

# **ASTR 202 - 001**

## ***Life in The Universe***

**Instructor:** **Professor Dániel Apai**  
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Office hours: Tue 10am-11am, Thu 9am-10am (via zoom)

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**Office hours:** Mon 2:00-3:00pm, Wed 11:00am-Noon  
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**Office hours zoom link:** <https://arizona.zoom.us/j/83616717729>  
Password: ASTR202

**Course Web Page:** on [d2l.arizona.edu](http://d2l.arizona.edu)

**Coarse Modality:** In person

**Class Meetings:**  
Steward Observatory Room N210  
Tuesday and Thursday: 12:30pm – 1:45pm

### **Course description:**

The main goal for students in this course is to have fun learning about the possibilities for life in the Universe and, in the process, gain an appreciation for the methods used in science. To achieve this goal, we will study such seemingly diverse topics as the origin of the Universe, heavy element production, the formation of stars and planets, the nature of planets and their atmospheres, basic chemistry, geological and atmospheric evolution, biological evolution, cultural and technological evolution, interstellar travel, and communication techniques.

### **Course objectives, learning outcomes, and topics:**

Upon completion of this course, students will understand: (1) The role and importance of science and the scientific method in everyday life and in our society; (2) The fundamentals of natural science and how these concepts and processes connect to the origin and habitability of Earth and to technology and everyday applications. (3) The timeline of the evolution of life on Earth, including evolutionary milestones and mass extinction events. (4) The nature of planets, stars, galaxies. (5) The principles behind

and the methods of the search for life in the universe. In addition, students will further develop their quantitative and critical thinking skills.

**Textbook (optional):**

Life in the Universe (4th edition), Bennett and Shostak, Addison-Wesley

*Miscellaneous:* There may be other reading material provided for the class when needed. Examinations, quizzes, activities, and homework are based on material covered in the lectures.

**Structure:** Even though this class is large, you will be an active participant. Each week we will cover a particular broad topic. Some lectures will include breaks for demonstrations, quizzes, and discussion. You will have 'individual' homework associated to lectures and activities. Graded quizzes will be also given randomly through the semester.

**PTY214:**

There is a significant overlap between ASTR202 and PTYS214 courses. You can only receive credit for either of these courses, but not to both. If you already completed PTYS214, do *not* take ASTR202.

**Grades:**

The grades are based on the combination of quizzes, homework, and two exams (mid-term and final). The following weights will be used:

Quizzes	10%
Homework	25%
Mid-term	30%
Final	35%

In addition, there will be opportunities to volunteer for extra credit assignments.

The grading is absolute, i.e., there is no competition between students.

If your final percentage falls between the following ranges, you are guaranteed at least the following grade:

A:	87.5-100%
B:	75-87.5%
C:	62.5-75%
D:	50-62.5%
E:	<50%

**Exams:**

There will be a total of two exams. One midterm exam will be given during a regularly scheduled class period (the date for the midterm exam will be announced in class). The final exam will be given on **December 15, 1pm–3pm** in Steward N210. This date and time is set by the University and *cannot be changed*. Exams will be cumulative but focused on the more recent material covered in class. They will consist of a combination of multiple choice questions and short essays.

Exams will be closed book, closed notes, unless otherwise specified.

*Mid-term:* The mid-term exam is tentatively scheduled for October 10. By this time about 40% of the quiz / homework will have been completed, so at the mid-semester mark you will know how well you are performing in the class and will have enough time to improve your expected grade, if needed.

**Makeup Exams:**

A makeup exam for the midterm will be allowed *only* for the following reasons:

- 1) University approved activity (dean's approval required);
- 2) Religious holidays (you must provide information on the holiday);
- 3) Medical emergency, for which you can provide a doctor's note;
- 4) Jury duty.

Makeup exams must be taken within 2 weeks of the exam date. No makeup exam is allowed for the final examination, whose date is determined by the University.

**Quizzes**

Quizzes will be given randomly throughout the semester. They will consist of a few multiple choice or true/false questions based on material from a recent lecture and should be very easy for students who attend class regularly and pay attention to the lectures. The *quiz with the lowest grade* will be automatically dropped from the final grade. There will be no make-up quizzes.

Quizzes are closed book, closed notes, unless otherwise specified.

**Homework**

Homework assignments will be announced in class and will be posted on the d2l website after the class. The assignments must be submitted by the due date on the d2l website. Homework are typically graded on a 10-point scale. Late homework will not be accepted. You are strongly encouraged to work together but the work that you submit **MUST** be your own.

The homework may include a peer-reviewed section; in such assignments credit will be given for your own work and for reviewing other students' work.

**Errors in Grading**

If you spot an error in grading you must call it to the attention of the TA or instructor within one week. An effort will be made to hand back material in a timely manner. Make sure to review all your handed-back material as soon as possible. Note that you can only discover an error in grading if you pick up your graded material and review it!

## Classroom Behavior – READ CAREFULLY!

**Academic Integrity:** It is strongly recommended that all students read the University of Arizona's Code of Academic Integrity. Details can be found at <http://dos.web.arizona.edu/uapolicies/>. All students in this course are expected to abide by this code, which will be strictly enforced.

The key things you need to be aware of are:

- **Cheating is not tolerated in any form.** If a student is caught cheating on an exam, the penalty will be failure in the course. You will be given “0 pt” for cheating on quizzes. In all cases a letter will be sent to the Dean of Students describing the incident. If you are aware that someone else is cheating, it is your obligation to inform the instructor.
- We allow, even encourage, collaboration on most assignments. However, **you must always write the final version of an assignment yourself**, and use your own words to describe what you have concluded. If we receive verbatim answers from more than one person we will divide the credit received among all those with identical answers. This holds for math as well as text.
- It is fine to make use of reference books or web sites. This is indeed what you must do in certain assignments. But if you do so make sure to put in quotes what is taken verbatim from a different source, otherwise make sure to rewrite things in your own words, and list the source of your information. **Plagiarism is strictly prohibited.** If you are uncertain as to what constitutes plagiarism see: <http://deanofstudents.arizona.edu/codeofacademicintegrity>.

Note that we will be using the software *Turnitin* within d2l to automatically check all assignments for plagiarism.

### Threatening Behavior:

Check <http://web.arizona.edu/~policy/threaten.shtml>

**Late Arrival – Early Departure:** Late arrivals and early departures can be very disruptive for the class. They can be accepted as an exception, but if for whatever reason a student needs to do so on a regular basis, he/she should contact the instructor ahead of time, and try to sit near the exit doors. Repeated cases of unjustified late arrival or early departure will be considered poor class participation (student will be asked to show his/her ID) and affect the overall grade in the class. Leaving early may result in missing a quiz, no make up is allowed without prior authorization by the instructor.

**Attendance:** Regular attendance is essential to doing well in this class. Although there is a book for the class, you are expected to take notes. Furthermore, there will be several in-class quizzes that will contribute to your grade.

**Doors Closed During Planetarium Operations:** Some classes may be held at the Flandrau planetarium. Because of the use of the planetarium late arrivals to the class can be very disruptive - please, always be on time. During the operation of the digital planetarium projector the doors are automatically locked. If you arrive late and the projector has been activated, you will need to wait until that session ends (usually 10 minutes) and the doors are unlocked.

**Cell Phones, Laptops, and Gadgets:** The use of cell phones is *not allowed* inside of the class and it is strongly suggested that they are **turned off** before getting to class. If you accidentally forget to turn your cell phone off, I expect that if the cell phone rings you will turn it off immediately. **Talking on the phone during class is not allowed**; it is disrespectful to the teaching team as well as to your fellow classmates. Failing to observe this rule will be considered poor class participation (student will be asked to show his/her ID to the instructor or TA) and affect the overall grade in the class. Phone usage is strictly forbidden during exams.

Taking notes on a laptop is allowed. However, those using laptops will have to sit in the front rows.

Electronic equipment can only be used for the purposes of the class. Students who play games, check Facebook, tweet, etc. generally perform poorly in the class and often also distract those sitting close to them.

*Anyone caught using electronic equipment not strictly required for the class will have to leave the classroom.*

**No Food/Drinks:** The Steward Observatory **does not allow food and drinks** other than bottled water in the classroom. Also, if you find a problem with a seat or its writing table, please let us know, so that the problem can be addressed as soon as possible.

**Students with Disabilities:**

If you anticipate barriers related to the format or requirements of this course, please meet with me so that we can discuss ways to ensure your full participation in the course. If you determine that disability-related accommodations are necessary, please register with Disability Resources (621-3268; [drc.arizona.edu](http://drc.arizona.edu)) and notify me of your eligibility for reasonable accommodations. We can then plan how best to coordinate your accommodations.

**Special Dates:**

- November 11 – Veteran’s Day, no classes
- November 25–28 – Thanksgiving, no classes
- December 8: Last day of classes
- December 15, 2021 (Wednesday) 1:00–3:00pm: Final exam in Steward N210

## Classroom attendance:

- If you feel sick, or may have been in contact with someone who is infectious, stay home. Except for seeking medical care, avoid contact with others and do not travel.
- Notify your instructor(s) if you will be missing a course meeting or an assignment deadline.
- Non-attendance for any reason does **not** guarantee an automatic extension of due date or rescheduling of examinations/assessments.
- Please communicate and coordinate any request directly with your instructor.
- If you must miss the equivalent of more than one week of class, you should contact the Dean of Students Office [DOS-deanofstudents@email.arizona.edu](mailto:DOS-deanofstudents@email.arizona.edu) to share documentation about the challenges you are facing.
  
- Voluntary, free, and convenient [COVID-19 testing](#) is available for students on Main Campus.
- If you test positive for COVID-19 and you are participating in on-campus activities, you must report your results to Campus Health. To learn more about the process for reporting a positive test, visit the [Case Notification Protocol](#).
- COVID-19 vaccine is available for all students at [Campus Health](#).
- Visit the [UArizona COVID-19](#) page for regular updates.

- **Office Hours:** via zoom

*Professor Apai*

Tue 10am-11am and Thu 9am-10am (via zoom)

*Teaching Assistant Amaro*

Mon 2pm-3pm and Thu 11am-Noon (via zoom)

**Office hours Zoom link:** <https://arizona.zoom.us/j/83616717729>

Password: ASTR202

One tap mobile

+16027530140,,83616717729# US (Phoenix)

+12532158782,,83616717729# US (Tacoma)

Dial by your location

+1 602 753 0140 US (Phoenix)

Meeting ID: 836 1671 7729

- **Academic advising:** If you have questions about your academic progress this semester, please reach out to your academic advisor (<https://advising.arizona.edu/advisors/major>). Contact the Advising Resource Center (<https://advising.arizona.edu/>) for all general advising questions and referral assistance. Call 520-626-8667 or email to [advising@.arizona.edu](mailto:advising@.arizona.edu)

● **Life challenges:** If you are experiencing unexpected barriers to your success in your courses, please note the Dean of Students Office is a central support resource for all students and may be helpful. The [Dean of Students Office](#) can be reached at (520) 621-2057 or [DOS-deanofstudents@email.arizona.edu](mailto:DOS-deanofstudents@email.arizona.edu).

● **Physical and mental-health challenges:** If you are facing physical or mental health challenges this semester, please note that Campus Health provides quality medical and mental health care. For medical appointments, call (520) 621-9202. For After Hours care, call (520) 570-7898. For the Counseling & Psych Services (CAPS) 24/7 hotline, call (520) 621-3334.

● **Equipment and software requirements:** For this class you will need daily access to the following hardware: laptop or web-enabled device; regular access to reliable internet signal; ability to download and run the following software: web browser, Adobe Acrobat.

● **Class Recordings:** Classes will be recorded

○ For lecture recordings, which are used at the discretion of the instructor, students must access content in D2L only. Students may not modify content or re-use content for any purpose other than personal educational reasons. All recordings are subject to government and university regulations. Therefore, students accessing unauthorized recordings or using them in a manner inconsistent with [UArizona values](#) and educational policies ([Code of Academic Integrity](#) and the [Student Code of Conduct](#)) are also subject to civil action.

### **iCourses, Arizona Online, Global Direct (Asynchronous Online)**

Please see resources at [The Office of Instruction and Assessment](#) and/or the [Arizona Online's Digital Learning](#). To review frequently asked questions relevant to Fall 2021 teaching, please see the [COVID-19 Instructor FAQs](#)