

## ASTR 1000 – Survey of Astronomy

## Spring 2022 Syllabus

Course webpage: [http://inpp.ohio.edu/~meisel/ASTR1000/ast1000\\_home.html](http://inpp.ohio.edu/~meisel/ASTR1000/ast1000_home.html)

Instructor: [Assoc. Prof. Zach Meisel](#) Office: 204 Edwards Accelerator Laboratory

Email: [meisel@ohio.edu](mailto:meisel@ohio.edu)

Office hours: Video calls by appointment. Email anytime.

Class location: Online

Class times: No set time. (Homework due Fridays 11:59pm)

Course Textbook: [Astronomy by OpenStax](#)

### Overview:

The purpose of this course is to get an overview of the major topics in astronomy. This will include covering events and objects from the Big Bang to beyond solar system formation and scales ranging from neutron stars to galaxy clusters. Assumed knowledge includes basic algebra and geometry, though refreshers will be given. The course content should be accessible to any undergraduate student with an interest in astronomy.

**The course is online and fully asynchronous**, meaning students will watch pre-recorded lectures and complete pre-assigned readings at their own convenience, though homework assignments will assume students are on-schedule. The course schedule will indicate which lectures and readings need to be completed prior to attempting each homework set. The only assignments will be weekly homework, with the exception of the final exam, which will itself essentially be a cumulative homework assignment. Course materials are hosted on the course webpage (see the document header), with the exception of the homework, which will be completed on [TopHat](#) (course name: "ASTR 1000: Survey of Astronomy (Spring 2022)"; join code: 556789).

The **course schedule** is available at: <https://inpp.ohio.edu/~meisel/ASTR1000/Schedule.html>. A brief synopsis is available at the end of this syllabus.

### Grading:

Grades are based on the homework assignments, automatically graded in TopHat. Homework problems may have variable point totals, but each homework assignment will be worth 1/16<sup>th</sup> of the course grade (6.25%). The cumulative final exam will count as much as two homework assignments (12.5%).

### Comments on Homework:

Homework assignments are located in [TopHat](#) (course name: "ASTR 1000: Survey of Astronomy (Spring 2022)"; join code: 556789). Students will need to complete weekly homework assignments before 11:59pm on Fridays. **If an extenuating circumstance causes you (or will cause you) to miss the deadline, please contact me ([meisel@ohio.edu](mailto:meisel@ohio.edu)) as early as possible, including ASTR1000 in the subject line.** Extensions can be granted. **I encourage you to email me with homework questions, though note that *anything after Noon on Friday may not get answered***

*before the deadline. **Include ASTR1000 in the subject line.*** Note that I will ask you show some work or explain your thinking before I provide much in the way of assistance. I will then suggest how to move forward if you are stuck. Essentially, I am asking you to not google the solution. Doing the work yourself is how you will learn. If you didn't do it, you didn't learn it. In that case, why take the class?

### **Exams:**

When you look at the course schedule, you may notice that there aren't exams (The final exam is just a cumulative homework assignment). Frankly, this is because I haven't found a way to have an equitable exam arrangement for a fully asynchronous class that also doesn't involve in-person exam proctoring (which defeats the online-only aspect). So, no exams, just homework.

### **Academic Honesty:**

I trust you will act in an academically honest fashion. Please do the work to solve your homework. Feel free to work with colleagues, but be sure to share the load and to make sure you actually understand the material. The purpose of this class is to learn cool stuff ...so learn it yourself!

Academic Misconduct is a Code A violation of the Ohio University Code of Student Conduct. If you are found to be involved in academic misconduct regarding this course, you will receive a zero on the pertinent work and possibly for the entire course and/or referral to the [Office of Community Standards and Student Responsibility](#). University Judiciaries may impose additional sanctions.

### **Inclusion and Expected Conduct:**

This class is online and asynchronous, but you may interact with others in office hours and/or solving homework assignments. Everyone is expected to behave professionally and respectfully. We will maintain a professional environment that encourages the free expression and exchange of scientific ideas and is characterized by an atmosphere of tolerance, equity, and mutual respect, regardless of personal attributes. We will keep in mind that behaviors and language acceptable to one person may not be acceptable to another and will ensure that our words and actions communicate respect for others. We will avoid offending others by exercising restraint and will maintain awareness that statements or actions not intended to be offensive to another person may be perceived as such. We will commit to being open minded and growing in our understanding of what it means to be inclusive. Harassment or bullying of any kind will not be tolerated.

If something has happened that is preventing you from learning in our environment, please either let me know so I can help find the best resources to support you on campus or in our community, or, if you are uncomfortable speaking with me, utilize the resources on campus like [Counseling and Psychological Services](#), the [Division of Diversity and Inclusion](#), and [Equity and Civil Rights](#)

[Compliance](#). Please also see the [list of resources](#) (both internal and external to the university) maintained by the Department of Physics & Astronomy.

### Resources for Victims of Sexual Assault and Misconduct:

I am committed to supporting you by creating an educational environment free from discrimination, sexual harassment, sexual assault, domestic and dating violence, and stalking. If you or someone you know has any of these experiences, know that you are not alone. Ohio University has [policies in place](#) to protect students, faculty, and staff and provides resources and support for those impacted. I encourage you to reach out for help. If you would like to report what happened, the [Survivor Advocacy Program](#) is a confidential resource that can help you determine what next steps, if any, you would like to take. Reports, which can be submitted anonymously, can be directly made at [this website](#). I am also here to support you, but note that as a faculty member I am a “mandatory reporter”. This means that I must report any instances of sexual harassment, sexual violence, and other forms of prohibited discrimination to the [Office of University Equity and Civil Rights Compliance \(ECRC\)](#).

### Preliminary Schedule *(subject to change with reasonable advance notice)*

See the course webpage for the associated lectures for each week. See TopHat for the homework.

Week #	Week of ...	Topic	Book Chapters	HW deadline (11:59pm)
1	Jan. 10	Overview of Astronomy	1	Jan. 14
2	Jan. 17	Radiation & Spectra	5	Jan. 21
3	Jan. 24	Telescopes	6	Jan. 28
4	Jan. 31	Big Bang & Cosmic Evolution	29	Feb. 4
5	Feb. 7	Milky Way Galaxy	25	Feb. 11
6	Feb. 14	Galaxies	26	Feb. 18
7	Feb. 21	Galaxy Evolution	28	Feb. 25
8	Feb. 28	Stellar Interiors	16	Mar. 4
9	Mar. 7	Spring Break	Spring Break	Spring Break
10	Mar. 14	Stars	17 & 18	Mar. 18
11	Mar. 21	Stellar Evolution	22 & 23	Mar. 25
12	Mar. 28	Star & Planet Formation	21	Apr. 1
13	Apr. 4	Our Solar System	7	Apr. 8
14	Apr. 11	Solar System Origins	14	Apr. 15
15	Apr. 18	Life in the Universe	30	Apr. 22
16	Apr. 25	All of the above	All of the above	Apr. 29

## **Grades**

Final grades for the course will be assigned to a letter-grade according to the following scale:

- A- to A: 80% or better
- B- to B+: 70-79%
- C- to C+: 60-69%
- D- to D+: 50-59%
- F: 49% and below