

Human Anatomy Course Syllabus

Summer Term 2021

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All times in this syllabus reflect Mountain Standard Time (MST)

Human Anatomy (BIOL 2325) is an **Interactive Video Conferencing (IVC)** course and will be presented live via Zoom through Canvas at the lecture times listed in the class schedule (indicated below):

Monday, Wednesday, Friday from 11:30 AM to 1:30 PM – Zoom ID: 923 9720 0711

Please use the email address above if you need to contact me **prior** to the start of summer term and I will get back to you as quickly as possible. Once summer term starts you can contact me via Canvas messaging. **Please note that I will not be checking email or Canvas messages after 5:00 PM on Mondays-Fridays and not at all on weekends or holidays.**

While there will be no points for attendance, it will be to your advantage to attend the live Zoom lecture. Please note that you are responsible for the information presented during all scheduled live Zoom lectures. Therefore, if you miss any of the lectures, you must watch any missed lecture recordings prior to the next live Zoom lecture in order to keep up with the material. Beginning the second week of summer term there will be weekly homework assignments posted on Canvas that will be due by 11:00 PM every Friday. These assignments will be a significant part of the grade and they must be completed before the Friday deadline. Late assignments will receive a 50% reduction of the points earned. **THERE ARE NO EXCEPTIONS, SO TAKE CARE OF BUSINESS.**

The laboratory is a part of the course and the lab sections are also designated as IVC sessions and will therefore be delivered via Zoom at the designated times listed below. You must attend the laboratory session for which you are registered. There will be a weekly proctored quiz at the beginning of each lab. **IF YOU MISS THE QUIZ THEN YOU WILL MISS OUT ON THE POINTS—NO EXCEPTIONS! SO, KNOW YOUR LAB TIME AND MAKE SURE TO BE ON TIME EACH WEEK. NOTE THAT ALL LABORATORY SESSIONS ARE HELD ON THURSDAYS AT THE FOLLOWING TIMES.**

BIOL 2325-002 - 7:30 - 9:30 AM

BIOL 2325-003 - 10:00 - 12:00 PM

BIOL 2325-004 - 12:30 - 2:30 PM

BIOL 2325-005 - 3:00 - 5:00 PM

BIOL 2325-006 - 5:30 - 7:30 PM

DISCLAIMER:

The coursework for the lecture and laboratories for this class will all be delivered online. Anatomy is a visual science therefore this class—with its associated laboratories—will use images of real human cadavers and vector-based line art to illustrate the structures of the body. The use of real images and artwork to teach and test students online requires that you have access to a reliable internet connection.

If your internet connection is unreliable and/or significantly slower than standard internet speeds available virtually everywhere I encourage you to drop the class before the last day to drop classes, which is Wednesday, May 26th and take it at a later time.

BIOLOGY 2325 - HUMAN ANATOMY

EXPECTED LEARNING OUTCOMES

The undergraduate Biology programs at the University of Utah provide students the knowledge base, skills, and resources needed to prepare them for careers in the Biological Sciences, or for enrollment and success in post-graduate education opportunities in numerous graduate or professional schools such as, biology, medicine, dental, veterinary, pharmacy, nursing, physical therapy, occupational therapy, and physician assistant programs. Within the department of biology, the human anatomy course is specifically designed to serve the needs of students in biology, and from many other departments on campus, as they prepare for futures in medical, dental, allied health, exercise sports science, and athletic training careers. In fact, it is designed for the educated person who is interested in becoming more knowledgeable about their most important possession — their own body.

SPECIFIC LEARNING OUTCOMES

- **Structure and Function**

Students will be able to think critically about structure-function relationships as they build a strong foundation knowledge of the structure of the human body.

- **Developmental and Evolutionary Patterns**

Students will be able to apply developmental and evolutionary patterns to simplify the learning of anatomical structure and use these patterns to critically analyze the structure-function relationships of the human body.

- **Transmission, Flow, and Interpretation of Anatomical Information**

Students will be able to utilize the extensive language of anatomy to explain the important structural relationships and functional significance of the human body in biological and medical contexts.

- **Body Systems**

Students will be able to explain how the hierarchical organization of the human form, from cells, to tissues, to organs, to body systems account for the structural and functional features at all levels of organization and function in the human body.

- **Ability to Apply Scientific Reasoning**

Students will be able to apply critical thinking skills using the problem solving skills of science to diagnose and solve anatomical problems related to the structure and function of the human body.

- **Real World Application**

Students will not only be prepared to enter the medical, dental, allied healthcare, exercise science, and athletic training professions with the critical knowledge base of one of the most important tools they can have in their toolbox — human anatomy, but they will be prepared to better communicate with healthcare professionals about their own body and health and better understand their body as they deal with it on a daily basis for the remainder of their life.

ACADEMIC CODE OF CONDUCT

Students are encouraged to review the Student Code for the University of Utah: <https://regulations.utah.edu/academics/6-400.php>. In order to ensure that the highest standards of academic conduct are promoted and supported at the University, students must adhere to generally accepted standards of academic honesty, including but not limited to refraining from cheating, plagiarizing, research misconduct, misrepresenting one's work, and/or inappropriately collaborating. **A student who engages in academic misconduct as defined in Part I.B. may be subject to academic sanctions including but not limited to a grade reduction, failing grade, probation, suspension or dismissal from the program or the University, or revocation of the student's degree or certificate.** Sanctions may also include community service, a written reprimand, and/or a written statement of misconduct that can be put into an appropriate record maintained for purposes of the profession or discipline for which the student is preparing. Incidents of academic dishonesty on homework assignments will result in a minimum penalty of a full letter-grade reduction and up to a failing grade (E) for the course. Incidents of academic dishonesty on exams will result in a minimum penalty of a failing grade (E) for the course, and the incident(s) will be referred to the dean of your major-department college for possible further sanction.

Inclusivity Statement

It is my intent that students from all diverse backgrounds and perspectives be well served by this course, that students' learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength and benefit. It is my intent to present materials and activities that are respectful of diversity: age, color, disability, gender identity, gender expression, national origin, political affiliation, race, religion, sexual orientation, and veteran status, and other unique identities. Your suggestions are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally or for other students or student groups. In addition, if any of our class meetings conflict with your religious events, please let me know so that we can make arrangements for you.

NAMES/PRONOUNS

Canvas allows students to change the name that is displayed AND allows them to add their pronouns to their Canvas name. However, all homework, quiz, and exam scores will be tracked on a spreadsheet based on the official class roster. These are provided by the University to the instructor with the student's legal name as well as "Preferred first name" if one has been designated by you in the Student Profile section of your Campus Information Systems (CIS) account—which can be managed at any time. I will honor you by referring to you using either your legal name or your preferred first name (if one has been designated by you in your CIS account) and the pronoun that feels best for you in class or on assignments. Please keep your CIS account updated and advise me of any name and pronoun changes you make to your Student Profile. Doing so will help me create a learning environment in which you, your name (legal or preferred), and your pronoun are respected. If you need any assistance or support, please reach out to the LGBT Resource Center. https://lgbt.utah.edu/campus/faculty_resources.php.

ADDITIONAL IMPORTANT INFORMATION

The following information provides students with a variety of important resources and facts about the course and the university in general:

Americans with Disabilities Act

The University of Utah seeks to provide equal access to its programs, services, and activities for people with disabilities. If you will need accommodations in this class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Olpin Union Building, (801) 581-5020. CDS will work with you and the instructor to make arrangements for accommodations. All written information in this course can be made available in an alternative format with prior notification to the Center for Disability Services.

Addressing Sexual Misconduct

Title IX makes it clear that violence and harassment based on sex and gender (which includes sexual orientation and gender identity/expression) is a civil rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, color, religion, age, status as a person with a disability, veteran's status or genetic information. If you or someone you know has been harassed or assaulted, you are encouraged to report it to the Title IX Coordinator in the Office of Equal Opportunity and Affirmative Action, 135 Park Building, 801-581-8365, or the Office of the Dean of Students, 270 Union Building, 801-581-7066. For support and confidential consultation, contact the Center for Student Wellness, 426 SSB, 801-581-7776. To report to the police, contact the Department of Public Safety, 801-585-2677(COPS).

Wellness Statement

Personal concerns such as stress, anxiety, relationship difficulties, depression, cross-cultural differences, etc., can interfere with a student's ability to succeed and thrive at the University of Utah. For helpful resources contact the Center for Student Wellness at www.wellness.utah.edu or 801-581-7776.

Veterans Center

If you are a student veteran, the University of Utah has a Veterans Support Center located in Room 161 in the Olpin Union Building. Hours: M-F 8-5pm. Please visit their website for more information about what support they offer, a list of ongoing events and links to outside resources: <http://veteranscenter.utah.edu/>. Please also let me know if you need any additional support in this class for any reason.

LGBT Resource Center

If you are a member of the LGBT community, I want you to know that my classroom is a safe zone. Additionally, the University of Utah has an LGBT Resource Center on campus. They are located in Room 409 in the Olpin Union Building. Hours: M-F 8-5pm. You can visit their website to find more information about the support they can offer, a list of events through the center and links to additional resources: <http://lgbt.utah.edu/>. Please also let me know if there is any additional support you need in this class.

English as an Additional/Second Language

If you are an English language learner, please be aware of several resources on campus that will support you with your language and writing development. These resources include: the Writing Center (<http://writingcenter.utah.edu/>); the Writing Program (<http://writing-program.utah.edu/>); the English Language Institute (<http://continue.utah.edu/eli/>). Please let me know if there is any additional support you would like to discuss for this class.

BIOLOGY 2325 - HUMAN ANATOMY

COURSE INFORMATION

Visit the anatomy web sites at <http://miller.biology.utah.edu/courses/2325/> and <http://www.anatomylab.com>. The first site is your primary link to all the information for this course, the handouts, the laboratory manual, etc. It also contains information about other courses I teach. The second site is where you will access the Human Anatomy Interactive Atlas that you will use to prepare for your laboratory section each week.

Anatomy is an enjoyable topic that is not conceptually difficult, however, from the perspective of time commitment it is rigorous. It requires a considerable amount of memory work coupled with the ability to use the memorized knowledge to solve problems and synthesize answers. Work on the course daily, do not get behind, and you can succeed while having a rewarding learning experience.

LECTURES

This anatomy course incorporates a wide array of pedagogy, from excellent lecture-oriented instruction and pre-lecture movies, to problem-based learning, interactive discussions, and collaborative laboratory sessions. Throughout the course students create their own textbook that is specific to the course of study. For this reason, students who attentively participate in lecture sessions have a distinct advantage. All written examinations are based on the material covered in lecture, with all material being equally important and fair game. If for any reason you miss lecture, you should acquire the missed lecture notes from a classmate.

BOOKS AND SOFTWARE

Human Anatomy course pack (Available for you to purchase through the bookstore or from Kendall-Hunt at <https://he.kendallhunt.com/product/human-anatomy>). This course pack includes the following:

Human Anatomy Lecture Manual, 6th edition by Mark Nielsen — Invaluable outline of all lectures containing the illustrations used in lecture; this course would be very difficult without it.

Human Anatomy Exercise Manual and Workbook, 6th edition by Mark Nielsen — This book contains information and exercises to help you succeed in the course. If you use it daily, you will be well prepared for the examinations in the course. It also contains a model of the pelvis/perineum that you will build for points toward your lab score.

Human Anatomy Interactive Atlas by Shawn Miller and Mark Nielsen — This is an online resource that will help you prepare for the lab quizzes and the lab practical examinations. It is designed to allow you to interactively quiz yourself as you study anatomy. Access to this web resource will be discussed on the first day of class.

Wiley textbook (included with course fees) includes the following:

Principles of Human Anatomy and WileyPlus Web Link, 15th edition by Jerry Tortora and Mark Nielsen— This is the online textbook resource and web link that will contain the weekly homework assignments. The online site called WileyPlus has lots of features to help you learn anatomy.

Real Anatomy by Mark Nielsen and Shawn Miller — This is a web-based program that allows you to dissect a cadaver on your computer while rotating it in three-dimensional space. It contains over two thousand images that can be studied, labeled, and rotated. It essentially allows you to take the lab home with you as you study and prepare for lab. You have access to this program and many other learning aids through WileyPlus. The teaching assistants will use this software on a weekly basis during the online laboratory sessions.

Concept Lectures by Mark Nielsen — These are also included with WileyPlus. This series of lectures are designed to supplement the online lectures presented each week. These will be assigned prior to selected lectures throughout the course.

Web-based materials: (free)

Human Anatomy Lab Manual, 6th edition (summer term version) by Mark Nielsen — This book is available on the course Canvas page and will be posted once summer term begins. It contains all the information you will need as you prepare for the weekly lab quizzes. It will provide a list of structures you will study in the lab and help you in your preparation for the quizzes, midterm practical quiz and the final practical exam.

OTHER MATERIALS

Obtain good quality colored pencils in pure or bright colors (e.g., red, blue, green, etc.). Anatomy is a visual subject and color is used during lecture presentations to label the illustrations on each slide. It will be to your advantage to color-code drawings in the lecture manual.

OFFICE HOURS

Beginning the second week of class I will hold office hours directly after class to answer any questions you might have regarding lecture material. I will also be available by appointment if you are unable to attend regular office hours. Additionally, each TA will hold weekly office hour in the anatomy lab. I encourage you to take advantage of office hours to get your questions answered and to study anatomy. **DON'T BE AFRAID TO ASK QUESTIONS!**

EXAMINATIONS

All exams count toward your final grade in this class, this means that you **WILL NOT** be able to drop any of the exams. The following statement appears in the course information box for BIOL 2325, Section 001 in the Summer 2021 Class Schedule:

Due to the accelerated pace of this course during Summer semester students are required to take all lecture exams, lab quizzes, and lab exams on the day and time scheduled on the syllabus.

So, it should have been understood **BEFORE** you registered for this class that all **exams and quizzes must be taken on the day and time they are scheduled.**

Exams 1 and 2 will cover specific parts of the course; the final exam is a little different. Not only will it cover the material following exam 2, it will also have a comprehensive component to it, making it a more significant exam in terms of its point value (see exam breakdown below). In addition, there will be weekly quizzes in the lab, a midterm practical quiz and a comprehensive final practical examination (see laboratory schedule). The point distributions are as follows:

Exam 1	70 points
Exam 2	70 points
Final Exam	110 points: Approximately 70 points from the material covered during lecture after exam 2 and approximately 40 points from the material covered during lecture up to exam 2.
Laboratory	145 points (see below for point breakdown)
Homework	65 points: These will be assignments based on the daily lecture and the assigned readings and they will begin in week 2. They will typically be due by 11:00 PM on the Friday of the week the homework is assigned. PLEASE NOTE THAT LATE HOMEWORK WILL RECEIVE A 50% PENALTY. THERE WILL BE NO EXCEPTIONS TO THIS POLICY!

All assignments and lecture examinations will occur during assigned time windows on specific dates. Once you begin the assignment/examination you will have a time limit to complete the assignment/examination. If you do not complete the assignment/examination by the designated time and due date, you will miss the points for that assignment/examination—NO EXCEPTIONS! FOR THE LAB QUIZZES AND BOTH THE MIDTERM AND FINAL LAB PRACTICAL EXAMINATIONS YOU ARE REQUIRED TO HAVE A STABLE INTERNET CONNECTION, A WORKING CAMERA ON YOUR COMPUTER OR MOBILE DEVICE, AND THE ABILITY TO ATTEND THE LAB YOU SIGNED UP FOR AT THE CORRECT TIME, AS THESE QUIZZES AND EXAMINATIONS WILL BE PROCTORED LIVE VIA ZOOM.

EVALUATION OF STUDENT PERFORMANCE

To pass this course, you must earn a cumulative average of 45%:

15.2%	Exam 1 - 70 points
15.2%	Exam 2 - 70 points
23.9%	Final Exam - 110 points
31.5%	Laboratory Grade - 145 points: 10 lab quizzes @ 5 points each = 50 points Pelvic model = 5 points Midterm practical quiz = 20 points Final practical examination = 70 points
14.1%	Homework - 65 points Variable number of questions each week @ ~6 points per assignment

The grading breakdown is as follows:

90.0—100%	A
88.5—89.9%	A-
84.5—88.4%	B+
80.0—84.4%	B
77.5—79.9%	B-
70.0—77.4%	C+
60.0—69.9%	C
50.0—59.9%	C-
45.0—49.9%	D
0.00—44.9%	E

Total points possible = 460

All grades are final. There will not be any opportunities to change your grade after you have completed the course. If you have been accepted into a professional program and your entry depends on passing this course, **then you must achieve the necessary grade.** Under no condition will make-up work or exam re-takes be given.

COURSE CONTENT ACCOMMODATIONS POLICY

I do not grant content accommodation requests as the course content fulfills legitimate pedagogical goals.

BIOLOGY 2325 - HUMAN ANATOMY

SUMMER TERM 2021

Schedule of Lectures and Written Exams

Lecture time and place: **M, W, F – 11:30 AM to 1:30 PM via Canvas using Zoom (id: 923 9720 0711)**

Note to students: Print this schedule and keep it with you. **You are responsible for all dates, times and places in this schedule.**

- May 17 Introduction to Course
19 Histology
21 Integument
- 24 Osteology; Arthrology
26 Myology; Cardiovascular System – **LAST DAY TO DROP CLASSES**
28 Cardiovascular System
- 31 MEMORIAL DAY - NO CLASS**
- June 2 Cardiovascular System; Urinary System
4 Respiratory system; Digestive System
- 7 Digestive System
9 Nervous System
11 Nervous System; Patterns of Organization - Body Wall
- 14 EXAM 1 - Administered via Canvas from 11:30 AM - 1:30 PM**
16 Anatomy of the Thorax
18 Anatomy of the Thorax; Anatomy of the Abdomen
- 21 Anatomy of the Abdomen
23 Reproductive Systems
25 Reproductive Systems; Anatomy of the Pelvis and Perineum
- 28 Anatomy of Pelvis and Perineum
30 Anatomy of the Back; Patterns of Organization - Limbs
- July 2 Anatomy of the Superior Limb - Brachial Plexus
- 5 INDEPENDENCE DAY (OBSERVED) - NO CLASS**
7 Anatomy of the Superior Limb - Scapular and Shoulder Muscles
9 Anatomy of the Superior Limb - Brachial Muscles, Topography, and Vasculature
- 12 EXAM 2 - Administered via Canvas from 11:30 AM - 1:30 PM**
14 Anatomy of the Superior Limb - Vasculature, Antebrachial and Hand Muscles
16 Anatomy of the Inferior Limb - Innervation; Hip Muscles, Medial Thigh Muscles, and Gait
- 19 Anatomy of the Inferior Limb - Thigh Muscles, Vasculature, and Leg Muscles
21 Anatomy of the Inferior Limb - Leg Muscles, Foot Muscles
23 PIONEER DAY (OBSERVED) - NO CLASS

- 26 Patterns of Organization - Head and Neck; Muscles of the Neck
- 28 Anatomy of the Head and Neck - Somitic Muscles, and Pharyngeal Arch Muscles
- 30 Anatomy of the Head and Neck - Anatomy of the Mouth and Eye

- Aug.
- 2 Anatomy of the Head and Neck - Anatomy of the Eye and Ear
 - 4 Anatomy of the Head and Neck - Anatomy of the Ear; Cranial Nerves

5 FINAL PRACTICAL EXAM - During your regularly scheduled lab time

6 FINAL COMPREHENSIVE WRITTEN EXAM - Administered via Canvas 10:00 AM to 12:00 PM

BIOLOGY 2325 - HUMAN ANATOMY

SUMMER TERM 2020

Schedule of Laboratories

Laboratory sections: Thursday – 7:30-9:30, 10:00-12:00, 12:30-2:30, 3:00-5:00, 5:30-7:30

Laboratory location: Zoom through Canvas

Note to students: Laboratories 1-10 begin with a quiz. You will use the Laboratory Manual (on the course website) and the Human Anatomy Interactive Atlas (www.anatomylab.com) to prepare for the weekly quizzes. Additional information is available in the laboratory introduction online. Practical quizzes and exams must be taken on the day for which they are scheduled. **There will be no exceptions to this policy.** Please print this schedule and keep it with you. **You are responsible for all the dates, times and places.**

May	20	Lab Introduction – NO QUIZ THIS WEEK
	27	Laboratory 1: Appendicular Skeleton
June	3	Laboratory 2: Introduction to Soft Tissues, Cardiovascular System
	10	Laboratory 3: Urinary, Respiratory, and Digestive Systems
	17	Laboratory 4: Axial Skeleton, and Nervous System
	24	Laboratory 5: Anatomy of the Thorax and Abdomen, Abdominal Vasculature
July	1	Laboratory 6: Genital Systems, Pelvis/Perineum, and Epaxial muscles Pelvis model due(5 points) Midterm Practical Exam (20 points)
	8	Laboratory 7: Anatomy of the Superior Limb
	15	Laboratory 8: Anatomy of the Superior Limb
	22	Laboratory 9: Anatomy of the Inferior Limb
	29	Laboratory 10: Anatomy of the Inferior Limb
August	5	Final Comprehensive Practical Exam: All students must take the final comprehensive practical exam on this day during the laboratory section for which they are registered.