# BSC 426. HISTOLOGY
COURSE SYLLABUS: SPRING 2020

## INSTRUCTOR INFORMATION

**Instructor:** Larry F. Lemanski, PhD
**Office Location:** STC 226
**Office Hours:** TWR 9.00 AM - 11.00 AM
**Office Phone:** 903-886-5378
**Office Fax:** 903-886-5997
**University Email Address:** Larry.Lemanski@tamuc.edu
**Preferred Form of Communication:** email
**Communication Response Time:** Less than 72 hours for emails (excluding weekends and holidays)

## COURSE INFORMATION

### Materials – Textbooks, Readings, Supplementary Readings

**Textbook(s) Required:**
The required text is Histology-A Text and Atlas with Correlated Cell and Molecular Biology (eighth edition) By Wojciech Pawlina  The lectures/discussions/microscopy observations will be related to materials covered in  the Text/Atlas. Chapters or parts of chapters will be assigned for  supplementary reading. This reading will be very useful in understanding and supplementing  the materials covered.

**Software Required:** Please see technology requirements.

**Optional Texts and/or Materials:** N/A

### Course Description

Histology is a discipline which examines the structure and correlating functions of tissues and cells using light microscopy, electron microscopy and other specialized microscopic methods. The course will involve a study of general tissue characteristics and will explore histologically and ultrastructurally the different tissue types in the body including epithelial, connective, skeletal, blood/vascular, muscular, and neurological

tissues as well as the various organ systems including cardiovascular, lymphatic, integumentary (skin), digestive, respiratory, urinary, endocrine, male and female reproductive, and special senses (eye and ear). While the course's emphasis will be a study of the appearance of normal cells and tissues, selected abnormal/diseased tissues will be examined as well (e.g., bone osteoporosis, heart myocardial infarctions, neurological diseases, etc.) and functional correlations will be made.

## Student Learning Outcomes

Upon completing the course, students will be able to:
1. Understand the basic concepts of tissue fixation, dehydration, embedding, sectioning, staining and mounting of slides for histological examination, immunofluorescent staining and electron microscopy.
2. Recognize, identify and describe the characteristic structures/images of cells, tissues and organ systems of the body at the light microscope histologic level, and for selected tissues, at the electron microscopic ultrastructural level.
3. Know and understand the characteristics of tissues of the body (epithelium, connective, muscle, nerve) and their relationships in the various organ systems of the human body.
4. Understand the basic functions of cells and cellular organelles, tissues and organ systems of the body as correlated with their histological structures.
5. Identify and understand the histological features of selected tissues/organ systems resulting from disease processes (e.g., atherosclerosis, osteoporosis, pulmonary pneumonia, etc).

## COURSE REQUIREMENTS

## Minimal Technical Skills Needed

Standard skills necessary to use web browsers to access course materials are required. Students also should be able to submit their work as necessary. Students should be able to use Microsoft Word and PowerPoint.

## Instructional Methods

Lectures and related practical histological laboratories are offered in a completely "web based" format. The lecture and lab materials will be supplemented with appropriate visual materials, and assignments.

## Student Responsibilities or Tips for Success in the Course
1. Keeping up on course progress and performing well on quizzes and unit exams will be important since the course builds on previously learned concepts.
2. Submitting assignments by deadlines – The Term paper/essay should be completed by the set date.

3. Checking both course page in D2L and emails for course related announcements on a regular basis

# GRADING

## Grading scale
Final grades in this course will be based on the following scale:

A = 90%-100%
B = 80%-89%
C = 70%-79%
D = 60%-69%
F = 59% or Below

## Grading policies
Students are expected to take all of the exams/quizzes as scheduled. Excused absences as defined in the Student Handbook of the university will be accepted for rescheduling a quiz/exam.
Excused absences include:
1. Verified illness (with Doctor's note); make-up exam, quiz or other grading assessments will not be available if the note does not cover the date(s) on which assessment(s) were supposed to be completed.
2. Death in a student's immediate family
3. Obligation of student at legal proceedings in fulfilling responsibility as a citizen. Evidence should cover date(s) on which assessment(s) were supposed to be completed.
4. Elective TAMUC activities (with the activity director's note). The note should cover date(s) on which assessment(s) were supposed to be completed.

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## Assessments:

There will be four factors that will contribute to the grade. These are:
1. Quizzes                            = 30% (6 quizzes; 5%/quiz)
2. Unit Exams                   = 30% (3 exams; 10%/exam)
3. Term paper/Essay          =10%
4. Comprehensive Final Exam     = 30%

*The Final Exam is a comprehensive exam that will cover all the chapters.

Exams and quizzes will consist of multiple choice questions. Questions are drawn from the same test pool. Therefore some questions may be repeated. Students will take all exams and quizzes at specified times.

The Quizzes and Exams, including the Final Exam, each will include a section of multiple choice questions that are derived from the histological laboratory identification/analysis portion of the instruction. This will be approximately 20-30% of the questions on each quiz/examination.

The term paper/essay should be 3-5 pages in length double-spaced on a topic in histology that is of particular interest to the student. If illustrations are included, they should be included within the 3-5 page term paper/essay.

<u>Important information:</u> There will not be any additional extra credit points. A student's grade will come only from the points he/she earns from the aforementioned types of assessments.

# TECHNOLOGY REQUIREMENTS

## Browser support

D2L is committed to performing key application testing when new browser versions are released. New and updated functionality is also tested against the latest version of supported browsers. However, due to the frequency of some browser releases, D2L cannot guarantee that each browser version will perform as expected. If you encounter any issues with any of the browser versions listed in the tables below, contact D2L Support, who will determine the best course of action for resolution. Reported issues are prioritized by supported browsers and then maintenance browsers.

Supported browsers are the latest or most recent browser versions that are tested against new versions of D2L products. Customers can report problems and receive support for issues. For an optimal experience, D2L recommends using supported browsers with D2L products.

Maintenance browsers are older browser versions that are not tested extensively against new versions of D2L products. Customers can still report problems and receive support for critical issues; however, D2L does not guarantee all issues will be addressed. A maintenance browser becomes officially unsupported after one year.

Note the following:

- Ensure that your browser has JavaScript and Cookies enabled.
- For desktop systems, you must have Adobe Flash Player 10.1 or greater.
- The Brightspace Support features are now optimized for production environments when using the Google Chrome browser, Apple Safari browser, Microsoft Edge browser, Microsoft Internet Explorer browser, and Mozilla Firefox browsers.

## Desktop Support

| Browser | Supported Browser Version(s) | Maintenance Browser Version(s) |
|---|---|---|
| Microsoft® Edge | Latest | N/A |
| Microsoft® Internet Explorer® | N/A | 11 |
| Mozilla® Firefox® | Latest, ESR | N/A |
| Google® Chrome™ | Latest | N/A |
| Apple® Safari® | Latest | N/A |

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## Tablet and Mobile Support

| Device | Operating System | Browser | Supported Browser Version(s) |
|---|---|---|---|
| Android™ | Android 4.4+ | Chrome | Latest |
| Apple | iOS® | Safari, Chrome | The current major version of iOS (the latest minor or **point** release of that major version) and the previous major version of iOS (the latest minor or **point** release of that major version). For example, as of June 7, 2017, D2Lsupports iOS 10.3.2 and iOS 9.3.5, but not iOS 10.2.1, 9.0.2, or any other version.<br><br>Chrome: Latest version for the iOS browser. |
| Windows | Windows 10 | Edge, Chrome, Firefox | Latest of all browsers, and Firefox ESR. |

- You will need regular access to a computer with a broadband Internet connection. The minimum computer requirements are:
    - 512 MB of RAM, 1 GB or more preferred
    - Broadband connection required courses are heavily video intensive
    - Video display capable of high-color 16-bit display 1024 x 768 or higher resolution

- **For YouSeeU Sync Meeting sessions _8 Mbps_ is required.** Additional system requirements found here: https://support.youseeu.com/hc/en-us/articles/115007031107-Basic-System-Requirements

- You must have a:
    - Sound card, which is usually integrated into your desktop or laptop computer
    - Speakers or headphones.
    - *For courses utilizing video-conferencing tools and/or an online proctoring solution, a webcam and microphone are required.

- Both versions of Java (32 bit and 64 bit) must be installed and up to date on your machine. At a minimum Java 7, update 51, is required to support the learning

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management system.  The most current version of Java can be downloaded at: JAVA web site  http://www.java.com/en/download/manual.jsp

- Current anti-virus software must be installed and kept up to date.

Running the browser check will ensure your internet browser is supported.
    Pop-ups are allowed.
    JavaScript is enabled.
    Cookies are enabled.

- You will need some additional free software (plug-ins) for enhanced web browsing. Ensure that you download the free versions of the following software:
    o Adobe Reader  https://get.adobe.com/reader/
    o Adobe Flash Player *(version 17 or later)* https://get.adobe.com/flashplayer/
    o Adobe Shockwave Player   https://get.adobe.com/shockwave/
    o Apple Quick Time   http://www.apple.com/quicktime/download/

- At a minimum, you must have Microsoft Office 2013, 2010, 2007 or Open Office. Microsoft Office is the standard office productivity software utilized by faculty, students, and staff. Microsoft Word is the standard word processing software, Microsoft Excel is the standard spreadsheet software, and Microsoft PowerPoint is the standard presentation software. Copying and pasting, along with attaching/uploading documents for assignment submission, will also be required. If you do not have Microsoft Office, you can check with the bookstore to see if they have any student copies.

# ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or helpdesk@tamuc.edu**.**

**Note:** Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

# COMMUNICATION AND SUPPORT

## Brightspace Support

### Need Help?

### Student Support

If you have any questions or are having difficulties with the course material, please contact your Instructor.

### Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778 or click on the **Live Chat** or click on the words "click here" to submit an issue via email.

### System Maintenance

D2L runs monthly updates during the last week of the month, usually on Wednesday. The system should remain up during this time unless otherwise specified in an announcement. You may experience minimal impacts to performance and/or look and feel of the environment.

### Interaction with Instructor Statement

Students are encouraged to interact with the instructor during active classroom learning sessions. Response time for Response time to any questions sent by email regarding the course will be within 72 hours. Weekends and holidays are excluded. Students need to use the office hours indicated in this syllabus.

# COURSE AND UNIVERSITY PROCEDURES/POLICIES

## Course Specific Procedures/Policies

Students are expected to attend ALL scheduled lectures and take the exams/quizzes as scheduled. There will be a 5 point credit for attendance. Excused absences as defined in the Student Handbook of the university will be accepted. Students are expected to come to class in time. There are no extra credits and late submissions or missed exams/quiz will result in lower than expected grade. For more information please check sections preceding "Technology Requirements".

## Syllabus Change Policy

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

# University Specific Procedures

## Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment.  The Code of Student Conduct is described in detail in the Student Guidebook.
http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: Netiquette
http://www.albion.com/netiquette/corerules.html

## TAMUC Attendance

For more information about the attendance policy please visit the Attendance webpage and Procedure 13.99.99.R0.01.
http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx

http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf

## Academic Integrity

Students at Texas A&M University-Commerce are expected to maintain high standards of integrity and honesty in all of their scholastic work.  For more details and the definition of academic dishonesty see the following procedures:

Undergraduate Academic Dishonesty 13.99.99.R0.03

http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf

Graduate Student Academic Dishonesty 13.99.99.R0.10

http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/graduate/13.99.99.R0.10GraduateStudentAcademicDishonesty.pdf

## ADA Statement

### Students with Disabilities

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a

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learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

## Office of Student Disability Resources and Services

Texas A&M University-Commerce
Gee Library- Room 162
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148
Email: studentdisabilityservices@tamuc.edu
Website: Office of Student Disability Resources and Services

http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/

## Nondiscrimination Notice

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

## Campus Concealed Carry Statement

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the Carrying Concealed Handguns On Campus document and/or consult your event organizer.

Web url:
http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

# COURSE OUTLINE / CALENDAR

Week 1 Jan 13-17:        Introduction; Histology Methods.
Week 2 Jan 20-24:        Cell - cytoplasm, nucleus, ultra-structure and function.
Week 3 Jan 27-31:        Tissues; Concepts and Classification of Tissue
Week 4 Feb 3-7:        Epithelial Tissues; Connective tissue, cartilage
Week 5 Feb 10-14:        Cartilage; Bone; Adipose tissue; Blood
                                 **Unit Exam I**
Week 6 Feb 17-21:        Muscle tissue
Week 7 Feb 24-28:        Nerve tissue
Week 8 Mar 2-6:        Cardiovascular system
                                 **Week 9  Spring Break**
Week 10 Mar 16-20:        Immune System; Lymphatic organs
Week 11 Mar 23-27:        Digestive system
Week 12 Mar 30-Apr 3:     Respiratory system
                                 **Unit Exam II**
Week 13 Apr 6-10:        Urinary system; Endocrine organs
Week 14 Apr 13-17:        Male reproductive system
Week 15 Apr 20-Apr 24:    Female reproductive system
Week 16 Apr 27-May 1:    Eye and ear
                                 **Unit Exam III**
Week 17 May 4-8:        Comprehensive Final Exam and Term Paper/Essay Due

1. This schedule is approximate and might change based on the amount of time spent for each topic. Quizzes will be scheduled every two or three weeks based on the amount of material  covered. Dates and times of quizzes will be announced as the course progresses.
2. The syllabus/schedule is subject to change.
3. Week 1 starts on **01/13/2020.** Last day of class (Week 15) will be **05/01/2020**.
4. Final Exam: **May 05, 2020; 10:30 AM-12:30 PM CDT**
4. Term Paper/Essay Due:  **May 06, 2020, 6:00 PM CDT**
5. Please check the academic calendar (https://ems.tamuc.edu/MasterCalendar/) for details on holidays and start and end dates of the current semester.

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