

# WE WANT TO HEAR FROM YOU

This course is taught by a team of more than 30 people. That means there are lots of people you can turn to for help. To help us help you, please direct your questions as follows:

1. Please direct all non-private inquiries to the discussion boards on Quercus.
2. Private questions must be sent to [ast201@astro.utoronto.ca](mailto:ast201@astro.utoronto.ca). Inquiries sent to other addresses, including the individual addresses or Quercus mailboxes of instructors and TAs, **will not receive replies**.
3. Inquiries must be sent from a [utoronto.ca](http://utoronto.ca) email address. Inquiries sent from other addresses will not receive replies.
4. Detailed questions requiring a lot of discussion are best dealt with during office hours.

## **Example public questions: Post on the discussion boards**

I need a little more explanation about topic X. Can you help?  
Where do I write the midterm?  
Will topic X be on the exam? Can you explain topic X?  
What was covered during the class I missed?

## **Example private questions: E-mail to [ast201@astro.utoronto.ca](mailto:ast201@astro.utoronto.ca)**

My posted midterm grade is wrong--can you fix it?  
I am registered with Accessibility Services and wanted to notify you of the accommodations I require...

## **Example questions for office hours:**

Can you help me understand why I did poorly on the midterm?  
How should I study for the final exam?  
I'm confused about the following list of topics: \_\_\_\_\_

# **Astronomy 201 -- Stars and Galaxies -- Winter 2020**

Prof. Renée Hložek & Prof. Jeremy Webb

Classes: Tu. & Th., 2-3 pm, Con. Hall

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## **Course Description and Prerequisites**

AST 201 is one of two general-interest courses in astronomy taught at the University of Toronto. This course deals with the universe beyond our solar system, including the lives and deaths of stars, black holes, galaxies, the Big Bang, dark matter, and dark energy. The complementary course, AST 101, deals with our solar system, newly-discovered planets in other solar systems, and the search for life in the cosmos.

The course is largely *non-mathematical*, but there will be some math shown in the classes. If you're uncomfortable with math, you should read the Study Guide (posted on Quercus) to get a clear idea of what will be expected of you. This course is designed for students with no science or engineering background.

Please make sure that you are eligible to take this course for credit. Check the most current list of exclusions in the course calendar. If you are unsure whether you can take this course for credit, please consult Andrew Apong ([admin@astro.utoronto.ca](mailto:admin@astro.utoronto.ca)) in the main astronomy office.

## Course Learning Goals

Our hope is that you will see AST 201 as an opportunity to indulge your curiosity about the universe you live in. You should **enjoy** taking this course. We will cover some essential topics, but we will make every effort to leave time for questions, which are strongly encouraged! Our overall goals in this course are:

- to discover our place in the universe
- discover **what** the universe is like and **why** it is like that
- to develop our capacity to ask and answer important questions about science
- to learn how to think critically about concepts in astronomy, physics, and space science

## E-mail

Please post all science questions, general inquiries, and any other material for which privacy is not a concern to the discussion boards on Quercus. For efficiency, these types of questions **will not be answered by e-mail**. For matters where privacy is a concern, please e-mail:

**[ast201@astro.utoronto.ca](mailto:ast201@astro.utoronto.ca)**

Note: We can only reply to emails sent from email addresses ending in utoronto.ca.

## Course Materials

All of the following may be obtained through the University Bookstore.

- **Required Text: The Cosmic Perspective**, 9<sup>th</sup> ed., by Bennett et al. (7<sup>th</sup> or 8<sup>th</sup> edition is also acceptable)
  - We **do not** recommend the 6th edition or earlier, nor any of the “Essentials” versions of the textbook. If you choose to use one of these editions, you will have to be careful to make sure you are reading the right material.
- An i>clicker+ (see Clicker Quizzes section below for details)
- An access code for Mastering Astronomy. It comes with new copies of the book or, if you bought a used book, you can buy the code separately from cashiers in the UofT Bookstore in Koffler Centre.

## Tutorials and Planetarium Shows

This course has mandatory weekly tutorials. Consult the “Term Schedule” on Quercus to ensure that you go to the correct room each week. Tutorials start in the fourth week of classes.

## Grading Scheme

Clicker quizzes in classes	<b>8%</b>
Clicker quizzes in tutorials	<b>8%</b>
Mastering Astronomy assignments (approx. 11 of these)	<b>5%</b>
Term Project Plan	<b>3%</b>
Term Project	<b>9%</b>
Midterm test	<b>22% or 32%</b>
Final exam	<b>45% or 35%</b>

If your midterm grade is higher than your grade on the final exam, your midterm will count for 32% of your final grade and the exam for 35%. Otherwise, the midterm will count for 22% and the final for 45%.

We will automatically disregard the following:

- Up to TWO missed assignment marks
- Up to TWO missed tutorial quizzes
- Up to FOUR missed class clicker quizzes

## Quercus/Canvas

All students are responsible for **daily monitoring** of the course Quercus page at:

[q.utoronto.ca](http://q.utoronto.ca)

All important announcements will be posted on Quercus. It is your responsibility to check for them. Class notes and grades will also be posted on Quercus. If you can't access the Quercus page for this course, please refer to these troubleshooting instructions:

<https://q.utoronto.ca/courses/46670/pages/student-quercus-guide>

## Clicker Quizzes

Clicker quizzes will be administered several times in each class and tutorial. These are open-book exercises designed to help you test your understanding as you learn and improve your retention. They help keep you engaged in class and help you identify your areas of weakness so that you can focus your studying later. Clicker quizzes are not tests: you are encouraged to discuss each quiz with your classmates and refer to your notes. To

make them less intimidating, you can earn two marks per quiz: one mark for clicking ANY answer plus one mark if your answer is correct.

To earn marks, you must register your clicker. Click the “i>clicker registration” link in the sidebar on this course’s Quercus page to get started.

Please also note that, you will need to be careful to change your i>clicker frequency code for each class and tutorial. The instructions on how to change the frequency code are printed on the back of your clicker. All of our classes in Con Hall will use frequency code ‘AA’, but the code used in your tutorial will be different. Failure to change your frequency code to the right one will result in the irretrievable loss of all marks for that session. **IF YOU ARE SEEING A RED LIGHT ON YOUR CLICKER WHEN YOU CLICK IN, YOUR MARKS ARE NOT BEING RECORDED.** Try changing your frequency to the one mentioned by your TA and, if that doesn’t work, bring the problem to the attention of your instructor or TA *immediately*.

**CLICKING IN ON ANY CLICKER BUT YOUR OWN, EVEN ONCE, OR ASKING SOMEONE TO CLICK IN ON YOUR CLICKER, EVEN ONCE, CONSTITUTES A SERIOUS ACADEMIC OFFENCE. THE PENALTY FOR THIS OFFENCE MAY INCLUDE THE LOSS OF ALL CLICKER MARKS IN BOTH CLASS AND TUTORIAL FOR THE ENTIRE TERM.**

## Illnesses, Absences, and Missed Work

What did you miss?

1. **Some clicker quizzes:** See the grading scheme--we already disregard up to four missed classes and two missed tutorials. We will only make further allowances for missed clicker quizzes if you missed quizzes in more than four lectures or more than two tutorials and you have appropriate documentation for every missed lecture or tutorial.
2. **The midterm:** If you missed the midterm because of a documented illness or religious observance and you are able to write the make-up midterm on the date shown in the term schedule, then you don’t need to let us know. Simply bring your documentation with you to the make-up midterm and submit it to the invigilating TA. If you missed the midterm for any other reason (e.g. you overslept, you forgot), then you must contact us within 48 hours of the missed midterm, or you will receive a grade of 0 for the midterm.
3. **The make-up midterm:** If you are unable to write the make-up midterm, you **MUST** let us know within 48 hours of your return to campus. Submit appropriate documentation covering your absences from BOTH the original and the make-up midterm.
4. **The final exam:** Speak to your college registrar as soon as possible to arrange to write a deferred exam. You **DO NOT** need to notify us.

5. **Up to two assignments:** Do nothing. Two missed assignments mark will be disregarded automatically at the end of the semester. Please note that if you miss a third assignment you will be required to submit documentation for all three.
6. **Three or more assignments:** Submit documentation covering your absence from all missed assignments.

You DO NOT need to notify us or submit documentation for this policy to apply. It happens automatically **at the end of the semester**.

**Please note that you if you miss more than the allotted number of clicker quizzes or assignments, you must provide us with documentation for ALL of the missed work. You must prove to us that you have missed additional work besides the allowed two tutorials, four lectures, or two assignments for valid reasons (medical, etc.).**

If you feel ill prior to the midterm and you think your illness will impair your test performance, **do not write the midterm**. Under **no circumstances** will students be allowed to re-write midterms. You will be able to write the make-up midterm if you provide us with documentation provide that you missed the regular midterm test for a valid reason (doctor's note, letter from your registrar, etc.). Absences for religious observances are permitted, but three weeks' advance notice is usually required.

## Assignments

In this course, assignments will be completed online using the Mastering Astronomy web site. Full instructions on how to purchase an access code and register for the system can be found on the Quercus site for this course, in the 'Mastering Astronomy Assignments' section. **For this course, we use a special version of Mastering Astronomy available to you only through the UofT Bookstore at a discounted price.**

New assignments will be posted on Mondays, and will be due the following Monday at 9:00 a.m. Eastern Time. **It is your responsibility to monitor the Mastering Astronomy web site and ensure that you complete all of the assignments by their posted due dates. Due dates for all assignments are noted on the Term Schedule. Mastering Astronomy assignments that are submitted after the due date will receive a grade of 0.**

Although you are free to discuss the assignments with each other in general terms, any evidence of copying or other forms of academic dishonesty will be treated very seriously. If we find that you have cheated on even one assignment, the penalty might include losing all of the assignment marks for the entire semester.

## Term Project & TurnItIn

For the Term Project, you will be required to submit your poster, podcast, or video transcript through TurnItIn to help avoid plagiarism. You may opt out of using TurnItIn, but you must let us know within the first two weeks of the course, i.e., by **Friday, January 17th**. For more

information on Term Project submission, please see the Term Project Instructions on Quercus.

**Normally, students will be required to submit their course essays to Turnitin.com for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the Turnitin.com reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of the Turnitin.com service are described on the Turnitin.com web site.**

## Examinable Material

The examinable materials for this course will consist of the materials covered in lectures. The assigned readings are to improve your understanding, but are not examinable. The final exam will be cumulative, with a slight emphasis on material covered in the second half of the course.

## Grade Checks and Disputes

You are encouraged to review your graded materials to ensure that they have been graded accurately and the marks correctly transferred to Quercus. Once the final exam has been written, we will consider all of your grades for all components of this course to be final.

## Observing Nights

Over the course of the term, we will hold several **optional** observing sessions which will afford students the opportunity to view highlights of the night sky through a telescope. These will necessarily be scheduled as the weather permits. Announcements about these sessions will be made in class, on Quercus, and by e-mail. No marks are awarded for participating in these activities—they're just for fun. You may attend more than one session, space permitting, and may bring one or two friends to each one.

Because these sessions will usually take place after dark on the downtown campus, all students are strongly encouraged to take appropriate safety precautions when traveling to and from the sessions. Dress warmly, as it can be cold and windy 15 floors up!

**Observing sessions will sometimes be canceled due to inclement weather or cloud cover.** If an observing night has to be canceled, a note announcing the cancellation will be posted on Quercus by 3 PM on the day of the observing night.

## Academic Integrity

From **Appendix D** of the **Academic Integrity Handbook**

Academic integrity is one of the cornerstones of the University of Toronto. It is critically important both to maintain our community which honours the values of honesty, trust,

respect, fairness, and responsibility and to protect you, the students within this community, and the value of the degree towards which you are all working so diligently. According to Section B of the University of Toronto's **Code of Behaviour on Academic Matters**

(<https://www.artsci.utoronto.ca/current/academic-advising-and-support/student-academic-integrity>) which all students are expected to read and by which they are expected to abide, it is an offence for students to:

- Use someone else's ideas or words in their own work without acknowledging **explicitly** with a citation that those ideas/words are not their own with a citation and quotation marks, i.e. to commit plagiarism. In particular, to copy answers to short answer assignment problems from any website, the textbook, another student, or any other source, even if reworded.
- **Click in on any i>clicker other than their own**
- **Ask another student to click in on an i>clicker other than his or her own**
- Include false, misleading, or concocted citations in their work.
- Obtain unauthorized assistance on any assignment
- Provide unauthorized assistance to another student. This includes showing another student your own work or clicking in on their i>clicker.
- Submit their own work for credit in more than one course without the permission of the instructor.

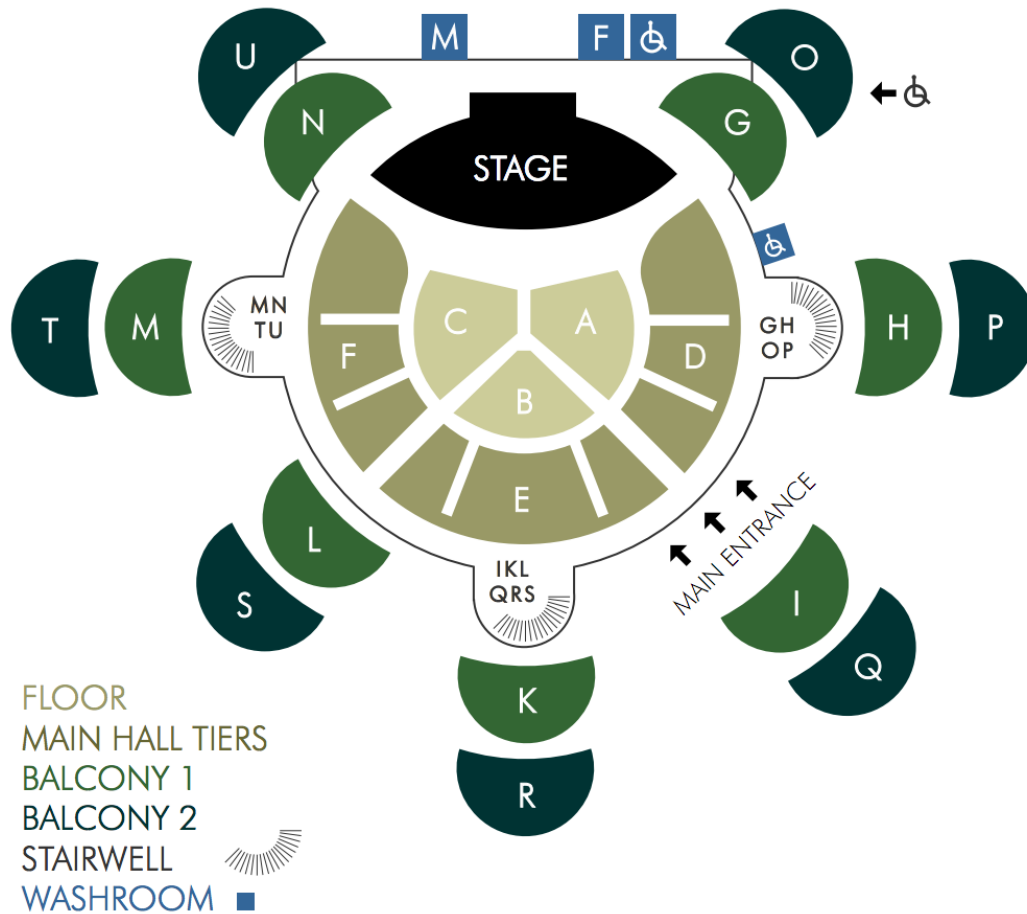
There are other offences covered under the Code, but these are the most common. You are instructed to respect these rules and the values which they protect.

## Con Hall Quiet Areas

Many students suffer from sensory hypersensitivities. For these students, concentrating in a large room like Con Hall is very difficult. Some of them avoid class because of the stress of trying to concentrate amid distractions. To help these and all students achieve their maximum potential, we require all students to respect the following seating rules.

Sections	Rules for these sections
<b>A</b>	Totally distraction-free--no talking, typing, eating, use of electronic devices, chewing gum, or wearing of scents. Strive to be still and calm.
<b>B-F</b>	Silent areas--no talking except during clicker quizzes; respectful use of electronic devices
<b>G-M</b>	Quiet areas--brief, necessary conversations only; respectful use of electronic devices





## Accessibility

The University of Toronto offers a wide variety of services to ensure that all students have equal access to education. Most of these services are coordinated through Accessibility Services. See:

<http://www.studentlife.utoronto.ca/as>

If you have (or develop) any kind of physical, mental, or emotional condition that might interfere with your schoolwork, we strongly encourage you to register with Accessibility Services as early as possible. Examples of such conditions include learning disabilities, concussions, chronic health issues, mobility issues, low vision, anxiety, and depression. Accessibility Services will assess your needs and work on your behalf to arrange accommodations with your professors so that you can achieve at your optimum potential.

***If you have a mobility issue that prevents you from going up or down stairs, please let us know as early in the semester as possible. The planetarium, the observatory, Prof. Geansler, and Dr. MacDonald's offices are all accessible by stairs only. (Prof. Netterfield's office is in an accessible building.) We will happily arrange assistance or alternatives for those who might have difficulty accessing these locations.***

# VERY IMPORTANT TO-DO ITEMS

1. Bring your i>clicker with you to every class starting in the second class.
2. Log into the course on Quercus. If you can't access the course and you have registered recently, please wait up to 48 hours for your registration to take effect. Your professors cannot speed this process along.
3. Register your i>clicker on this course's Quercus page. Everyone must complete this step, even if you've registered your clicker before.
4. Sign up for a tutorial section on ROSI if you have not already done so.
5. Make sure your e-mail address on ROSI is an @utoronto.ca address or you may miss crucial e-mails.
6. Sign up for Mastering Astronomy following the instructions on the 'Assignment' page of the course Quercus site.
7. Complete the assignments "Introduction to Mastering Astronomy" (not for marks) and "Assignment 1" (for marks) on Mastering Astronomy.
8. Read the university's policies on academic honesty and integrity:  
<https://www.artsci.utoronto.ca/current/academic-advising-and-support/student-academic-integrity>
9. Read the university's Code of Student Conduct:  
<http://www.governingcouncil.utoronto.ca/policies/studentc.htm>