

Syllabus (v1.0) for AST 2002 Section 0004
Introductory Astronomy, Fall 2009
MWF 1:30pm-2:20pm, MAP 260
University of Central Florida

The Basics:

Instructor: Dr. Yan Fernández
Office: MAP 305D
Contact Info: Internet: yan@physics.ucf.edu
Email is by far the easiest way to get a hold of me.
Telephone: 407-823-6939
AIM/iChat: yfast2002
In person: office hours W 6-7:15pm, R 5-6:15 pm, or by appointment

Course WWW sites: <http://masteringastronomy.com>
The code you need to register is MA93692.
<http://www.physics.ucf.edu/~yfernandez/ast2002>
My web site, with much useful info.
<http://my.ucf.edu>
Not a course website, but grades are posted here.

FAQ list: <http://www.physics.ucf.edu/~yfernandez/ast2002/faq.html>

TAs: Pejman Jouzdani Zoe Landsman

<i>Email:</i>	TBD	ast2002.help@gmail.com
<i>Office hours:</i>	TBD	By appointment
<i>AIM/iChat:</i>	TBD	ast2002help
<i>AIM hours:</i>	TBD	M 3-5, W 12-1, F 7-9
<i>For what:</i>	Course Content	MasteringAstronomy & Content

Course Information:

Course description: The official one is “Descriptive survey of solar system, galaxies and universe; physical properties of stars, H-R diagram, stellar evolution, black holes, neutron stars.” This course could also be called physics of the universe.

Credit hours: 3, with 2 $\frac{1}{2}$ contact hours.

Course goals and objectives:

Goals: (1) Learn basic concepts, theories, terms, and facts of Astronomy. (2) Develop ability to think holistically about Astronomy. (3) Develop an informed understanding of the role and relevance of Astronomy. (4) Learn to appreciate important contributions to Astronomy.

Objectives: (1) Understand the astronomical phenomena we see everyday. (2) Understand popular misconceptions and why they are wrong. (3) Understand how we know what we know about the universe. (4) Understand that Astronomy is not just a collection of facts but that it is a way to gain a deeper understanding of our existence. (5) Understand the scale of the universe and our place in it. (6) Understand basic properties of astronomical phenomena. (7) Understand the relationships between different astronomical phenomena (i.e. the “big picture”). (8) Understand the discussion of astronomy in media and popular culture.

Course philosophy: It is my responsibility to find ways to help you learn Astronomy. It is your responsibility to actively engage in your own learning. It is my hope that doing well in this course will not simply require regurgitation of material absorbed in lecture, but rather that it will require you to internalize what you learn, and achieve a fundamental appreciation and understanding of Astronomy. Your role in class should be that of a learner, not of a scribe or copyist.

Course prerequisites: Nominally there are none. However I expect that you will have had exposure to algebra in high school. There will be a very small math-oriented component in this course, but it will not generally be arithmetic. Instead, you’ll be doing more relational math to learn about patterns and relationships of physical properties.

Course materials:

These four course materials are required, but continue reading after the list for more info.

- The workbook *Lecture-Tutorials for Introductory Astronomy 2nd Edition* by E. E. Prather et al. The ISBN is 978-0-13-239226-6. You must bring this to class every time unless otherwise noted.

- An “iclicker,” i.e. a little device that will let you answer questions in class. Don’t buy the other kind of clicker, the CPS one. Bring your iclicker to class every time.

- The textbook *The Essential Cosmic Perspective 5th Edition* by J. Bennett et al. The ISBN is XXXX.

- A subscription to the MasteringAstronomy website, which is at URL <http://www.masteringastronomy.com>. Make sure you register with the correct textbook and for the correct course.

The campus bookstore has all of these items. In particular, the bookstore is selling a “bundle,” which has the textbook, the workbook, and the MA subscription together. The price is cheaper than if you bought these items new but separately. The bundle also comes with a \$10 rebate coupon for the iclicker if you buy the iclicker new. The bundle alone costs \$95. The clicker costs \$30, but is effectively only \$20 with the rebate. So the total is \$115.

Can you gather all these items separately and/or used? Yes, but there are only limited situations where you would actually save money, which are explained below. But you must recognize two things. First, buying a used version of the workbook is a bad idea; don’t do it. You need a workbook that has all its pages and hasn’t been written in already. Generally, only new workbooks satisfy this requirement. Buying a new workbook alone costs about \$30-\$35. Second, the subscription to MA has to be bought new, i.e. you can’t use another student’s subscription. This costs at minimum \$30. With that in mind, here are your options:

- Buy the bundle and buy the clicker. Everything is new and the cost is \$115.

- Buy the workbook separately and buy the MA subscription separately. Together, these cost \$60-\$65. So if you can find an iclicker and a textbook that together cost you less than \$50-\$55, then you’ll save money in the end. (E.g., if you get a used iclicker for \$15 and a used textbook for \$30, then you’d be OK.)

- Buy the workbook separately and buy the MA subscription separately – but choose the “ebook” option when you buy the MA subscription. This costs \$74 instead of \$30, so those two items together cost \$104-\$109. If you can find a used iclicker that costs less than about \$10, then you’ll save money in the end. But of course then you won’t have a paper copy of the textbook.

About the textbook – while the 5th edition is the most recent edition, most of the material is the same as in the 3rd or 4th edition. So if you can find a cheap copy of an older edition, that will mostly work OK.

If the cost of materials is a real financial hardship, then see me.

WWW: It is your responsibility to check both course websites (the MA page and my page) at least once a day for news. On MA, you will be doing online homework assignments and using interactive tutorials. On my website, you can download supplemental material, lecture info, and assignment info.

External course materials: Third parties may be selling class notes and other materials from this course without my authorization. Please be aware that such third-party materials may contain errors, which could affect your performance or grade. Use these materials at your own risk. On a related note, students can’t sell my academic material. Please see section 11.A.1.d of the Golden Rule for specifics.

Tutoring: In the near future, we hope to have a tutor offering weekly sessions at the Student Academic Resource Center (SARC) in Phillips Hall Room 113. Their website is <http://www.sarc.sdes.ucf.edu>. The instructor will let you know more about this in the future.

Teaching Assistants (TAs): Zoe Landsman is our TA for matters related to MasteringAstronomy. Akbar Whizin is our TA for content questions.

Expectations, Evaluations, Grading:

Expectations: (1) Attendance is mandatory, as we will be frequently doing assignments in-class. Studies show that students who attend class are many times more likely to get better grades than those who do not. (2) For the first few weeks of class, the tutorial workbook must be brought to class every time. I’ll let you know when you can stop bringing it. (3) The reading assignment must be done ahead of time. There will be material from the textbook that I won’t explicitly cover in class but for which you’ll still be responsible. (Although if you specifically ask about a topic, we’ll go over it.) So it behooves you to read the textbook ahead of time so that you’re prepared to go deeper into a topic while in class. In other words, a good reason to read before class is so that we can use “lecture” time for something other than just repeating material in the book. (4) Typically, a student should spend 6 to 9 hours per week of work on this course outside of the 2.5 hours per week of classtime. This includes time spent reading the textbook.

Course grade: Your course grade is determined by how many points you earn during the semester. There is a total of 500 points that are earnable. You earn points in four ways: (1) exams, (2) homework, (3) in-class assignments, and (4) extra credit. I describe each way in more detail below. The correspondence of points to numerical grade and to letter grade will be as follows. Note that grades are rounded to the nearest tenth of a point, not the nearest point.

If you earn at least this many points	your course grade is	and so your percentage is above
450.0	A	90.0
437.5	A–	87.5
412.5	B+	82.5
400.0	B	80.0
387.5	B–	77.5
362.5	C+	72.5
350.0	C	70.0
337.5	C–	67.5
312.5	D+	62.5
300.0	D	60.0
0.0	F	0.0

Exams: There will be four exams of equal weight. You can earn a maximum of 100 points from an exam. Three of the exams will be in-class exams during the course of the semester: Monday, October 5; Monday, November 2; and Wednesday, December 2. The final exam is on Monday, December 14, from 1 pm to 3:50 pm. The final exam will be cumulative and it is optional. If you are happy with your grade after the first three exams you do not need to take the final. In other words, I will drop your lowest grade among the four exams. In other other words, taking the final cannot hurt your grade, it can only improve your grade. In other other other words, skipping the final cannot hurt your grade, but if you have a grade that you'd want to improve, skipping the final would be a bad idea. Your final grade will include your best three exam scores out of the four (including any zeros), and therefore since you can earn up to 300 points on the three exams, exams are 60% of your course grade.

Note that scheduling conflicts do occur so it would be wise to check now to see if you have two final exams scheduled for the same date and time. If you don't bring this to my attention by the end of October, then there will be no recourse. Furthermore in general it is not possible to take any of the four exams early; this would violate test security and fairness protocols.

If you miss an exam, and you have an excused absence, then you are eligible to take a make-up exam. A make-up exam will be given at a specific time and place (announced in class) and will be an essay test. If you can't make the make-up exam, then there's no recourse. Why? To preserve exam security and fairness, we can only give one make-up and everyone has to take at the same time. There are too many people in the course to accommodate everyone individually. See the "Missed Work Policy" below, and the online FAQ.

Homework and In-Class Assignments: You can earn up to 200 points toward your course grade by doing homework and in-class assignments. In other words, this work counts for 40% of your course grade. We will split the points roughly evenly between homework and in-class stuff, i.e. so roughly 20% each.

There will be weekly homework assignments, and in some weeks more than one. Exam questions make heavy use of homework problems, so it's in your interest to do every homework set. Homework will usually either be done online on the MasteringAstronomy website, or by doing pages out of the Prather et al. workbook. Sometimes other sources will be used to create a homework assignment. Regarding the online homework: (1) After completing an on-line assignment, save an electronic copy that shows your answers or your score. (2) If you are working on an on-line assignment and it is close to the due time, save in-progress electronic copies of your assignment so that you can get partial credit, since the website may cut you off abruptly at the due time. It is your responsibility to make sure that you know how to use the website properly so that you can successfully complete and "turn-in" the on-line assignments. And by saving copies of your work, you can avoid potential problems. A claim of "the website ate my homework" is just like "the dog ate my homework" excuse.

We will have in-class assignments in many class periods. These assignments will often take the form of: (a) pages from the Prather et al. workbook, (b) reading checks, or (c) clicker questions. Sometimes we'll do all three in a class period. You should be happy about these assignments because generally they will be easy points and they break-up the lecture. You don't want to have to listen to me talk nonstop for 50 minutes three times a week. Exam questions make use of these assignment problems, so it's in your interest to do all this in-class work.

Assignments from the Prather et al. workbook typically take 10 minutes and assume that you've done some background reading from the textbook and have paid attention to lecture. These are group activities in which you must focus in on the assignment at hand to get it done in time, but you are encouraged to discuss questions with your groupmates so that you come to consensus answers.

Reading checks are just one or two multiple-choice questions that are very easy if you've done the assigned reading, but very difficult if you haven't. They are meant to give you incentive to keep up with the reading. You have to answer these questions with your clicker.

Clicker questions are questions that I'll ask in class during the course of lecture that must be answered with your clicker. Sometimes these will be graded, sometimes not.

About your iclicker: Go to <http://www.iclicker.com/registration> and type in your first name, last name, student ID, and your clicker's ID. The student ID that you should use is your PID, not your NID. Your PID has 7 numbers in it and starts with a 1 or a 2. You may have a PID that includes a letter at the beginning, a letter that is the first letter of your first name. If so, don't use the letter when registering. Just use the 7 digits of your PID.

Extra credit: Unless I say differently in class, there are only two opportunities for extra credit in this course. If you need accommodation (under the "Disability Access Statement" policy below), we can discuss alternatives.

One project is to visit to our campus's Robinson Observatory. This involves attending an observing session (a.k.a. Public Viewing), and is worth up to 10 points toward your course grade – i.e. 2% of your entire course grade! It's worth a lot, so you should put the effort into it. The observatory is located on Neptune Drive in the south end of campus – take Libra Drive south from the water tower. Please consult a map if you need directions. The assignment is to write an observing report on the form that is attached to this syllabus. Fill out the form while you are at the observatory, and turn it in to the appropriate place (i.e. "the box" at the observatory). Other AST 2002 students will be at Robinson doing a similar assignment, but they'll be using a slightly different form. You can use that form for this assignment, but you really ought to use the form that's attached to this syllabus. If you forgot our form, find a friend that has the form and answer the questions on the other form as if you had the right form. Also note that you can only turn in the form at the observing session, not during class or during the day. The report must have legible writing; bring a hard writing surface and a flashlight. Please be detailed (at least one paragraph per object) in your descriptions of what you saw, since you will be graded primarily on the eloquence and quantity of the descriptions. Please also be sure that you yourself observe three separate night-sky objects through a telescope with your own eyes. Binoculars do not count. Naked-eye observations do not count. In extenuating circumstances where there are mechanical breakdowns of the outdoor telescopes that prevent you from looking at three objects through these telescopes, you may be able to go upstairs in the observatory to the big telescope and use digital images obtained by the big telescope. However, since these images are so much better than what you can do with your eye, the standard by which your descriptions and drawings will be graded will be much higher. But in any case, cloudy weather is not an excuse to use the upstairs telescope.

The other extra credit assignment involves going to an Academic Success Workshop at SARC. Note that this is different from going to a tutoring session at SARC – you do not get extra credit for going to a tutoring session. A list of workshops will be on the SARC website <http://www.sarc.sdes.ucf.edu/workshops.php>. If you attend a Workshop, make sure you sign in so that I will be told that you were there. There is no extra work aside from attending the Workshop itself. This extra credit will add 5 points (i.e. 1%) to your course grade.

The maximum possible extra credit boost in this course is 15 points.

Other Policies:

Instant messaging: Occasionally I will be online for this. But you shouldn't necessarily rely on it. I'll try to be online somewhat regularly. But note that if you want to discuss something in detail it will often be easier to just schedule an appointment.

Conduct: (1) In class, do not talk out of turn. There is a lot of echo in the classroom; we can all hear you. So don't make problems. There will be many opportunities to talk during group assignments, and of course you can ask questions during lecture. (2) Please turn off cell phones and all those sort of interrupting devices when in class. (3) When asking a question by email, please identify yourself, please use standard English. The style of your email should be as if you were sending mail to your supervisor at work. Also be warned that you should look in this syllabus and on the website for the answer to your question. In fact there's a FAQ list on my website. If you don't hear a response from me, it's probably because the answer is to be found in those sources.

Missed work policy: It is the policy of the Department of Physics that making up missed work will only be permitted for University-sanctioned activities and bona fide medical or family reasons. Authentic justifying documentation must be provided in every case (and in advance for University-sanctioned activities). At the discretion of the instructor, the make-up may take any reasonable and appropriate form including (but not limited to) the following: giving a replacement exam, replacing the missed work with the same score as a later exam, allowing a 'dropped' exam, replacing the missed work with the quiz average.

Golden Rule: Please read this information at the website <http://goldenrule.sdes.ucf.edu>.

UCF Creed: Please read this information at the website <http://www.ucf.edu/catalog/current/creed.htm>.

Gordon Rule: This course does not satisfy your Gordon Rule requirements.

Disability access statement: As stated on the website <http://www.sds.ucf.edu/?id=faculty>, The University of Central Florida is committed to providing reasonable accommodations for all persons with disabilities. This syllabus is available in alternate formats upon request. Students with disabilities who need accommodations in this course must contact the professor at the beginning of the semester to discuss needed accommodations. No accommodations will be provided until the student has met with the professor to request accommodations. Students who need accommodations must be registered with Student Disability Services, Student Resource Center Room 132, phone (407) 823-2371, TTY/TDD only phone (407) 823-2116, before requesting accommodations from the professor.

Collaboration policy: On homework, you can discuss questions, but don't copy answers. On in-class work, sometimes you'll be allowed to collaborate, sometimes not. I'll let you know. But regardless, work that you turn in should not appear to be just a copy. On exams, no collaboration is allowed. If you cheat and I catch you, that's grounds for failing the whole course.

Posted Grades: Your assignment and test grades will be posted on myUCF Grades. If you feel that your grade has been recorded there incorrectly, please see me within 72 hours of the posting of the grade. After 72 hours, the grades will be assumed to be correct.

Schedule:

We have 43 class periods this semester; with three class periods devoted to exams, we have 40 class periods for actual material. There are 18 chapters in the textbook, but we won't get to all of them. The tentative schedule is below, but this can change. During the semester I'll take a poll to see what chapters would be most desirable.

Week	Dates	Topics
1	Aug 24, 26, 28	Chapter 1
2	Aug 31, Sep 2, 4	continue Chapter 1, start Chapter 2
3	Sep 9, 11	Chapter 2
4	Sep 14, 16, 18	Chapter 2
5	Sep 21, 23, 25	finish Chapter 2, start Chapter 3
6	Sep 28, 30, Oct 2	finish Chapter 3, start Chapter 4
7	Oct 5, 7, 9	exam #1, then finish Chapter 4, start Chapter 5
8	Oct 12, 14, 16	finish Chapter 5, start Chapter 7
9	Oct 19, 21, 23	finish Chapter 7, start other chapter
10	Oct 26, 28, 30	other chapters
11	Nov 2, 4, 6	exam #2, start other chapter
12	Nov 9, 13	other chapters
13	Nov 16, 18, 20	other chapters
14	Nov 23, 25	other chapters
15	Nov 30, Dec 2, 4	other chapters, exam #3
16	Dec 7	other chapters
17	Dec 14	exam #4 (a.k.a. the final) at 1 p.m.

Acknowledgement

I have read and understood the contents of the syllabus for AST 2002 Section 0004 Fall 2009. I realize that violating the rules described here can result in my receiving a failing grade for the course.

Signed:

Print Name:

PID:

Date: