



Astronomy 105

Spring 2014

Prof. Dennis Just (djust@pima.edu)

This is a 4.0 credit course.

We meet Tue/Thur from 3:00pm to 5:30pm in Bldg M1 Room 101.

The lab portion of the class will be a combination of at-home and in-class projects, as well as on-site labs at the East Campus

Observatory; details scheduling for the latter are below.

You're welcome to see me before class if you need extra help, in addition there are tutors and a study-session led by Professor Pereira, so you can ask me for details on that.

Course Description

This course will be on life in the universe, and as such is an intersection of astronomy, biology, genetics, and geology. We will learn about what we mean by life, how it evolved on Earth, and where it may arise elsewhere in the Solar System, and beyond. Fundamentals of astronomy are also covered.

Course Prerequisites

There are no course prerequisites for this course, although a basic understanding of math will be needed at some points. This includes algebra, graphs, scientific notation, ect. We will review these topics as necessary.

There is a book required for the course: "Lecture Tutorials For Introductory Astronomy" by Prather, Slater, Adams, and Brissenden (Third Edition). I will be teaching out of "Life in the Universe" by Bennett and Shostak (Third Edition), which I recommend but do not require.

Schedule (subject to change)

(Chapters are in reference to Bennett and Shostak)

Week	Dates	Topic	T# Lab
1	Feb 3 Feb 5	Ch.1, 2, Motions on the Sky	
2	Feb 10 Feb 12	Ch. 3 Phases of the Moon	
3	Feb 17 Feb 19	Ch. 4 History and Orbits	
4	Feb 24 Feb 26	Ch. 5, Spectra, Light, Matter NO CLASS, RODEO DAY, YEE-HAW	
5	Mar 3 Mar 5	Ch. 6, Spectra, Light, Matter (cont.) Telescopes	
6	Mar 10 Mar 12	Ch 7., Telescopes (cont.) MIDTERM	
n/a	Mar 17 Mar 19	NO CLASS, SPRING BREAK NO CLASS, SPRING BREAK	
7	Mar 24 Mar 26	Ch. 8	(T2 signup) (T2 signup)
8	Mar 31 Apr 2	Ch. 9	(T2 signup) (T2 signup)
9	Apr 7 Apr 9	Ch. 10	(T3 signup) (T3 signup, <i>T2 due</i>)
10	Apr 14 Apr 16	Ch. 11	(T3 signup) (T3 signup)
11	Apr 21 Apr 23	Ch. 12	(<i>T3 due</i>)

12	Apr 28 Apr 30	Ch. 13	
13	May 5 May 7	Bonus 1	<i>(Research Report due)</i>
14	May 12 May 14	Bonus 2 FINAL EXAM	

Grades

Attendance/Participation	25%
Quizzes	10%
In-class Tutorials	10%
Research Report	10%
Labs	15%
Midterm Exam	15%
Final Exam	15%

Extra Credit:

- (1) Attend a public astronomy lecture/talk and write a ~1 page (250 letter) report. Each report will contribute 5% towards the next exam, up to a max of 20%. This means they need to be handed in **before** the exam, even if its the day of, to count towards that exam.
- (2) Scratch-off Quiz winners' bonus (see below under Quizzes).

Participation/Attendance

Attendance will make up half of this portion of your grade, in other words 12.5% of your total grade. Attendance essentially means coming to class (or completing the make-up assignment, see below). Furthermore, now that we're doing a Attendance Tracking system, you need to complete the assignments outside of class to get full attendance over the 7-day week.

If you are unable to attend a class, you may still receive credit **IF**:

- (1) you give me notice before 10pm the previous day,
- (2) you complete an assignment (usually will involve a short report) within one week (7 days) of the missed class. All discretion on what the assignment will be lies with me.

You can only do this a total of **3 times**, after that you will get an

absent for any classes missed.

Participation will make up half of this portion of your grade, in other words 12.5% of your total grade. This will be determined by me based on

- (1) asking/answering questions in class
- (2) participating in the Clicker Quizzes (CQ; see below)

Quizzes

There will be multiple types of quizzes in this class.

- (1) **Review Quizzes (RQ)**. Almost every Thursday class we will have a short, 10 question quiz on **the previous week's material**. These are intended to be a *basic* review of the previous week's topic, so studying explicitly should not be necessary. There will be ~10 of these if scheduling works out, in which case **the two lowest scores will be dropped**. These best scores will make up half of the quiz grade, in other words 5% of your total grade.
- (2) **Scratch-off Quizzes (SQ)**. These will be randomly peppered into class, where you will first take a short, written multiple-choice quiz individually. Afterwards you will break up into groups, and take the same quiz as a group using scratch-off cards. Your scores on these will translate into the remaining half of your quiz grade, in other words 5% of your total grade. **Extra Credit:** Furthermore, all members of the group with the best score (i.e. the least number of scratches to get all the correct answers) at the end will receive 1pt added to their final grade. Two-way ties will give 0.5pts to each group, three-way ties 0.33pts, and so on.
- (3) **Clicker Quizzes (CQ)**. These will be roughly every day, later in the class, and will review what we've gone over already as well as test your conceptual understanding of the topic. **These won't count towards your quiz grade, but will factor into your participation grade.**

In-class Tutorials

The only required text for this course, "Lecture Tutorials For Introductory Astronomy" by Prather et al. (Third Ed.), will be drawn on extensively in class. We will do these activities, and they will be graded and contribute to 10% of your total grade.

Research Report

This will be a 5 page (double-spaced, 12pt font) report on a specific aspect of Life in the Universe. The topics will be listed in class at some point during the semester, and you will be free to choose your topic. These topics will be aspects of the course that we will not otherwise go into detail in; the goal of this report is for you to gain extra understanding on a topic in addition to what's covered in class. You'll need to cite your sources, and feel free to ask me any specific questions about the report.

Labs

There will be different types of labs, O1, O2,... and T1, T2... Each of the three types will contribute 1/3rd of the lab grade, or 5% of your total grade each.

O# Labs: These are shorter, take-home labs. There will be 5 of them, and all except the Sun Observing lab will take 1 week to complete.

T# Labs: These are longer, and will require you to come to the observatory on campus. **Scheduling will be done via doodle polls (see Schedule).**

In-class Labs: These will be done in class.

Midterm and Final Exam

There will be a midterm and a final exam, together counting for 30% of your total grade.

Active Participation* (Academic Activity) by Students:

Throughout the term, students must substantively participate in such a way as to ensure successful completion of the course by the end of the term (i.e. regularly submit assignments and continue to interact with other students and the course instructor). Students must complete at least one academic task per week/7-day period (including during the first 7 days of the course) that will serve as documented active participation. Examples include (but are not limited to):

- attending class during each scheduled face-to-face session
- participating in a class-related activity each week/7-day period such as

- attending a faculty-organized study session, working on course content in a supervised center, or meeting with the instructor face-to-face or online
- completing a class-related task such as an interactive tutorial or computer-assisted instructional activity
 - completing an assessment during each week/7-day period; the assessment might address content that should have been learned to date or might be in the form of a progress self-assessment**
 - posting academically-related communications regarding course content
 - academically-participating in a discussion
 - signing in via an 'Accutrack'-type system for the on-site component in an on-campus (and possibly self-paced) class

Initial Participation:

If the student is registered for the course, but does not actively participate* as per the above definition by the drop deadline, the faculty member will record a grade of NA for that student within three days of the drop deadline. The student's registration will be converted to a Never Attended (NA) status that will have the effect of dropping the student from the course and causing a recalculation of the student's cumulative enrolled semester credit hours. (See PCC BP 3108.)

Syllabus version: Students who do not actively participate* (see above definition) in the class by the drop deadline will be dropped from the class. This may result in adverse financial consequences such as a change in financial aid, veterans' benefits, and/or other benefits related to being a student (see PCC BP 3108). <https://www.pima.edu/about-pima/policies/board-policies/BP-3108.html>

Continued Participation:

If the student begins the course but does not actively participate* as per the above definition for 10 consecutive calendar days, the student's record will be flagged with the Registered but Not Attending (RN) status. The College will initiate contact to determine whether the student intends to return to the course. If the College is unable to confirm the student's intent to return, the student will be considered unofficially withdrawn for purposes such as Financial Aid and Veterans' Benefits and adverse consequences may result for the student. (See PCC BP 3103.) <https://www.pima.edu/about-pima/policies/board-policies/BP-3103.html>

Grades of "Incomplete" and W:

Student Withdrawal "W" Grades: We understand that unexpected events occur

that may cause you to need to drop or withdraw from some or all of your courses. Before dropping or withdrawing, it is important for you to consider how the decrease in credits will affect your financial aid or scholarships. You may owe funds back to PCC and/or the U.S. Department of Education. It is strongly recommended that you speak with a financial aid staff member prior to dropping, or withdrawing from, courses. Dropping or withdrawing may also have a negative impact on your Satisfactory Academic Progress. Please see [http:// www.pima.edu/financialaid/managingaward/dropping-withdrawing.shtml](http://www.pima.edu/financialaid/managingaward/dropping-withdrawing.shtml)

W Grades: Students who do not wish to finish the course are responsible for withdrawing themselves by the deadline date. Failure to complete the class and/or withdraw will result in a grade of “F”. Under very unusual circumstances, the instructor may give an “instructor withdrawal” as the final grade, if attendance and effort has been satisfactory.

Audit Grades: “A”. Audit status in a course will depend on availability of seats after credit-seeking students have been accommodated, and only with the permission of the instructor. All Audit requests require the signature of the instructor during the first week of classes. Once a student has signed up for audit credit, it may not be converted to credit-bearing status.

Grade Dissemination

I do not discuss grades over email or the phone, but am happy to discuss your current grade with you before or after the lecture, at my regular posted office hours or at another time by appointment. It is your responsibility to keep track of your performance, and you will be given many opportunities to assess your understanding of the concepts in class through concept quizzes, think pair share questions and group discussions.

Course Policies: Communication with your Instructor

The best way to communicate with me is in person, either during class or at office hours. The second best way to reach me is by email. I will always respond to your emails within 24hrs, during weekdays. If it's a subject that's better addressed in person (e.g. grades, see above) I will request that you make an appointment to see me or come to office hours.

Email etiquette: Please remember that we are in an academic setting: your emails should be properly addressed and signed, should not include texting abbreviations, and should be civil and professional. This is good practice for the professional world out there. Also always remember to include your name, and your course, and to edit the subject line so that it's relevant to your message.

Course Policies: Make-ups and absences

Apart from the procedures detailed above, there will be no make-ups or extra credit, no exceptions. There are no excused or unexcused absences - I don't monitor the reasons why you can or cannot come to class. I understand everyone has busy lives - you can miss 2 of the quizzes and Sunday questions and still get full credit, and you can take exam make-ups at the testing center during the week of the exam.

Course Policies: Group Work

Group work is an important life skill and a major component of this class. Group assignments will change frequently. If you are having issues with your partners, see me privately.

Course Policies: Technology and Media

Email: I will often use email to communicate with you about coursework, reminders, etc. Please check your email regularly. If access to email is a problem for you, please talk to me about it in the first week of class.

Laptop usage: If you have a laptop that you can bring to class, please do! We will be using computers occasionally in class. However, please don't bring them out unless I ask you to - laptops are proven distractions for other students in class (and for you) and prevent full class engagement. If you feel this requirement is going to affect your learning in class - please come talk to me.

Cellphone usage: No cellphone usage in class - please turn your phone off or set it to vibrate at the beginning of class. If you have an emergency, please take your call outside. Please do not use your phone to text, play games, check Facebook, etc during class. These activities distract your fellow students, and I will ask you to put your devices away or leave class if you are interfering with other students' right to succeed.

Professionalism Policy

Students are expected to respect their fellow students and the instructor at all times. Your conduct must be professional. You are also expected to know and obey the Student Code of Conduct at this college. You can find that here: <http://www.pima.edu/current-students/code-of-conduct/index.html>

Academic Integrity Policy

Academic dishonesty in any form will not be tolerated. If you are uncertain as to what constitutes academic dishonesty, please refer to the student code of conduct and consult your instructor. Violations of these rules will result in a record of the infraction being placed in your file and receiving a zero on the work in question AT A MINIMUM. At the instructor's discretion, you may also receive a failing grade for the course. Confirmation of such incidents can also result in expulsion from the College.

Student Resources

Pima has many FREE resources available for you, from TUTORING (<https://www.pima.edu/current-students/tutoring/>) to academic, career and personal COUNSELING (<https://www.pima.edu/current-students/counseling/index.html>). The library on campus has astronomy textbooks you can borrow, and there are computers in the computer commons available for all online assignments.

College Course Catalog Description

This course is on life in the universe, and as such is an intersection of astronomy, biology, genetics, and geology. We will learn about what we mean by life, how it evolved on Earth, and where it may arise elsewhere in the Solar System, and beyond. Fundamentals of astronomy are also covered.

Disabled Student Resources (DSR)

Pima Community College is committed to providing accommodations for qualified individuals with disabilities in a timely and effective manner. To request a reasonable accommodation, students must be registered with the campus Disabled Student Resources (DSR) office. Accommodations will be made based on eligibility determined by Disabled Student Resources. Services can be requested at any time during the semester. Requesting services well in advance will help to ensure that resources are available when needed. Please contact a DSR office at 206-6688 or DSRhelp@pima.edu. (5/1/12)

Family Education Rights and Privacy Act (FERPA)

Subject to certain exceptions set forth in the Federal Family Education Rights and Privacy Act (FERPA) of 1974, Pima Community College will not provide personally identifiable student information (including but not limited to grades,

billing, tuition and fees assessments, financial aid and other student records) to third parties absent the student's consent. Third parties include parents, spouses and third-party sponsors. You (the student) may grant Pima Community College permission to release certain information to a third party by submitting the FERPA Release form. Ask your instructor for a copy of the form BEFORE you arrive with a third party.

Arizona's Mandatory Reporting Law (A.R.S. 13-3620):

Pursuant to Arizona law (A.R.S. §13-3620), College personnel, including faculty, staff, and administrators, who learn in the course and scope of their employment that a minor (defined as under 18 years of age) has been the victim of physical or sexual abuse, are required to report this information immediately to law enforcement.

Arizona's Mandatory Reporting of Sexual Violence and/or Sexual Offenses (A.R.S. 13-14xx):

Pursuant to Arizona law (A.R.S. §13-14xx) and Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistic Act; 34 CFR Part 668; College personnel, including faculty, staff, and administrators, who learn in the course and scope of their employment that an individual has been a victim of sexual violence, or is informed about an alleged sexual offence shall, as soon as possible, contact the Department of Public Safety.

Acknowledgement of Receipt of Syllabus for AST 105

Please complete, sign and return the following acknowledgment to your instructor.

I (print your name) _____ have received the AST105 syllabus including course objectives, policies and requirements, and have read and understand all the enclosed materials, including course/instructor expectations and deadlines.

Your signature:
