

Syllabus  
KIN 270, Fall 2022 (4 credits)

**Lecture location:** ILC N151

**Lecture time:** Tu, Th, 2:30 - 3:45 PM

**Lab location:** Totman Room 8A

**Lab times:** variable depending on your registration.

**Table of contents (click heading to navigate to any section):**

Table of contents (click heading to navigate to any section):	1
Instructor and contact:	2
Welcome and syllabus note	2
Course description:	3
How to get help:	3
Course objectives:	3
Required materials:	4
Class schedule (subject to change):	5
Course assessments and weighting:	6
Grade scale:	8
Course recommendations:	8
Course policies:	8
Lecture attendance	8
Lab attendance:	8
Deadlines:	9
Make-up assignments or extensions	9
Etiquette:	10
Assignments	10
Valuing, Recognizing, and Encouraging Diversity	10
Academic Honesty Policy Statement	11
Disability Statement	11
Mask Policy	12

### **Instructor and contact:**

<PROF\_FULL\_NAME>, Ph.D.

(He, him) 159C Totman

Building

e-mail: <PROF\_EMAIL> (Please make sure to specify your course in email subject line, i.e., "KIN 270")

Office hours:

Online group sessions: Tuesday from 1:15 - 2:15 (<LINK\_ZOOM>, Password: <CODE>)

These sessions will be dedicated to review of course content. Anyone may attend, whether to ask questions or simply to watch. If there are no questions and no students at 1:25, I will close the session. Questions may be submitted by email prior to the session or asked during the session (voice or chat). Barring technical difficulty, reviews will be recorded and posted for later reference

Individual meetings: For questions applying to individual situations, please send an email to schedule an appointment. We can meet virtually or in-person. These meetings should address issues that apply specifically to you. If you have questions about course content, please either post to the discussion forum (preferred) or ask the question by email. I will respond so that all students see the question and answer, but will not identify the student who asked the question.

Note: Due to restrictions on office space and the need for individual Zoom links, prior notification is necessary for individual meetings. The following times are blocked off for student meetings:

Monday: 11:00 AM – 12:00 PM

Friday: 1:30 - 2:30 PM (prior notification necessary for in-person meetings)

By appointment

Back to [Table of Contents](#)

### **Welcome and syllabus note**

Anatomy and physiology can be one of the most rewarding classes in any educational career. Our topics will span biology, chemistry, physics, health and wellness. You will find the information relevant not only to healthcare, but to understanding how we go about our daily lives. Success in this class requires significant effort and participation. We will work with a large volume of material, some of which students find difficult. I am committed to making the course as fun and engaging as possible, but much of your course experience will rely on student enthusiasm and participation. I encourage you to engage with a positive attitude and growth mindset. When we encounter problems, we will fix them. When you struggle with a concept, we can find resources to help you achieve the learning objectives. Taking ownership of your learning at the beginning of the semester will set you up for success in this class and in future educational pursuits.

**Note:** This syllabus is intended to provide important information about our course policies and schedule. Should circumstances require changes in course policies, you will be notified by announcement on Moodle. Except in an emergency, the exam schedule will not change. However, the remaining schedule is approximate. We may cover some topics faster than expected, but will need to spend extra time on topics that prove difficult. Your flexibility is appreciated.

> Back to [Table of Contents](#)

### **Course description:**

This is the first semester of a two semester course sequence that examines the structure and function of the human body. Students completing the two semester sequence should be capable of relating detailed information about human biology back to the whole.

**Course goals:** Students completing this course should understand the general function of each human system and be able to relate that function to the maintenance of life and general health. Students should take with them a more detailed understanding of histology as well as the skeletal, muscular, and nervous systems.

> Back to [Table of Contents](#)

### **How to get help:**

There are a number of resources available to help you with class material. The correct order is listed below:

1. Check the learning objectives. The learning objectives serve as a study guide and have resources linked to explain course concepts.
2. Ask a question in the course discussion forum. Your students are often the best instructors for two reasons:
  - a. There is often someone online, even at odd hours of the day.
  - b. Peer instruction is often superior to faculty instruction. We (faculty) want to be the best instructors in the world. Unfortunately, we can be handicapped by having taught the same course numerous times. We may hear questions that are different from what you are asking or unintentionally provide an overly complicated explanation. Use your fellow students.

Note: Your instructor or TA will monitor the discussion to ensure that correct answers are available minimally every weekday morning.

3. Undergraduate office hours (<TA\_FIRST\_NAME>, [link to UGTA office hours once available](#))
4. Graduate instructors. Your lab discussion instructor can address issues related to course content, grading, and individual situations.
5. Office hours (See above).
6. Email the instructor. Email is the best way to contact me. I respond to emails within 24 hours on weekdays, typically no later than the morning following receipt.

> Back to [Table of Contents](#)

### Course objectives:

1. Apply an understanding of negative feedback to maintenance of homeostasis in general and to specific situations
2. Employ correct anatomical terminology in written statements
3. Explain the organization of the human body from the molecular to organismal level
4. Utilize molecular properties to explain how cellular structure relates to function
5. Utilize cellular properties to explain how tissue structure relates to function
6. Categorize tissue by structural properties
7. Demonstrate how the structural organization of skeletal tissue relates to function
8. Identify major bones and landmarks of the axial and appendicular skeleton
9. Relate major categories of joint structure to function
10. Explain the structural organization of skeletal muscle tissue
11. Apply principles of muscle contraction to the generation of force and movement in the human body
12. Identify principle human muscles, including origin, insertion, action, and innervation
13. Describe the organization of the nervous system
14. Relate the structure of the nervous system to function
15. Apply knowledge of specific brain structures to function
16. Construct models of autonomic nervous system function
17. Describe the basics of the human sense of smell, taste, vision, sound, and motion

> Back to [Table of Contents](#)

### Required materials:

Pearson materials accessed through Moodle (modified MasteringAandP.com, including eText, Study area, and Learning Catalytics). Visible Body anatomy atlas can be accessed at no cost through the library.

**Optional:** Our course materials are based on the following text. You may choose to purchase a hard copy of this text or earlier versions. To avoid paying for materials twice, you should either buy a used copy of the book (no online subscription) or purchase through a link that will be provided through Moodle. Access to the e-text is included through Moodle.

Marieb, EN and Hoehn, K. (2018) Human Anatomy and Physiology Plus, 11<sup>th</sup> edition.  
Pearson: Boston, MA.

Link to purchase a hard copy of the book at at a discounted rate (\$44.99):

<https://www.pearson.com/store/p/human-anatomy-physiology/P100001418359/9780134807430>

> Back to [Table of Contents](#)

**Class schedule (subject to change):**

Week	Day	Date	Lecture	Lab
1	Tu	9/6	Course introduction and logistics	Lab 1, Visible Body and PAL  <b>Note:</b> There is no in-person lab meeting this week. Lab 1 will be done online.
	Th	9/8	Homeostasis and negative feedback	
2	Tu	9/13	Chemistry	Lab 2: Team assignment, Anatomical overview and terminology. Visible Body review.
	Th	9/15	Chemistry	
3	Tu	9/20	Cells	Lab 3: The cell, histology and skin
	Th	9/22	Cells	
4	Tu	9/27	Histology	Lab 4: Axial skeleton
	Th	9/29	Histology	
5	Tu	10/4	<b>Lecture exam 1</b>	Lab 5: Appendicular skeleton
	Th	10/6	Skin	
6	Tu	10/11	Bone tissue	Lab 6: Review Lab  <b>Note:</b> Monday is a holiday. Monday lab members choose an alternate time.
	Th	10/13	Skeletal system and joints	
7	Tu	10/18	Joint wrapup, begin muscle	<b>Lab practical 1</b>
	Th	10/20	Muscle, flow down gradients	
8	Tu	10/25	Muscle Tissue, muscular system	Lab 7: Muscles: Head, Neck, and torso
	Th	10/27	Nervous system	

9	Tu	11/1	Nerves and action potentials	Lab 8: Muscles: Upper limb
	Th	11/3	Neuromuscular Toxins and applied problems	
10	Tu	11/8	<b>Lecture exam 2</b>	Lab 9: Muscles: lower limb <b>Note:</b> Friday is a holiday. Friday lab members choose an alternate time.
	Th	11/10	Central nervous system	
11	Tu	11/15	CNS, Spinal nerves and reflexes	Lab 10: CNS
	Th	11/17	Spinal nerves and reflexes	
12	Tu	11/22	Friday schedule, no class	Thanksgiving break, no class
	Th	11/24	Thanksgiving, no class	
13	Tu	11/29	ANS	Lab 11: Team assessment, Spinal nerves and reflexes
	Th	12/1	Special senses	
14	Tu	12/6	From molecule to system: Integrating the skeletal, muscular, and nervous systems	<b>Lab practical 2</b>
	Th	12/8	Last day of class/review	
15	Tu	12/13	Reading Day	
			Wednesday, 12/14, 3:30 - 5:30 PM	

> Back to [Table of Contents](#)

### Course assessments and weighting:

Evaluation	Material covered	Date	Class grade %
Lecture quizzes	Lecture learning objectives	Weekly throughout semester	15%, average taken after dropping lowest grade
Lecture exam 1	Through histology	10/4	12.5%

Lecture exam 2	skin through nerve and neuromuscular toxins	11/8	12.5%
Final exam	cumulative	12/14, 3:30 PM	20%
Lab Practical 1	Labs 1-5	Week of 10/17	10%
Lab Practical 2	Labs 6-11	Week of 12/5	10%
Online lab quizzes	Lab activities and identification	Weekly throughout semester	5%, average of highest 10 of 11 quiz grades
Lab preparation and participation	In-person lab engagement	Weekly throughout semester	10%; average of highest 10 of 11 scores
Team peer review	Contributions to your team	Throughout semester	5%

> Back to [Table of Contents](#)

### Grade scale:

Percentage Totals	Grade
93 – 100%	A
90 – 92.99%	A-
87 - 89.99%	B+
83 - 86.99%	B
80 – 82.99%	B-
77 - 79.99%	C+

Percentage Totals	Grade
73 – 76.99%	C
70 – 72.99%	C-
67 – 69.99%	D+
60 – 66.49%	D
59.99% or below	F
Incomplete	INC

> Back to [Table of Contents](#)

### Course recommendations:

Anatomy and physiology is an exciting and intense course. Even the most gifted students work hard to succeed. With consistent and conscientious effort, many students find this to be one of their most rewarding college courses, including those taken in graduate school.

Although attendance during our synchronous lecture periods is not required, it is strongly encouraged. You will gain insight into application of course material and core concepts. Many lecture quiz and exam questions will come from questions we address during these meetings. Participating in study groups and discussion forums is a good way to test your knowledge and practice teaching other students. As you may have experienced, it is one thing to understand something and another to explain it to others.

> Back to [Table of Contents](#)

### Course policies:

#### Teams:

In order to increase engagement with your classmates and the course material, students will be working as part of a team throughout the semester. Teams will be assembled during your first in-person lab meeting. You will be part of the same team throughout the semester. Your lab participation grade and a significant portion of your lecture extra credit grade will be based on team submissions. Even though the assignments will be tackled as a team, both the volume and difficulty of the work will not exceed what would be expected of an individual student. However, in order to gain benefits of working as a group, each team member should contribute equally to your group's success. 5% of your semester grade will be based on peer review of your team contribution. Actively participating with your teammates will improve your scores on individual assignments and earn a perfect five percentage points towards your final grade. Please note that your team participation grade will include participation both to lecture and lab.



### Lecture attendance

Lecture attendance is not required. However, extra credit will be offered during many class sessions. Beginning the third week of class, extra credit activities will be team-based, meaning the majority of your points will be earned based on answers agreed upon by your team. Therefore it is critical that you either attend class to communicate with your permanent teammates. Please note that you may earn points for participating in our live sessions even if your teammates are not there. You will be allowed to interact with any student, whether part of your team or not, prior to submitting your team's answer. However, once any student on your team submits an answer it will count as the answer for your team. Therefore you should not submit any answer prior to clearing it through discussion with your teammates.

Students are responsible for material covered during our synchronous class meetings as well as anything covered in the learning objectives. Barring unexpected circumstances, lectures will be recorded and posted for later viewing. However, no credit will be given for participation outside of the scheduled session.

### Lab attendance:

Attendance at lab meetings is required. Students are expected to arrive at their lab period on time and prepared. A score of 100% is given for arriving prepared and actively participating in the entire lab session. "Lab preparation" will be assessed via your team's prelab assignment. Participation points will be awarded based on your team's completion of in-lab activities. Extra credit points may be awarded for exceptional team achievement. Lab participation points may be deducted for arriving late, leaving early, or insufficient participation. Your lab instructor will guide you through a syllabus explicitly stating lab policy.

Because live lab sessions cannot be made up, we score the highest 10/11 in-person sessions. This allows students to miss a lab due to "life happening." Please note that the purpose of the dropped grade is not to make up for poor performance but to accommodate unavoidable absences due to situations including illness. If you know that you must miss an upcoming lab for a legitimate reason, please contact your lab instructor ahead of time. We will do our best to include you in a different section. If you unexpectedly miss a lab for a legitimate reason (such as illness), contact your instructor as soon as possible. We will do our best to include you in an upcoming session. However, because labs happen live and in-person, some sessions may not be available for makeup.

Students are expected to adhere to university policy addressing illness during this COVID crisis. Please do not come to the lab if you are feeling sick. If you are sick, get tested for COVID and inform your lab instructor of the situation. We are committed to helping

students overcome legitimate obstacles and will work to find creative solutions to persistent problems. You will not experience a grade deduction for live class periods missed due to documented illness.

### Deadlines:

All work must be completed by the stated deadline. An assignment due at 9:00 AM will not be accepted at 9:01. You will drop your lowest score on minor assessments to allow for expected life interference, including internet connectivity issues. Extraordinary circumstances will be considered. The rationale for this policy is addressed in the [instructor introduction](#).

### Make-up assignments or extensions

will be offered only when conflicts are unavoidable. Foreseeable conflicts should be discussed with the instructor prior to the scheduled exam or as soon as the conflict becomes apparent. If there are issues during an exam (like internet connectivity),

1. Don't panic. We understand that life is unpredictable and will work with you to the extent we can.
2. Complete the exam to the best of your ability.
3. Notify the instructor immediately.

We will do our best to accommodate reasonable requests; however, negligence on the part of the student may result in a zero score.

### Etiquette:

Students should extend courtesy to all class participants, including fellow students and instructors. While enthusiastic participation is encouraged, please leave space for all students to participate in class discussion (including those who respond slowly). Communication that intimidates or excludes others from participation will not be tolerated. Such communication includes hate speech and flaming. Flaming refers to derogatory, abusive, threatening, sarcastic, rude, or otherwise mean-spirited messages. A student's chosen name and pronouns are to be respected at all times in the classroom.

> Back to [Table of Contents](#)

## **Assignments**

Lecture quizzes: Each lecture quiz is open book and untimed. You will have unlimited attempts at each quiz with the highest score counting towards your grade. The goal is to master the material prior to moving to the next unit. Lecture quizzes will be due after we have completed discussing the topic.

Lab quizzes: Each lab quiz is open book and untimed. You will have unlimited attempts at each quiz, so you may retake the quiz until you earn the score you find satisfactory. The lab quizzes should help you prepare for each upcoming lab as well as review anatomic structures identified in person.

Lecture exams: Lecture exams will be computerized and held during normal class times. You may take these exams either in the lecture hall or another quiet place of your choosing. Please note: if you choose to take the exam out of the lecture hall, you must login to our class via Zoom and take the exam with your camera on. Lecture exams will be open-book and timed. You will have approximately 1.5 minutes per question. You will have a single attempt at each exam. Questions for each student will come from a larger test bank, so each student's exam will have a different combination of questions. However, the number of questions on each topic and intended difficulty of each question set will be consistent. Approximately 70% of all questions will come from the question bank used for your lecture quizzes. A practice exam will be made available so that you should not be surprised by the format or types of questions.

Lab practical exams: These will be held during your normally scheduled lab period. You will have approximately 1 minute per question. Your lab instructor will guide you through the exam process prior to the "live" exam.

Spelling: Online quizzes and lab practicals require written answers. You must spell the terms correctly to receive credit on these answers. Missing the spelling by even a single letter will result in full point deduction.

Grading mistakes: You will invariably encounter "bad" questions over the course of the semester. Questions may be poorly worded, have multiple correct answers, no correct answers, or the correct answer may be marked incorrect. If you encounter such a question, choose the best answer. I will review questions after an assignment and award credit for any correct answer. All students will get credit for fatally flawed or overly confusing questions. I reserve the right to determine which questions should be tossed based on your feedback.

> Back to [Table of Contents](#)

## **Valuing, Recognizing, and Encouraging Diversity**

Promoting and valuing diversity in the classroom enriches learning and broadens everyone's perspectives. Inclusion and tolerance can lead to respect for others and their opinions and is critical to maximizing the learning that we expect in this course. Our own closely held ideas and personal comfort zones may be challenged. The results, however, create a sense of community and promote excellence in the learning environment. Diversity includes consideration of (1) the variety of life experiences others have had, and (2) factors related to "diversity of presence," including, age, economic circumstances, ethnic identification, disability, gender, geographic origin, race, religion, sexual orientation, social position. This class will follow principles of inclusion, respect, tolerance, and acceptance that support the values of diversity.

> Back to [Table of Contents](#)

## **Academic Honesty Policy Statement**

Since the integrity of the academic enterprise of any institution of higher education requires honesty in scholarship and research, academic honesty is required of all students at the University of Massachusetts Amherst.

Academic dishonesty is prohibited in all programs of the University. Academic dishonesty includes but is not limited to: cheating, fabrication, plagiarism, and facilitating dishonesty. Appropriate sanctions may be imposed on any student who has committed an act of academic dishonesty. Instructors should take reasonable steps to address academic misconduct. Any person who has reason to believe that a student has committed academic dishonesty should bring such information to the attention of the appropriate course instructor as soon as possible. Instances of academic dishonesty not related to a specific course should be brought to the attention of the appropriate department Head or Chair. The procedures outlined below are intended to provide an efficient and orderly process by which action may be taken if it appears that academic dishonesty has occurred and by which students may appeal such actions.

Since students are expected to be familiar with this policy and the commonly accepted standards of academic integrity, ignorance of such standards is not normally sufficient evidence of lack of intent.

For more information about what constitutes academic dishonesty, please see the Dean of Students' website (p. 9-10):

[http://umass.edu/dean\\_students/codeofconduct/acadhonesty/](http://umass.edu/dean_students/codeofconduct/acadhonesty/)

> Back to [Table of Contents](#)

### **Disability Statement**

The University of Massachusetts Amherst is committed to making reasonable, effective and appropriate accommodations to meet the needs of students with disabilities and help create a barrier-free campus. If you are in need of accommodation for a documented disability, register with Disability Services to have an accommodation letter sent to your faculty. It is your responsibility to initiate these services and to communicate with faculty ahead of time to manage accommodations in a timely manner. For more information, consult the Disability Services website at <http://www.umass.edu/disability/>.

> Back to [Table of Contents](#)

### **Mask Policy**

Students are expected to adhere to university policy regarding face coverings and COVID precautions.