

The Basics

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| Instructor: | Professor J.D. Smith |
| Class TA: | Brad Rush bradley.rush@utoledo.edu Office: RO 29 |
| Class Meeting Time: | MW 4:00pm 5:15pm, MH 1005 |
| Textbooks: | <i>The Essential Cosmic Perspective, 4 Edition</i> (Bennett et al.) <i>Lecture Tutorials for Introductory Astronomy, 2nd Edition</i> (Prather et al.) |
| Course Website: | http://tir.astro.utoledo.edu/jdsmith/class/a1010_f08 (link is also available through your MyUT page) |
| Textbook Website: | http://www.masteringastronomy.com (Choose our textbook) |
| Office: | RO 3000 (Ritter Observatory, 3000: 3rd floor & through the doors) |
| Office Hours: | T 2:30 4pm; W 10am 12pm (or other times by appointment) |
| Email: | jd.smith@utoledo.edu (please put "1010" in the subject line) |
| Phone/Voice Mail: | 419-530-8528 |
| Dept. FAX: | 419-530-5167 or 419-530-2723 |

The Background

Astronomy is a broad subject: in principle it includes *everything* outside the boundaries of our meager planet. This course covers fundamental concepts in classical and modern astronomy. We will grapple with some of the oldest questions humans have asked since they began looking up at the sky – what controls the rhythm of day and night, the changing of the seasons, the phases of the moon, and the motion of planets? We will explore the fantastic menagerie of objects which inhabit our universe, including planets, stars (our sun among them), nebulae, galaxies, and black holes. And we will develop perspective on our place in the vastness of space, and the many questions about the universe yet to be answered.

The Learning Objectives

1. Students will be able to describe the physical processes which govern the appearance of the sky.
2. Students will be able to differentiate between different types of objects in the universe – their properties, formation, and evolution – and to demonstrate that knowledge by placing them in context.
3. Students will be able to describe the scientific methods and physical principles by which we study the universe.

The Structure

In-class time will consist of lectures and workbook-based learning exercises. You'll receive homework – some online at masteringastronomy.com, and some from your workbook. You'll

also have the opportunity to visit University of Toledo's very own Ritter Planetarium for two shows: one during class, and one on your own. In addition, you'll have an evening observing session with the telescopes at Brooks Observatory on campus.

The Way to Succeed

This course is a general survey of astronomy. There are no prerequisites. No background in astronomy is assumed. No college-level math is required, but high school level familiarity with graphs and simple equations indicating relationships between quantities is assumed, and will be used and discussed.

To succeed in this course you should:

1. **Come to class.** Not all material covered in class will be in the textbook. Our in-class exercises will also be an important component of the course, and some materials for the exams will be drawn almost *directly* from them.
2. **Keep up with the chapter readings outlined in the syllabus.** This will give you an idea of what will be talked about during the lecture.
3. **Ask questions.** Ask at any time during the lecture, after class, during office hours, or particularly encouraged email me. Never assume you are the only person who doesn't understand something. A question left unasked is no question at all.
4. **Use the text website.** It's full of interactive study aids, demonstrations, and more, and is an excellent (and easy to use) tool for reviewing what you learned in class and in your reading.
5. **Regard the notes as an outline only.** It's not a good idea to simply take down everything I put up on the projector. Also, don't confuse reading the notes with studying.
6. **Form study groups.** Three of four heads are better than one.

The Requirements

- **Considerate Behavior:** Please **turn off cell phones/ipods/etc**, and refrain from using them in any way throughout the class. Show consideration for the other students and your professor by not talking, chewing, singing, rustling newspapers, tapping gadgets, whistling, humming, or yawning loudly enough to distract anyone. When in doubt, use the golden rule.
- **Bringing your copy of *Lecture-Tutorials* to class.** We'll be using them for in-class exercises.
- **An account on MasteringAstronomy.com.** It comes free with a new copy of your textbook. If you have a used text, an account can be purchased at the web-

site. Register and sign up for my class using the course ID:
UTASTR1010SMITHFALL08.

- **Use of electronic mail and the web.** There will be limited paper handouts but mostly 'handouts' and announcements on the web page – check regularly!
- **Academic integrity.** Maintain academic integrity and honesty. Don't take credit for work which is not your own. Among other things, this refers to cheating on exams, copying (plagiarizing) material without stating where it came from, or not participating in group work, but taking credit for it. An academic dishonesty policy for the university can be found at:
http://www.utoledo.edu/catalog/2000catalog/admissions/academic_dishonesty.html.

The Details

- **Withdrawing from class:** Until Monday, September 8, a student may drop a class with no record on his or her transcript. A student may withdraw with a 'W' grade from Sept. 9 through Oct. 31. Note that the 'IW' (Instructor Withdrawal) grade – in use for many years – no longer exists. If you are enrolled in this class after Oct. 31, you will receive a letter grade. I would appreciate it if you would let me know (e-mail or a phone call is fine) if you withdraw from the class. Unlike in previous years, students not current on their tuition will not be dropped automatically.
- **Missed class policy:** The University's Missed Class Policy can be found at http://www.utoledo.edu/facsenate/missed_class_policy.html. It states that excused absences are permitted for circumstances such as personal emergencies (illness), religious observances, participation in University-sponsored activities (athletics or artistic performances), or government-required activities (military service or jury duty). Students should note that any missed work must be made up, and that written documentation of the circumstance (such as a doctor's note or a note from the Student Medical Center) must be provided. It is the student's responsibility to inform me (by email, phone or in writing) of an absence for which an excuse will be provided.
- **Other 1010 sections:** The different sections of ASTR 1010 are similar but not the same. Each will cover different subsets of material. The notes for another section will not serve as a substitute for those from this class.
- **Come prepared for exams:** Bring a #2 pencil. If you have a conflict with an exam date, tell me about it well in advance, so we can arrange something else. If there is a medical problem, notify me by phone or email as soon as possible. You are responsible for, and will be tested on, any material covered in class, in the assigned reading, or in the exercises.

Planetarium and Observing, Dates and Time:

You'll have the opportunity to attend two planetarium shows, one during class, and one on your own time. You'll also get to attend an evening observing session at the Brooks Observatory atop McMaster Hall (where you're sitting now!).

Open Planetarium Shows: Friday evenings 8:30pm (Aug/Sep) or 7:30pm (Oct/Nov)
 Saturday afternoon at 1pm (primarily children oriented)
 see <http://utoledo.edu/as/rpbo/programs/public.html>

Evening Observing at Brooks: 9/15 9/18 at 9:00 pm
 10/27 10/30 at 8:30 pm
 11/17 11/20th at 7:30 pm

Note: After Fri. night evening planetarium shows on clear nights, there is open observing at Brooks Observatory, so you can get both out of the way at once!

Evening Observing:

You may come anytime during an hour and a quarter window starting with the stated start time. Please note that starting time changes throughout the semester. Observing will only be held on *CLEAR* nights. Please be aware that many of these nights will be cloudy! Dress warmly, you will be outside. The Brooks Observatory is located on the roof of McMaster Hall. You may take the elevator to the fifth floor, and then the stairs to the roof. Please bring your *BLUE* ticket with you. You will write a short description of your trips to the planetarium and observatory, so bring a notebook.

The Score

Your final grade will be calculated as follows:

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| Homework | 15% of grade |
| 3 mid-term exams | 15% each = 45% of grade |
| Final exam | 30% of grade |
| Short written description of your two planetarium visits and one evening observing session. | 10% of grade |

Grading Scale:

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| 98 100% A+ | 92 97% A | 90 91% A- |
| 88 89% B+ | 82 87% B | 80 81% B- |
| 78 79% C+ | 72 77% C | 70 71% C- |
| 68 69% D+ | 62 67% D | 60 61% D- |
| <60% F | | |

These numbers may be adjusted if an exam turns out to be especially hard (which I hope it won't). In that case, I'll adjust things so that the best performing students get A's. If you consistently perform at the level of 90% or above, you'll get an A. If that means 1/2 of the class gets an A, fine!

Missed question buy-back: Ever get that sinking feeling when you walk out of the exam: you just *know* you answered a particular question incorrectly? In this course, you'll have the opportunity to *buy back* up to 1/2 of your missed mid-term exam points. After the exam, if you believe you missed a question, you can write a paragraph identifying the missed question, and describing why the answer you chose was incorrect, what the correct answer actually is, and why. It may help to circle your answers on your exam sheet to take with you. You can earn rebate points for up to five questions. If your new answer and explanation are correct, you'll get full credit for the question. But you can't earn back more than 1/2 of the points missed. For example, if you scored 80/100 points, with the full rebate, your grade could be amended to 90/100.

Grade Updates: If you sign and return the sheet attached at the end of this syllabus, your up-to-date grade will be posted anonymously on the website using a 4 digit class ID code of your choice. This is a very good way to monitor your progress through the course.

Extra Credit: There may be opportunities to earn small amounts of extra credit which will be announced in class.

Grade Display

If you'd like to have your grades posted anonymously to the website throughout the semester, fill in this form and return.

Your printed name: _____

Class ID # (4 digits): _____

A class ID # can be any four digits (last 4 of cell number, a favorite person's birthday as MMDD, 200th-203rd digits of π anything you'll remember). Do not use any part of your social security number or other sensitive numbers.

I hereby give permission to Professor Smith to post course grade information throughout the semester to the class web site, anonymously coded by the last four digits of my class ID.

Signature: _____

Date: _____