal and social integrity of which academic integrity is an integral part, is so central to our mission as students, teachers, scholars, and citizens, I will ask that you affirm the CSU Honor Pledge as part of completing your work in this course.

Further information about Academic Integrity is available at CSU's [Academic Integrity - Student Resources](#).

A Note on AI: Any work written, developed, created, or inspired by artificial intelligence (AI) is considered plagiarism and will not be tolerated. While the ever-changing (and exciting!) new developments with AI will find their place in our workforces and personal lives, in the realm of education and learning, this kind of technology does not belong. This is because the use of AI robs us all of the opportunities to learn from our experiences and from each other, to play with our creative freedoms, to problem-solve, and to contribute our ideas in authentic ways. In a nutshell, college is a place for learning. AI simply cannot do that learning for us.

CSU Honor Pledge

Academic integrity lies at the core of our common goal: to create an intellectually honest and rigorous community. Academic integrity, and the personal and social integrity of which academic integrity is an integral part, is so central to our mission as students, teachers, scholars, and citizens. I ask that you affirm the CSU Honor Pledge as part of completing your work in this course. While you will not be required to affirm the honor pledge, you will be asked to affirm the following statement at the start of your exams:

"I have not given, received, or used any unauthorized assistance."

Further information about Academic Integrity is available on the website provided here: <https://tilt.colostate.edu/integrity/>

Virtual Office Hours

The TAs and I do not have set office hours. If you would like to have a personal conference with me or one of the teaching assistants, email us and we can meet in person (if local) or set up a phone, Skype or other form of personal meeting. We all like to interact with students in the class, so please don't hesitate to contact us.

Third-party Tools/Privacy

Please note that this course may require you to use third-party tools (tools outside of the Canvas learning management system), such as Skype and others. Some of these tools may collect and share information about their users. Because your privacy is important, you are encouraged to consult the privacy policies for any third-party tools in this course so that you are aware of how your personal information is collected, used and shared.

Copyrighted Course Materials

Please do not share material from this course in online, print, or other media. Course material is the property of the instructor who developed the course. Materials authored by third parties and used in the course are also subject to copyright protections. Posting course materials on external sites (commercial or not) violates both copyright law and the CSU Student Conduct Code. Students who share course content without the instructor's express permission, including with online sites that post materials to sell to other students, could face appropriate disciplinary or legal action.

Undocumented Student Support

Any CSU student who faces challenges or hardships due to their legal status in the United States and believes that it may impact their academic performance in this course is encouraged to visit [Student Support Services for Undocumented, DACA & ASSET](#) for resources and support. Additionally, only if you feel comfortable, please notify your professor so they may pass along any additional resources they may possess.

Title IX/Interpersonal Violence

For the full statement regarding role and responsibilities about reporting harassment, sexual harassment, sexual misconduct, domestic violence, dating violence, stalking, and the retaliation policy please go to: [Title IX – Sexual Assault, Sexual Violence, Sexual Harassment](#).

If you feel that your rights have been compromised at CSU, several resources are available to assist:

- Student Resolution Center, 200 Lory Student Center, 491-7165
- Office of Equal Opportunity, 101 Student Services, 491-5836

A note about interpersonal violence: If you or someone you know has experienced sexual assault, relationship violence and/or stalking, know that you are not alone. As instructors, we are required by law to notify university officials about disclosures related to interpersonal violence. Confidential victim advocates are available 24 hours a day, 365 days a year to provide support related to the emotional, physical, physiological, and legal aftermath of interpersonal violence. Contact the Victim Assistance Team at: 970-492-4242.

Religious Observances

CSU does not discriminate on the basis of religion. Reasonable accommodation should be made to allow individuals to observe their established religious holidays. Students seeking an exemption from attending class or completing assigned course work for a religious holiday will need to fill out the [Religious Accommodation Request Form](#) and turn it in to the Division of Student Affairs, located on the second level of the Administration building.

Once turned in, the Division of Student Affairs will review the request and contact the student accordingly. If approved, the student will receive a memo from the Dean of Students to give to their professor or course instructor.

Students are asked to turn in the request forms as soon as the conflict is noticed. Similarly, unanticipated conflicts requiring a religious observance, such as a death in the family, can also be reviewed.

CSU Principles of Community

Inclusion: We create and nurture inclusive environments and welcome, value and affirm all members of our community, including their various identities, skills, ideas, talents and contributions.

Integrity: We are accountable for our actions and will act ethically and honestly in all our interactions.

Respect: We honor the inherent dignity of all people within an environment where we are committed to freedom of expression, critical discourse, and the advancement of knowledge.

Service: We are responsible, individually and collectively, to give of our time, talents, and resources to promote the well-being of each other and the development of our local, regional, and global communities.

Social Justice: We have the right to be treated and the responsibility to treat others with fairness and equity, the duty to challenge prejudice, and to uphold the laws, policies and procedures that promote justice in all respects.

Weather Closure Guidelines for Online Courses

Because this course is fully online and our students live across the country, CSU's weather closures **do not pause or cancel online class activities**. You should plan to continue with coursework, deadlines, and scheduled synchronous sessions even if CSU announces a campus closure.

However, your wellbeing and safety always come first. I understand that students may personally experience severe weather or emergencies, including power outages, internet loss, evacuation, or other disruptions.

If Weather Affects Your Ability to Participate

Please let me know **as soon as you can** if a weather event affects your ability to participate in class or complete coursework.

- **Use the Canvas Inbox** to message me directly.
- **If you know a storm is coming** (e.g., hurricane, blizzard), please reach out beforehand so we can anticipate possible disruptions.
- If advance notice isn't possible, please contact me **within five (5) business days** of the event.

Communication within this timeframe helps me support you and offer flexibility.

Flexibility and Make-Up Work

I will work with you to provide short extensions, alternate assignments, or other arrangements when severe weather affects your participation **if you communicate with me in a timely manner**. You won't be penalized for circumstances outside your control.

If I Am Impacted

If severe weather affects my ability to teach or communicate, I will post an announcement in Canvas as soon as I am able with next steps or adjusted expectations.

How This Relates to CSU Closure Statements

CSU's standard emergency and closure policies primarily apply to on-campus operations. In online courses, learning continues unless you or your instructor are directly impacted. When emergencies arise, communication ensures that we can maintain progress while prioritizing safety and wellbeing.