

Astronomy 101, Fall 2014

STARS AND GALAXIES

Dr. Reid & Dr. Netterfield
Classes: Tu. & Th., 2-3 pm, Con. Hall
ast101@astro.utoronto.ca

Course Description and Prerequisites

AST 101 is one of two general-interest courses in astronomy taught at the University of Toronto. This course deals with the nearby universe, mainly our solar system and recently discovered exoplanets. The complementary course, AST 201, deals with the more distant universe, including stars other than the Sun, galaxies, and cosmology.

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 Portal) to get a clear idea of what will be expected of you.

This course is intended for students with no science or engineering background. AST 101 cannot be taken for credit by those who are taking or have previously taken AST 221H, Civil 101H, or any 100-level or higher-series Chemistry or Physics courses (with the exception of PHY 100H and CHM 200Y). If you are unsure whether you can take AST 101 for credit, consult Lillian Lanca (lanca@astro.utoronto.ca) in the main astronomy office.

Course Learning Goals

Our hope is that you will see AST 101 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 Portal. For efficiency, these types of questions **will not be answered by e-mail**. For matters where privacy is a concern, please e-mail:

ast101@astro.utoronto.ca

Please do not e-mail your instructors or your TAs at their individual accounts!

Course Materials

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

- **Required Text: The Cosmic Perspective**, 7th ed., by Bennett et al. (6th edition is also acceptable)
- An iClicker+ or a license for iClicker GO (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 and Reading List” on Portal to ensure that you go to the correct room each week. Tutorials start in the second week of classes.

Grading Scheme

Clicker quizzes in classes	6%
Clicker quizzes in tutorials	6%
Mastering Astronomy assignments (approx. 11 of these)	5%
Observing Project	8%
Midterm test	25% or 35%
Final exam	50% or 40%

If your midterm grade is higher than your grade on the final exam, your midterm will count for 35% of your final grade and the exam for 40%. Otherwise, the midterm will count for 25% and the final for 50%. We will **automatically** drop the following:

- Your lowest **TWO** assignment marks
- Your lowest **TWO** tutorial marks (i.e. all **tutorials** will be weighted equally and the two with the lowest percentage grades will be dropped)
- Your lowest **FOUR** class clicker marks (i.e. all **classes** will be weighted equally and the four with the lowest percentage grades will be dropped)

Portal/Blackboard

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

portal.utoronto.ca

All important announcements will be posted on Portal. It is your responsibility to check for them. Class notes and grades will also be posted on Portal. If you can't access the Portal page for this course, please refer to these troubleshooting instructions: <http://www.portalinfo.utoronto.ca/content/information-students>

Clicker Quizzes

Clicker quizzes will be administered several times each class and tutorial. These are open-book exercises designed to help you test your understanding as you learn and improve your retention. 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 for clicking ANY answer and one more if your answer is correct.

To earn marks, you must register your clicker. Click the “Register Your Clicker” link in the sidebar on this course’s Portal page to get started.

We **strongly recommend** that you purchase an iClicker. iClicker exercises help you concentrate in class and will improve your retention, helping you study more efficiently later. Licenses for the iClicker GO app can be obtained for as little as \$10.00. If you are unable to afford an iClicker, you may opt out of the assignments without penalty by notifying us at the course e-mail address before midnight on September 22, 2014. If you opt out of iClicker use, the portion of your grade which would normally come from clicker quizzes will be split equally between the midterm and the final exam. You may not opt back into clicker use after opting out.

Please note that you have two options for purchasing an iClicker:

1. Purchase a hardware iClicker+ (either new or used) from the UofT Bookstore.
2. Purchase a one-semester license to use the iClicker GO app on your smartphone, tablet, or laptop.

The hardware iClicker+ units (option 1) are known to work well in Convocation Hall. We are trying iClicker GO for the first time this year, in an effort to save you money. **If you want to use iClicker GO, we STRONGLY RECOMMEND that you use the free trial version for at least one class to ensure that your device is able to access the service reliably using whatever mobile internet connection you choose.** Marks earned with the trial version of iClicker GO will be kept if you choose to upgrade to the full version. If you find that you are unable to access an internet connection reliably in Convocation Hall, we recommend you purchase an iClicker+ device, which should ‘just work’. We will not make special accommodations if you miss clicker quizzes due to problems with your own mobile device, such as a depleted battery or difficulty accessing the campus wireless network. The only accommodation we make is the default number of allowed dropped clicker quizzes (see “Grading Scheme” above).

When registering for an iClicker GO account, you will be asked for your school’s postal code. Use M5S1A1

Please also note that, if you use a hardware iClicker+, you will need to be careful to change your clicker frequency during tutorials, or you will not earn marks. Your tutorial TA can tell you how to do this. **IF YOU ARE SEEING A RED LIGHT ON YOUR CLICKER WHEN YOU CLICK IN, YOUR MARKS ARE NOT BEING RECORDED.** Try clicking in again. 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 OFFENSE. THE PENALTY FOR THIS OFFENSE MAY INCLUDE THE LOSS OF ALL CLICKER MARKS IN BOTH CLASS AND TUTORIAL FOR THE ENTIRE TERM.

Illnesses, Absences, and Medical Notes

In a class this size, we prefer not to handle lots of medical notes. Instead, we drop the equivalent of two weeks worth of clicker quizzes and assignments for *every student*. No notes are required. For longer absences, please submit appropriate documentation to one of the professors after class or during office hours. Any documentation you submit will be counted against the default allowed absences first. For example, if you submit documentation covering three missed tutorials, we will drop your two default missed tutorials plus ONE additional extra, for a total of three dropped tutorials (not five).

If you are absent from a midterm, you MUST notify us ast101@astro.utoronto.ca as soon as possible, preferably on the day of your absence. If you do so promptly, you may be allowed to write a make-up test. Otherwise, your final exam will count for both the midterm and final exam portions of your grade. If you feel ill prior to a test and you think your illness will impair your test performance, DO NOT WRITE THE TEST. **Under NO CIRCUMSTANCES will students be allowed to re-write tests.** 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 Portal site for this course, on the 'Assignments' page. **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 Wednesdays and will be due the following Tuesday at 5:00 p.m. ***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.***

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.

We ***strongly recommend*** that you obtain a Mastering Astronomy access code and complete the assignments. Mastering Astronomy provides an excellent means to prepare for the midterms and exam which form the main means of evaluation in this course. However, you may opt out of the assignments without penalty by notifying us at the course e-mail address before midnight on September 22, 2014. If you opt out of the assignments, the portion of your grade which would normally come from assignments will be split equally between the midterm and the final exam. You may not opt back into assignments after opting out.

Examinable Material

The examinable materials for this course will consist of the materials covered in classes and tutorials, assignments, and the assigned readings. Portions of the text not covered in class are not examinable.

Grade Checks and Disputes

You are encouraged to review your graded materials to ensure that they have been graded accurately and the marks added correctly. Near the end of the term, we will have Mark Dispute Session during which you will have the opportunity to meet with the grading TAs and discuss your marks.

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 Portal, and by e-mail. No marks are awarded for participating in these activities—they're just for fun, and sometimes to get help with your Observing Projects. 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—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 Portal 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* (<http://www.artsci.utoronto.ca/osai/students>) 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 re-worded.
- **Click in on any clicker other than their own**
- **Ask another student to click in on a 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 students. This includes showing another student your own work or clicking in on their iClicker.
- 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.

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.accessibility.utoronto.ca/>

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, and Dr. Reid's office are all accessible by stairs only. We will happily arrange assistance or alternatives for those who might have difficulty accessing these locations.

VERY IMPORTANT TO-DO ITEMS

1. Bring your iClicker (or mobile device with iClicker GO installed) with you to every class starting on the second class.
2. Log into the course on Portal. 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 iClicker+ or iClicker GO subscription on this course's portal 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 a @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 Portal 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:

<http://www.artsci.utoronto.ca/osai/students>

as well as the university's Code of Student Conduct

<http://www.governingcouncil.utoronto.ca/policies/studentc.htm>