

PHYS 2210: PHYSICS FOR SCIENTISTS AND ENGINEERS I

Fall 2020, Physics & Astronomy Department, University of Utah

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Updated Aug. 23, 2020. Syllabus subject to change: This syllabus is meant to serve as an outline and guide for our course. Please read it carefully. Please note that I may modify it with reasonable notice to you. Any changes will be announced in class and posted on Canvas.

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1 Your learning goals

Significant learning combines the logical and the intuitive, the intellect and the feelings, the concepts and the experience, the idea and the meaning. When we learn in that way, we are whole. *Carl Rogers, 1983*

PHYS 2210 is the first of a two-part sequence, calculus-based course in introductory physics. In class we will explore standard concepts in classical mechanics such as kinematics, dynamics, energy, momentum, rotation of a rigid body, oscillations and waves. The class will assume a working knowledge of calculus. After successful completion of this course, you should be able to:

- Appreciate the power of physics and mathematics to deepen your scientific understanding of some of the physical phenomena we observe everyday.
- Identify, apply and master problem solving strategies to reach a quantitative understanding in a variety of circumstances.
- Work and collaborate productively in a group and learn from your peers.

In addition, I hope that you will:

- Further develop your own passion for learning, not be afraid of being challenged, believe in yourself as capable of improvement.
- Be creative, have fun and make good friends.

2 Welcome from the Teaching Team

This class strives to be an inclusive community, learning from the many perspectives that come from having differing backgrounds and beliefs. As a community, we aim to be respectful to all. We reject all forms of prejudice and discrimination, including but not limited to those based on age, color, disability, size, gender, gender identity, gender expression, national origin, political affiliation, race, religion, sexual orientation, and veteran status. The instructional staff and students are expected to commit to creating an environment that facilitates inquiry and self-expression, while also demonstrating diligence in understanding how others' viewpoints may be different from their own.

Teaching Assistants (TAs)

Teaching Assistants are graduate or undergraduate students in physics, they are working towards their Bachelor, Master or PhD degree in physics. They will lead discussion sections, staff Study Hall, hold Office Hours, present Reviews and grade Exams and Problem Sets. The names and contacts of the TAs will be posted on the Canvas website on the Teaching Staff page.

Learning Assistants (LAs)

Learning Assistants are undergraduate students who have taken this course previously, or a similar course, and who receive special training on how to help students learn science (see more details on the [U of U Learning Assistant program](#) page). LAs will help during class and discussion sections to facilitate student learning, they will also staff Study-Hall and hold Office Hours. LAs are not responsible for grading assignments and can be thought of as peer mentors. The names and contacts of the LAs will be posted on the Canvas website on the Teaching Staff page.

3 Content

Course topics overview:

1. Kinematics
2. Dynamics
3. Work and Energy
4. Conservation of Energy
5. Linear Momentum and collisions
6. Rigid Bodies
7. Angular momentum and static equilibrium
8. Harmonic Oscillator
9. Waves

4 Class meetings

Class Times

This course will run in IVC format, Interactive Video Conferencing, that means we will meet synchronously online on Zoom both for the lectures and the Discussion Sections. This course requires you to attend two 80-minute lectures and two 50-minute Discussion Sections every week. Before every lecture you will have some Pre-class Assignments to complete by midnight of the previous day. A typical lecture will be run by the instructor together with the help of Teaching Assistants(TAs) and Learning Assistants(LAs), it will consist of interactive lecturing, short questions and quizzes, and group discussions/problem-solving. Discussion Sections will consist primarily of group problem-solving activities and will be run by a Teaching Assistant(TA) with the help of Learning Assistants(LAs). Additional help will be provided via Study-Halls and Office Hours.

- Lectures (online on Zoom):
 - Section 011- Monday and Wednesday, 1:25-2:45pm

- Section 021- Monday and Wednesday, 3:00-4:20pm
- Discussion Sections (online on Zoom):
 - 012-022-023 Monday-Wednesday 4:35-5:25pm
 - 013 Tuesday-Thursday 10:45-11:35am
 - 014-024 Tuesday-Thursday 12:55-1:45pm
 - 015-025 Tuesday-Thursday 2:00-2:50pm
- **Study-halls** (online on Zoom):
 - Monday 11am-12:30pm (to help you prepare for the Monday In-class Quiz)
 - Tuesday 3:30-5pm (to help you with the Homework)
 - Thursday 9-10:30am and 3:30-6:30pm (to help you finish the Homework due every Thurs. at midnight)
- Additional Office Hours (online on Zoom) may be added based on needs and they will be announced and posted on Canvas. Keep in mind that Study-hall does serve the purpose of office hours, but with the additional ability to work in groups, see more below about the format of **Study-halls**.

Zoom links for each of the meetings above will be provided on Canvas.

Note on Punctuality and Attendance: Please be on time for lectures and Discussion Sections. Class meetings will start sharp at the beginning. Once a week there will be a quiz at the beginning of class, and if you come late you will not have the chance to take the quiz later. Discussion Sections are required and attendance will be taken in class. Make sure to come on time or you will lose on attendance credit.

IMPORTANT: You will be required to attend the Lecture Section and Discussion Section in which you are enrolled. Additionally, you may not attend Lecture and Discussion Sections in which you are not enrolled.

Lecture Recording: Lectures will be recorded on zoom and made available on Canvas by the end of the day, so that you can watch them again later on. Only the Active Speaker and Screen Sharing view will be recorded, not the participants view nor the time spent in the breakout rooms. Lecture recording will be available only to students enrolled in this course.

Group work

Group work and collaboration are essential tools to succeed in almost any career (research teams, firefighting personnel, nursing teams, committees, construction teams, etc.) and they will be fundamental and invaluable tools for your learning of physics in this class. That is why one of the learning goals of this course is to learn to work effectively with your classmates. Learning to work effectively with a variety of people will prepare you to work with your colleagues and collaborators at your work place, and will enhance and deepen your understanding of physics. The best discoveries in science very often arise from the group work and collaboration of several people. By discussing ideas, posing questions, listening to other people's way of thinking, we each grow intellectually and can overcome struggles that seem daunting individually. I encourage you to start to hone your team work skills in this course. Specifically, I encourage you to collaborate, talk, discuss, make your classmates your best study-partners, bug them with questions, build ideas together. There will be group activities and group work several times throughout the course and working effectively in a group will be fundamental to your success in this class. The course is designed to encourage the collaboration with your classmates inside and outside the class. You will work in groups during the *lectures* when you will be asked to discuss and work with your classmates. In the *discussion sections* you will work on problem solving in groups of 3-4 classmates, groups will be changed for every discussion section. You will also work in groups for some of the class assignments, such as *groups quizzes* and *group exams*. *Study-halls*, I hope, will enable you to meet and work together with colleagues in the class; the Discussion Boards on Canvas will be another place where interact with your peers online. You can set up your own study-groups, or come together to study-hall. There will be a lot to understand and discover in this class, and while it can sometimes be rewarding to struggle on your own, often it can be fun to struggle together in a group. **I am NOT grading on a curve in this class, so your classmates are friends, collaborators, and team mates, not competitors.**

Technical requirements

In order to participate in this course (attending the class meetings and takings exams) you will be required to:

- Have access to a strong and stable internet connection
- Have access to a computer with working camera and microphone
- Be computer literate to be able to easily navigate Canvas and Zoom, as well as other software (e.g. Adobe Scan)

It will be recommended that you join Zoom sessions with audio and video enabled. **During proctored exams, you will be required to have your video and audio enabled.**

A regular scientific calculator (not a graphing calculator) may be needed for some of the homework questions. For exams and quizzes you will NOT need a calculator. Calculators will NOT be permitted during exams or quizzes.

Electronic or equipment failure :It is your responsibility to maintain your computer and related equipment in order to participate in the online portion of the course. Equipment failures will not be an acceptable excuse for late or absent assignments.

Note: Access to some technology equipment is available to students through [the Marriott Library](#).

In-class Response Tool

We will use [Learning Catalytics](#) to capture your input in class. Learning Catalytics is an interactive student response tool that you will be able to access online through our Canvas site (information on how to access and use Learning Catalytics will be given the first week of class, you will NOT need to create an account). You will never be penalized for answering an in-class question wrong, but we want you to always try your best to answer, your responses will help us tailor the class to your needs.

Special Dates

There will be no changes to the format of the course during the University announced fully-online weeks of instructions: September 28- October 2, October 5-10, and November 30-December 3. The IVC format will apply for the entire duration of the semester, we will always be meeting synchronously online at the class times listed above.

5 Materials and resources

Canvas

All course materials will be posted on the PHYS 2210 Canvas site <https://utah.instructure.com/courses/630925>. Make sure to be comfortable and familiar to navigate Canvas. Here are a couple of Canvas Guides for Students I encourage you to visit:

- [Student Canvas Guide-short](#)
- [Student Canvas Guide-extensive](#)

Class announcements will be sent through the Canvas server, and individual email communication with you will also happen through Canvas. **Therefore, it is extremely important that you receive your Canvas notifications and emails at your preferred email address.** To [manage your preferred email on Canvas](#), go on Canvas under *Account* → *Settings*, at the top right of the screen edit *Email Addresses*. In addition, it is important that you received the Canvas Course Announcements as soon as they are posted, these will often contain timely information; to [edit your Notification settings](#), go on Canvas under *Account* → *Notifications*, and select “Notify me right away” for Announcements.

Communication and email

You will be responsible for any information contained in **Canvas Announcements, individual emails sent to your Canvas email, as well as information announced in class.** Please keep in mind that **it is also your responsibility to regularly check your Umail** (make sure you set up forwarding if you do not check it regularly), your Umail is the only email contact we have access to as instructors, and the only

way for us to communicate privately with you. There will be occasions during the semester that we may need to reach out to you individually (e.g. regarding a grade or missing assignment) and it is in your best interest to respond promptly.

Feel free to contact me by email for questions at claudia.degrandi@utah.edu, I will do my best to answer emails promptly. I would like to encourage you to email me only if it is something personal that requires individual attention, **if instead you have questions about logistics of the class, course material and assignments, and anything else your classmates may wonder as well, please post a question on the appropriate Discussions Board** instead. This way the information is shared quickly to the entire class, and each of you can benefit from seeing other classmates' questions. There is more than three hundreds of you in this course, so the Discussions Boards will be a faster channel for communication for everyone. Therefore, even if you do not post questions yourself, **make sure to check the Discussions Boards regularly** as you may find some helpful information (for instance a typo in the homework, some helpful discussion to prepare for the quiz, etc.).

I will always do my best to ensure the communication relevant to the course is clear and transparent, **it is your responsibility as well to keep yourself updated by regularly checking**: the announcements on Canvas, your default email address on Canvas, your Umail, the posts on the Discussions Boards, and pay attention to the announcements given in class and Discussion Section.

Textbook, Inclusive Access and MasteringPhysics

The book adopted for this course is *Physics for Scientists and Engineers: A Strategic Approach with Modern Physics* with MasteringPhysics, Fourth Edition, by Randall D. Knight. The electronic version of the textbook and associated resources and access to MasteringPhysics are available to you as part of the *Inclusive Access Program*. The *Inclusive Access Program* delivers all required course material as part of your tuition or fees. **If you are enrolled in this course, you do not need to buy course material as they will be provided to you starting the first day of class (an access code will be provided to you on the Canvas website)**. You will get the required resources and access to the book directly through the Canvas site. A paper copy of the book is not necessary, but if you'd like one, you could find it at the Campus Book store, or you can order an "unbound" copy through the MasteringPhysics web interface (\$44.97, free shipping).

Homework submission will happen through MasteringPhysics, therefore you will need to make sure to have a MasteringPhysics account set up starting the first day of class. Instructions will be given on Canvas and discussed the first week of class.

Lecture videos, slides and notes

Lecture videos, lecture recording, slides, and any additional notes will be posted on the Canvas course website. All materials for this course are copyrighted. Do not distribute or share course resources without instructor permission.

Discussions Boards

We will be using the Canvas Discussions Boards in this course, an online platform embedded on Canvas for everyone to post questions to the teaching team and classmates. There will be different Discussion Boards based on the topic and purpose. Post questions on the Discussions Board to get quick responses from your instructor, TAs, LAs, and classmates. In this way, everyone can learn from your questions and you will be answered more quickly. I also encourage you to post answers to help your fellow classmates.

Study-Halls

There will be the following study-halls each week:

- Monday 11am-12:30pm (to help you prepare for the Monday In-class Quiz)
- Tuesday 3:30-5pm (to help you with the Homework)
- Thursday 9-10:30am and 3:30-6:30pm (to help you finish the Homework due every Thurs. at midnight)

The goal of study hall is to provide a place where you can come to do homeworks and study for quizzes and exams with your study group and other classmates. The instructor, TAs and LAs will be there available to advise you, and answer questions. Because participation in study hall has proven to be an important factor

leading to success in physics, **attendance to at least one of these study halls for at least one hour each week is strongly recommended.**

In previous semesters, students have repeatedly expressed their gratefulness and need for study-hall. Below are a few answers from an anonymous survey administered at the end of the semester to the question: “Imagine you could write a short paragraph to be given to next year’s students in this course. Please write what you would say to them to help them learn the most in the class.”

- “ALWAYS go to study halls. Go to all of them if you can. They are honestly really helpful, especially when you have your instructor or the TAs helping you. It also gets you to collaborate with your fellow peers. You’re all in this together, so why not work together? Don’t be afraid to ask questions either, whether during study hall or in lecture. Without communication or attending study halls, you won’t succeed in this class. Let the instructors help you!”
- “The best experience was the study halls. I made a bunch of new friends through it and I got work done I never could have figured out on my own. Go to the study halls!”
- “Interact with the people around you. Go to study halls and do the problem sets with your peers, but also don’t be afraid to talk to the professors and get to know them as well. It makes a huge difference because once you’re comfortable with the people around you, you’re not afraid to ask questions during class. You’re far less likely to feel lost or overwhelmed when you’re comfortable enough to sense how you learn best and ask questions.”

Study-halls will be run on Zoom, there will be different Zoom break-out rooms depending on your needs: you can come in for quick questions for the teaching team (for instance you can stay online when working on your homework and ask questions when you need), or you can join a working group to work together on the homework with classmates. You can come and leave anytime you like. It will be an informal place to get help, meet people, make friends, and collaborate on course assignments.

Office hours

I will stop by regularly during most Study-Halls times (more details will be given in class), so if you attend Study-Hall it will be easy to find time to talk. If you cannot attend Study-Hall or prefer to meet in a separate setting, please reach out to me (by email) and I’ll accommodate your schedule to find a time to meet. I’ll be also available after each class for questions.

Information about additional TAs’ and LAs’ office hours will be posted on the Canvas site at the beginning of the semester.

6 Netiquette: Expectations for online learning environment

Classroom Equivalency

Respectful participation in all aspects of the course will make our time together productive and engaging. Zoom lectures, discussion board threads, emails and Canvas are all considered equivalent to classrooms and student behavior within those environments shall conform to the Student Code. Specifically:

- Treat your instructor, teaching team and classmates with respect in any online communication.
- Posting photos or comments that would be off-topic in a classroom are still off-topic in an online posting.
- Disrespectful language and photos are never appropriate.
- Using angry or abusive language is not acceptable, and will be dealt with according to the Student Code. The instructor may remove online postings that are inappropriate.
- Course emails and other online course communications are part of the classroom and as such, are University property and subject to the Student Code. Privacy regarding these communications between correspondents must not be assumed and should be mutually agreed upon in advance, in writing.
- Remember that all college level communication should have correct spelling and grammar (this includes discussion boards).
- Avoid slang terms and texting abbreviations such as “u” instead of “you.”
- Be cautious when using humor or sarcasm as tone is sometimes lost in an email or discussion post and your message might be taken seriously or sound offensive.

Email Etiquette: How to Email your Professor

When emailing your Instructor and Teaching Team keep a professional tone. For example:

- use a descriptive subject line
- avoid “Hey” and other colloquial language
- always use your professors’ proper title: Dr. or Prof.
- sign your message with your name and return e-mail address.

Please consult [this page for tips](#) on how to write appropriate professional emails.

7 Course work

Pre-Class Assignments

The night before each lecture there will be a Pre-class Assignment due at midnight, therefore there will be two Pre-Class assignments due every week on Sunday at midnight and on Tuesday at midnight. The purpose of the Pre-Class Assignment is to introduce you to new class concepts and material prior to the lecture, so that in the lecture we can focus on applying and understanding these concepts together through examples, problems and discussions. **Completion of the Pre-Class Assignment will be required to be able to participate in the lecture. That is why it is extremely important that you complete the Pre-class Assignment regularly and thoroughly.** Pre-class assignments may include:

- watching some short video lectures and/or reading related course material;
- completing a quiz or survey;
- posting on a Canvas Discussion Board based on given prompts.

Dropped Pre-Class Assignments

Pre-Class Assignment contribute 7% to your final grade. There will be about 26 Pre-Class Assignments throughout the entire semester, some will count more points than others. You will be allowed to miss a few of these without affecting your final course grade, *your lowest six Pre-Class Assignment scores (or equivalent points) will be dropped* in calculating your cumulative course grade.

The first Pre-Class Assignment will be due on Tuesday, August 25th at midnight.

Quizzes

Almost **every Monday there will be a 10-minute quiz in class** on the previous week’s material. Quizzes are a great way to keep you up with the material, and give you a chance to practice and get feedback early on. Instructions on how to prepare for the quiz and topics will be announced the Friday of the week prior to the quiz. Sometime this could be a group quiz (details and instruction on group quizzes will be given in class).

Dropped Quizzes

Quizzes contribute 10% to your final grade. Of the about 12 total quizzes administered this semester, *the three lowest quiz scores will be dropped* in calculating your cumulative course grade. Therefore you won’t be penalized if you miss up to three quizzes, but it is in your interest to attend all the quizzes to improve your final quiz percentage.

There will be no make-up quiz allowed. If you happen to have to miss class the day of a quiz, you will earn no credit in the quiz, but these zero-credit quizzes will be dropped from your final course grade as long as you do not miss more than three.

The first quiz will be on Monday, August 31st.

Homework

There will be about 12 problem sets, assigned weekly and **due Thursdays at midnight**. The purpose of the homework is to review topics covered during one week of class, to get deeply involved in thinking about the material, and ultimately to prepare for the exams. Homework problems might, at times, walk you through a situation or concept not covered in lecture. In short, the homework is an excellent venue for checking whether you truly understand the material.

The homework also is a good way of getting used to **clear written communication**. **Make sure the steps of your solution can be followed by another reader**. Even if your logic is sound, if the steps and reasoning are not written down and clearly communicated to the reader your solution will be incorrect. Remember that the emphasis is on the logical process and analytic reasoning you do in order to solve problems, so the final line of the solution is not the basis for judging an answer to be correct or incorrect.

You are encouraged to discuss the problems with your classmates and teaching staff, especially during study-hall. However, the solutions you submit must be your own and represent how you understand the problem. **Students caught cheating will receive no credit for the homework, and will be sent on to the University Disciplinary Committee for further action.**

Homework submission and Solutions

Homework sets are assigned on Fridays and posted on the course website. They are due the following Thursday at midnight. In general, the homework will consist of two parts:

1. **Part 1: on MasteringPhysics.** Problems and questions to be worked out and submitted on MasteringPhysics.
2. **Part 2: on Canvas.** A few additional problems posted on Canvas for which you will write and submit a careful solution that shows all your steps. Make sure the steps of your solution can be followed by another reader. You will turn in Part 2 **online on Canvas as a single pdf attachment**. I encourage you to work on a handwritten copy and then scan it to make a *single* pdf document (do not attach multiple files) called `YourLastnameHW#.pdf`. We will NOT accept “photos” of homework. **It is your responsibility to guarantee your submitted pdf is legible and on a clear white background. Illegible homework will earn zero credit.** You can either use a scanning machine, or one of the many free “scanner” apps available on smartphones, we recommend **Adobe Scan** which is free and can be also connected with your U of U Adobe account (so that your files can be saved to your Adobe Document cloud if you like) When opening the app for the first time it will give you the option to sign in with Google, Facebook or Apple ID, but just below you have the option to sign in with your Adobe account, if you do this it will be connected to your Adobe account. Sign in with your `uNID@utah.edu`. See this page for more information on accessing your U of U Adobe Creative Cloud App: <https://software.utah.edu/adobe.php>

Late homework submission will be penalized according to the Late Submission Policy discussed below.

Homework grading

- Problems in Part 1 on MasteringPhysics will be automatically graded.
- Problems in Part 2 on Canvas will be graded by the TAs. You must do all assigned problems. Of these, *only a few will be graded*, selected after the homework has been handed in. The reason for this procedure is to free up TAs’ time, so that they can be available to staff study-hall and hold office hours, which is a more useful way to employ their time than grading alone.

Solutions to the entire homework set will be always posted, and it will be your responsibility to check the solutions to all problems, not just the ones that were graded, and consult with the teaching staff for any question.

A short warm-up homework will be due on Thursday, August 27th, the first full homework will be due on Thursday, September 3rd.

Dropped problem sets

Homework contributes 20% to your final grade. Of the 12 problem sets assigned this semester, *your lowest two problem sets score will be dropped* in calculating your cumulative course grade.

Discussion Sections

Attendance and active participation in Discussion Sections is **required**. During Discussion Section you will work on problems and exercises meant to help you practice with concepts and prepare for homework and exams. In Discussion Section most of the time you will be working in groups of 3-4 classmates. Groups will be changed weekly, your TA and LA will help you join a different group every week. If at any time you are not happy with your group please contact your TA or me.

In order to get full credit for attending a Discussion Section, you need to:

- Come on time
- Stay until the end of the section
- Work and participate actively with your classmates following the activities assigned by your TA.
- Submit your work on Canvas at the end of the Section.

If you fail to meet one or more of the criteria above, you will be given partial or no credit.

Dropped Discussion Sections

Participation in Discussion Sections contribute 10% to your final grade. There will be about 26 Discussion Section meetings throughout the entire semester, *your lowest five Discussion Section scores will be dropped* in calculating your cumulative course grade.

Discussion Sections will start regularly with the first week of class on Monday, August 24th.

Surveys and additional assignments

During the course of the semester, you will be asked to submit a few surveys and other assignments. These assignments will never be graded for correctness, but simply by being completed and submitted. These assignments will contribute 3% to your final course grade.

Late Submissions

All online assignments (Pre-Class Assignments, Discussion Posts, Homework, Survey, etc.) will be subjected to the following Late Penalty policy:

- A 5% of total points possible in the assignment will be deducted **per each hour** the submission is late. Minutes will be rounded to the next integer hour. For instance, if the homework is due at 11:59pm and you submit at 12:02am, you will be deducted 5% of the total homework points, if you submit 4 hours late, you will receive a 20% deduction (in this case for example, if the homework is out of 20 points and you are awarded full points, your homework grade will be 16 instead of 20).
- Therefore, for a submission 20 hours after the deadline, you will be deducted 100% of the total point, and so effectively you will receive no credit for your submission.

8 Exams

Midterm Exams

There will be **two midterm exams** held during class time scheduled on:

- Wednesday, September 30th
- Wednesday, October 28th

Each midterm exam contributes 15% to your final course grade. Make-up exams will only be offered in the following cases (a) absence due to a University sponsored activity or to military or jury duty, and (b) serious medical emergencies. In any case the student must provide complete documentation. In the case of exception (a) the request for a make-up exam must be filed with Professor De Grandi **at least three weeks in advance** of the anticipated absence. **Please note that all exam dates and times have already been determined: mark your calendars now and resolve any conflicts as soon as possible!**

Final Exam

The final exam takes place Tuesday **December 8th, 3:30-5:30pm** and contributes 20% to your final course grade. The final exam will be cumulative and therefore it will cover the material of the entire semester.

Exam Format

Each exam will have an in-class online proctored component (90% of the grade) and an out of class take-home component (10%). The in-class component will consist both of individual work, as well as group work. The exam will contain both multiple choice questions as well as problems for which a full solution needs to be submitted. All details of the exams will be discussed in class and posted on Canvas.

Exam Regrading

If you feel an error was made in grading part of your exam, you may request a regrading of problems. This means that your grade on the problem could be raised or lowered; thus, it is highly recommended that you only use this option if there is a clear and egregious error in the grading. Instructions on how to submit an Exam Regrade will be given in class when exams are administered.

9 Grading

Checking your Course Grades

It is the **student's responsibility to ensure the accuracy of all recorded homework, quizzes, online assignments, and exam grades.** Also you should keep as record all your graded assignments. If you see any error in your grades on Canvas, reach out to the instructor as soon as possible, or at the latest **within two weeks from when the assignment grade was posted.**

How I determine your final grade

There are two grading schemes to calculate the final course grade. I will use whichever is in your favor. Exams constitute 50% of your overall course grade. This portion of your cumulative grade can come from Midterm 1, Midterm 2 and the Final exam (15% +15% +20%) OR entirely from your final exam score (50%), whichever is higher.

Pre-Class Assignments	7%	OR	Pre-Class Assignments	7%
Surveys	3%		Surveys	3%
Quizzes	10%		Quizzes	10%
Discussion Sections	10%		Discussion Sections	10%
Homework	20%		Homework	20%
Midterm 1	15%		Final Exam	50%
Midterm 2	15%			
Final Exam	20%			

The rationale for these two schemes is that I believe that if you have mastered the material at the end of the course and your performance on the cumulative final exam demonstrates this, you should not be held back by a rough start earlier in the semester.

Grade boundaries

Your final letter grade will be determined from your total course grade percentage (calculated as described above) and according to the following grade boundaries:

Score in %	Grade
93-100	A
89-93	A-
85-89	B+
80-85	B
75-80	B-
70-75	C+
65-70	C
60-65	C-
<60	D,F

10 Academic Code of Conduct

Academic Integrity

While I encourage students to work together in groups, either in preparation for the weekly homework, or for the exams, each student must ensure a thorough understanding of the material and the problems solved. After your group study, you should always write up your work individually. Being able to rework your group's effort will show you whether you really understood everything.

If you are expected to collaborate on a group quiz or group exam it will be clearly stated. All individual quizzes, and the individual components of midterm exams and the final exam must be done entirely on your own. Sharing of information through any means (notes, internet, talking, texting, copying, etc.) will be considered a case of academic dishonesty.

Violations of the Student Code of Conduct erode the equitable learning environment that we strive for in this course. Therefore, at the beginning of the semester I will require all students in this course to agree to the academic integrity statement below.

Code of Conduct

All work submitted as part of your enrollment in this course should be your own work and you must follow all the rules associated with the assignment. Incidents of academic misconduct (including cheating, plagiarizing, research misconduct, misrepresenting one's work, and/or inappropriately collaborating on an assignment) will be dealt with in accordance with the Student Code (Policy 6-400, Section V). Instances of academic misconduct could result in a failing grade for the course; probation, suspension, or dismissal from a program; suspension or dismissal from the university; or revocation of a degree or certificate. Inappropriate behavior includes, for example, submitting assignment problems to online tutoring resources or searching for solutions on such websites and submitting the result as your own work.

All study materials in this course are considered intellectual property of the instructor and the University of Utah (this includes lecture slides, problem sets, exams, answer keys etc.). Unauthorized uploading or distribution of the aforementioned materials to any website, either during or after the semester, is prohibited and may be addressed both as a violation of the behavioral standards as well and an act of academic misconduct. The Department will actively monitor websites for unauthorized distribution and refer all instances of the violation to VP for Student affairs and the College of Science Academic Affairs Committee for investigation. You need written permission from the instructor permitting you to upload the material.

Events of academic dishonesty will be dealt with in the following way:

- First Offense: Student will receive a zero on exam or assignment.
- Second Offense: Students will receive a failing grade in the course.
- Particularly egregious attempts at cheating will result in a referral to the advocacy system and a permanent mark on your record.

You are encouraged to review the Student Code for the University of Utah:

<https://regulations.utah.edu/academics/6-400.php>.

11 Additional Policies and Resources

COVID-19 Considerations

Students must self-report if they test positive for COVID-19 via <https://coronavirus.utah.edu/>.

The 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 and Access](#), 162 Olpin Union Building, (801) 581-5020. CDA will work with you and the instructor to make arrangements for accommodations. You are encouraged to come and talk to me about your necessary accommodations within the first two weeks of the semester.

Campus Safety

The University of Utah values the safety of all campus community members. To report suspicious activity or to request a courtesy escort, call campus police at 801-585-COPS (801-585-2677). You will receive important emergency alerts and safety messages regarding campus safety via text message. For more information regarding safety and to view available training resources, including helpful videos, visit safeu.utah.edu

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). I will listen and believe you if someone is threatening you

Student Names and Personal Pronouns Statement

Canvas allows students to change the name that is displayed and allows them to add their pronouns to their Canvas name. This is possible on Zoom as well through the "Rename" tool. I will honor you by referring to you with the name and pronoun that feels best for you. Please advise me of any name or pronoun changes (and update CIS, Canvas and Zoom) so that I can help create a learning environment in which you, your name, and your pronoun will be respected. If you need assistance getting your preferred name on your uID card, please visit the [LGBT Resource Center](#).

Office of the Dean of Students

The [Office of the Dean of Students](#) is dedicated to being a resource to students through support, advocacy, involvement, and accountability. It serves as a support for students facing challenges to their success as students, and assists with the interpretation of University policy and regulations. Please consider reaching out to the Office of Dean of Students for any questions, issues and concerns. 200 South Central Campus Dr., Suite 270. Monday-Friday 8 am-5 pm.

University Counseling Center

The [University Counseling Center](#) (UCC) provides developmental, preventive, and therapeutic services and programs that promote the intellectual, emotional, cultural, and social development of University of Utah students. They advocate a philosophy of acceptance, compassion, and support for those they serve, as well as for each other. They aspire to respect cultural, individual and role differences as they continually work toward creating a safe and affirming climate for individuals of all ages, cultures, ethnicities, genders, gender identities, languages, mental and physical abilities, national origins, races, religions, sexual orientations, sizes and socioeconomic statuses.

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](#); 801-581-7776.

Learners of 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](#); the [Writing Program](#); and the [English Language Institute](#). Please let me know if there is any additional support you would like to discuss for this class.

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. Please visit their website for more information about what support they offer, a list of ongoing events and links to outside resources. Please also let me know if you need any additional support in this class for any reason.

Undocumented Student Support

Immigration is a complex phenomenon with broad impact— those who are directly affected by it, as well as those who are indirectly affected by their relationships with family members, friends, and loved ones. If your immigration status presents obstacles to engaging in specific activities or fulfilling specific course criteria, confidential arrangements may be requested from the Dream Center. Arrangements with the Dream Center will not jeopardize your student status, your financial aid, or any other part of your residence. The Dream Center offers a wide range of resources to support undocumented students (with and without DACA) as well as students from mixed-status families. To learn more, please contact the Dream Center at 801.213.3697 or visit <https://dream.utah.edu/>.

Too Many Resources! Where to start?

Reach out to the Student Success Advocates for assistance navigating resources and mentoring! Watch this [short video](#) on how Student Success Advocates can help you! The mission of Student Success Advocates (<https://ssa.utah.edu/>) is to support students in making the most of their University of Utah experience. They can assist with mentoring, resources, etc. In addition, any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact a Student Success Advocate for support.

Suggestions and other arrangements

Your suggestions are always 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.