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.

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# 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

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# 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.

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# 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.

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# 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:
   1. There is often someone online, even at odd hours of the day.
   2. 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.

1. Undergraduate oﬃce hours (<TA\_FIRST\_NAME>, **link to UGTA oﬃce hours once available)**
2. Graduate instructors. Your lab discussion instructor can address issues related to course content, grading, and individual situations.
3. Oﬃce hours (See above).
4. 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.

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# 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
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# 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, 11th 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](http://www.pearson.com/store/p/human-anatomy-physiology/P100001418359/9780134807430)

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# Class schedule (subject to change):

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Week** | **Day** | **Date** | **Lecture** | **Lab** |
| **1** | Tu | 9/6 | Course introduction and logistics | Lab 1, Visible Body and PAL  **Note**: 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 | **Lecture exam 1** | Lab 5: Appendicular skeleton |
| Th | 10/6 | Skin |
| **6** | Tu | 10/11 | Bone tissue | Lab 6: Review Lab  **Note:** 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 | **Lab practical 1** |
| 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 | **Lecture exam 2** | Lab 9: Muscles: lower limb  **Note:** 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 | **Lab practical 2** |
| Th | 12/8 | Last day of class/review |
| **15** | Tu | 12/13 | Reading Day |  |
|  |  | Wednesday, 12/14, 3:30 - 5:30 PM |  |

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# 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% |

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# 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 |

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# 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.

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# 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.

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# 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.

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# 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.

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# 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/>

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# 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/.](http://www.umass.edu/disability/)

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# Mask Policy

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