

# Course Syllabus – PHY 101 01

Introduction to Astronomy  
Fall 2020

## Class Information

**Class Day/Time:** Example: MWF 9:05-9:55 AM

**Class Location:** Science Center, Room 233; Zoom

To meet the requirements of social distancing in the classroom, I will split our class into groups. Each week, one group will meet in the physical classroom, while the other group joins the class session via Zoom. More details are provided below.

**Time Zone:** All times for this course are in EDT time zone.

**Credit Hours:** 3 credit hours

**Course Format:** Problem solving and discussion

## Instructor Information

**Instructor:** Julianne Morgan

**Email:** [jmorgan2@udayton.edu](mailto:jmorgan2@udayton.edu)

**Phone:** 937-229-5032

**Office Hours:** MWF 10:00 - 11:30 AM

**Zoom Office:** <https://udayton.zoom.us/my/juliannemorgan>

My Office Hours will be in my Zoom Office **only**. I will see students on a first come, first serve basis. You will see that you are 'waiting' to be let into my Zoom room.

If I don't get a chance to see you during my office hours, please email me so we can set up an appointment - I'm very happy to meet outside of those hours.

## Course Description

Welcome to the Introduction of Astronomy! I'm so excited to be sharing my passion and love for space with you.

Astronomy means a lot of things to a lot of people. For some, it means using telescopes to look at stars, planets, and other objects. Others come at astronomy from a perspective of physics - what are the calculations and forces that make the universe work. And yet still others believe astronomy to be the prediction of our lives based on horoscopes. If you're here for that last group, you're in the wrong class. ;)

The truth is, astronomy is a word that has lost its meaning, to some degree, and we can debate for as long as we've been trying to decide if Pluto is a planet (so 10+ years) what the real definition of astronomy is.

Astronomy in this class means a little bit of everything. We'll start locally - our place in space and the motion of the earth and the moon. We'll also look into the history of astronomy - the history explains a LOT of how we view astronomy today. We'll get into the physics of the universe, telescopes and optics, exploration, deep sky objects, and more. Along the way, there will be plenty of beautiful pictures and lots of inspiring videos.

## Course Learning Objectives

Upon completion of this course, students will be able to:

- Demonstrate improvement in critical and quantitative thinking by applying the scientific method to fact and theory in classroom learning, activities, some quantitative and mathematical, and assignments, some quantitative and mathematical.
- Explain theories of the origin of the universe.
- Describe the nature of stars and starlight.
- Discuss the probabilities of life elsewhere in the universe.
- Identify major constellations and astronomical objects.
- Compare and contrast major exploration efforts.

## Course Website

All course materials such as the syllabus, assignments, grades, etc. can be found on our course site in UD's Learning Management System, Isidore. Log in at [isidore.udayton.edu](https://isidore.udayton.edu) with your UD username and password. Check the site regularly for updates to the course.

## Required Text and Supplementary Materials

### Textbook

Chaisson, Eric. *Astronomy Today*. 8th edition.

ISBN-13: 978-0321901675

ISBN-10: 0321901673

This textbook can be purchased at the Bookstore. You can also rent an eText or physical text [from Amazon for a low price](#).

### Other Materials

All other materials and readings for this course will be provided through Isidore.

## Technology Requirements

This course requires the use of a computer that [complies with the hardware specifications](#) that were communicated to you by your college. This course will require your use of the latest version of the Microsoft Office software, which is available for you to download at no additional cost at [UD's Software page](#). It is your responsibility to ensure you have a working computer with the required software installed and functional for this course.

- All email messages will be sent to you via your UD Gmail, so you should be in the habit of checking that account every day.
- You may be required to attend virtual class meetings via the web conferencing platform, Zoom. To be an active participant in those meetings, I highly recommend that you have a functional camera and microphone. All laptops that meet UD's requirements should have a built-in webcam and mic. However, you may also use your smart phones to connect to these sessions. If you do not have a webcam or mic, please let me know as soon as possible so we can find a workaround.
- A secure and reliable internet connection is important. Please let me know as soon as possible if you foresee any trouble connecting to the internet.
- Please contact the Udit Service Center at (937) 229-3888 or [itservicecenter@udayton.edu](mailto:itservicecenter@udayton.edu) if you have any technical problems with Zoom, Porches, Isidore, Gmail, Microsoft Office, or your computer.
- **Do not panic** if you run into technical problems. I know that technology can be finicky and challenging - including for me! Just do your best, and let me know as soon as possible if you run into problems. Screenshots, recordings, and details are helpful if you do run into problems so that I can forward the issue to tech help. I will do whatever I can to help you out.

## How This Course Will Work

This course will run under a flexible format so that all students may participate in the class equally, no matter their physical location. To that end, there will be an online, asynchronous component as well as an in-person component (either virtual through Zoom or in the classroom).

### 1. Asynchronous Online Component

Our class has several asynchronous components, or in other words, items you need to complete on your own time by the due dates listed on the Isidore site. These tasks include posting to the discussion forums, watching pre-recorded lecture videos, taking quizzes, and completing homework assignments.

Each week will have at most two due dates - Thursdays at 11:55 PM and Sundays at 11:55 PM. Some weeks may only have the Sunday due date. This is made clear in each weekly

lesson on Isidore.

## **2. In-Person Component**

To meet the requirements of social distancing, our class will be randomly divided into two groups of students. I will communicate your group assignment to you prior to the first day of class. These groups will alternate how they attend our class sessions - either online or in-person. If you are not planning on coming to campus this semester, please let me know as soon as possible. You will participate fully online.

Our live meetings, whether on Zoom or face-to-face, will be used for group discussion, question and answer time, and further explanation of the topics covered in the readings and lecture.

### **In-Person Classroom Meetings**

Each week, one group of students will come to the physical classroom on Mondays. Then, the second group will come to the physical classroom on Wednesdays. Our Friday session will be completely online via Zoom.

If for any reason you cannot join our in-person activities, please let me know as soon as possible. This class is designed so that you can keep up with your work if you have to be away.

### **Online via Zoom**

Each week, one group of students will attend class via Zoom on Mondays. Then, the second group will attend class via Zoom on Wednesdays. Our Friday session will be completely online.

To join the Zoom class, go to our Isidore course site and click on the “Zoom Meetings” tool. Click on the “Join” button at the time of our class session.

## **Activity Descriptions**

### **Participation**

No matter if you are participating remotely or face-to-face, I expect you to participate in this class as much as possible.

For students who are attending face-to-face, please pay attention and stay engaged during our question and answer and demonstrations. I will be calling on random students to answer questions while I show examples - so stay focused!

For students who are attending the synchronous online sessions, I also expect YOU to pay attention. I will be posting poll questions that I want you to respond to. I will also be using Breakout Rooms in Zoom, and I want you to contribute to those discussions as much as possible.

Lastly, for students who can only participate asynchronously, I expect you to watch the recordings of the synchronous online sessions. For each recording, I will ask you to submit a reflection or response to a specific question.

## Discussion Forums

We will have a few discussion forums throughout the semester. The purpose of the discussions are for you to learn more about astronomy and some of the current issues astronomers are talking about today - it's truly a fascinating area with a lot of current events. I may ask you to solve a problem (based on your readings) or engage in a debate with your peers. I may ask you to reflect upon the nature of space exploration. I hope these discussions are fruitful and interesting - even if I also know they may not be everyone's cup of tea.

Please review the [discussion forum rubric and guidelines](#) for further information about how you will be assessed on those.

## Homework

The homework assignments for this class are designed to help you practice and master the more difficult concepts presented in this class. While each homework has a small point value, all together, they make up a large chunk of your grade. Plus, they *really will* help you for the midterm and final exams. I don't expect perfection on these assignments - I just want you to try your hardest to solve and think through the problems. I will be able to tell if you put in an effort. I also suggest you start early on the homework assignments so that you can pop in to office hours with questions before the due date -- I'll look kindly upon those who take advantage of that time!!

## Quizzes

There will be quizzes posted on Isidore throughout the semester. They are designed to help you make sure you understand the topics presented in the readings. You can take the quizzes as many times as you want, but please note that you will see different questions each time you take the quiz as the questions are pulling from a pool. You will be able to see your score, the questions, and how you responded after each attempt so you can work to improve your score with multiple attempts. When the deadline for the quiz closes, you will be able to see the correct answers for each of your attempts. Your highest score on the quiz will be the one that is recorded in the Gradebook. Lastly, the lowest score for your quizzes will be dropped.

## Project

You will complete a research project about a specific object in astronomy throughout the semester. I will be helping you make progress on this project in several assignments throughout the semester so that it's not all delayed until the last minute. The details for each step of the project will be explained for each week they are due. The idea is that by the time we get to the end of the semester, your project will be 100% finished with the exception of creating/delivering a presentation of your work.

For this project, you will research an object of your choice. It can be a planet, moon, nebula, star, dark matter, rover, telescope, satellite - whatever. Your research paper will consist of 5 sections:

- **Introduction:** Brief description of what the object is and why you selected it.
- **Description:** Thorough description of object - the details will vary depending on the object. I'll provide guidance on this once you select your object.

- **Literature Review:** No matter what you choose, there is research being done on it. This will be the bulk of your paper. I expect you to find at least 5 scholarly articles about the current research on the object and summarize each.
- **Reflection:** I then want you to provide your thoughts on each of those articles and research. What are you still curious about? Where do you think the research will take us? What other topics are related to this object that would further inform our knowledge of it?
- **Conclusion:** A few sentence summary that wraps up the paper.

The final step will be a presentation. Because we will all be at home during the final weeks of the semester, these will occur on Zoom and will be recorded.

### Exams

Our midterm and final exams will be open notes, open book. They will take place through Isidore. You will have a week in which to complete the exams. You will have 2 hours total to complete the exams. It will consist of multiple choice, fill-in-the-blank, matching, and written response questions. Each exam will be cumulative up to that point in the semester (in other words, the final exam will cover only the latter half of course content).

The questions for the tests will be drawn from a MASSIVE bank of questions - so it will be extremely difficult for you to cheat or to help others cheat. The tests are completely open book and you can use whatever resource (except for calling in your local astronomer for help) you want, so please, please don't try to save the questions or ask others for help. If I suspect you of cheating, I will have to investigate. If I confirm you cheated, I will have to give you an 'F'.

If technical problems arise during your exam, please email me WHILE the test is occurring. Please send screenshots if possible. REMEMBER to have Isidore closed in all other browser windows and tabs - if there are resources on Isidore you'd like to use during the exam, please download them so you can open them locally on your computer.

[See the university's Final Exam Policy](#)

## Course Policies

I apologize for the length of the policy section below, but I'm trying my best to be as clear as possible for this semester. Also, please do note that these policies are subject to change as the semester may be dynamic.

### Attendance & Participation Policy

I know this semester may be challenging. **I trust you and I respect you** to make the best decisions for yourself and your family and loved ones.

If you are on campus, I expect you to attend our face-to-face classes on your assigned days unless you are sick (or if you're an athlete). If you are sick, please DO NOT come to class. Email me as soon as possible to let me know you will not be in class. I will arrange for you to complete the work online or via Zoom.

During face-to-face sessions, **you are required to wear a mask** (unless a health condition prevents

you from doing so). I hope you will try to maintain social distance in the classroom as well.

During our Zoom sessions, I ask you to please turn on your webcams. I truly feel like having webcams on helps build a better learning community. And, for me, I absolutely rely on your facial expressions to help me 'read' your understanding. So please, turn on your webcams if you are able. If you need to run to the bathroom or if there is some other interruption, feel free to turn off the webcam. If you do not want to turn on your webcam for whatever reason, that is fine - I don't need an explanation.

I also expect everyone to engage civilly and with respect towards one another. I know this is a heightened time of anxiety, but let's do our best to be good to each other. I know some may have differing opinions on wearing a mask, but I insist that you wear one in our face-to-face sessions for the health of the others around you. I do not and will not tolerate any form of discrimination or disrespectful behavior - no matter if it's face-to-face, in the online discussion boards, or in our Zoom sessions. If you feel you have been disrespected in our class, please let me know *immediately*. I take these concerns very seriously, and I will involve administrators to mediate the situation.

### **Communication Expectations & Procedures**

Please post all questions about the course on the Commons tool on the homepage of our Isidore site. Other students should feel free to jump in and try to answer other students' questions. Feel free to even ask for help on homeworks and quizzes!

If you see something broken in the Isidore site, feel free to post that to the Commons tool as well. I will be checking this page at least once a day, except for Fridays and Saturdays.

If you have a more specific question that is related to your feedback or your situation, please just shoot me an email. I will be checking my email at least once a day except on Fridays and Saturdays.

If I, for any reason, cannot hold to these expectations myself - I will do my best to let you know. My life has also been affected by these recent events, so I hope you can be flexible with me as I am being with you.

### **Feedback & Turnaround Time**

Here are my general feedback commitments to you. If I cannot meet these commitments, I will do my best to let you know.

If you have questions about any grade or feedback you receive, don't hesitate to shoot me an email! I'm happy to discuss anything. And, I'm human and I can make mistakes. If you think I've made a mistake, *definitely* let me know. Don't let problems fester!

**Homework feedback:** I will provide grades and feedback on homework assignments within 3 days of you submitting. I may ask you to resubmit your homework for a better grade if you were way off track.

**Quiz feedback:** The system will automatically provide feedback to you once the due date of the quiz passes.

**Discussion forum feedback:** I will not be reading/responding to every single post in the discussion forum. I will be keeping track of your activity, and I will hop in to the discussion when I feel inclined to answer or to steer people back on track. I will grade discussions within 3 days of the forum closing.

**Exams feedback:** I aim to have these graded within a week of you submitting.

### Makeup / Late Work Policy

Students are expected to complete course activities by the assigned due dates. If for any reason you cannot complete work on-time, please notify me as soon as possible.

I am willing to make exceptions due to the challenging nature of class this semester. If you do not contact me **at least 24 hours prior to any due date** to let me know that you need an extension, I will deduct 2% from your grade on the assignment. ***It is in your best interest*** to let me know if you need an extension early!!! And there's no shame in asking for an extension -- I know things are tough!

For any assignment extension, I will grant an extra 3 days (longer if necessary due to extenuating circumstances). If you do not complete the assignment within that time, I will deduct an additional 5% off your grade.

### Grading Policy

I do not expect the framework for grades to change from what is laid out below, but please note that the grades and assessments *could* change.

Category	Number of Items	Points	Weight
Homework	10	10 points each	25%
Project	7	Varies for each component	15%
Quizzes	10	10 points each; your lowest score will be dropped	30%
Midterm	1	100 points	15%
Final Exam	1	100 points	15%

Final course letter grades will be assigned as follows:

Letter Grade	Percentage Range
A	93 – 100%
A-	90 – 92.99%
B+	87 – 89.99%
B	83 – 86.99%

B-	80 – 82.99%
C+	77 – 79.99%
C	73 – 76.99%
C-	70 – 72.99%
D	60 – 69.99%
F	0 – 59.99%

## University Policies

### Intellectual Property Statement

The materials shared with you during this course are authored and owned by the instructor, the department, the school and/or the book publisher. Copyright laws must be respected in using these materials. For example, unless authorized to do so, do not share course materials with anyone outside the course.

### Academic Honesty

I encourage you to talk with each other about the readings and ideas brought up in class. But in all assignments to be graded as individual work you are expected to do your own written work. In the case of group work, all members of a group will be held responsible for the content of work turned in to satisfy group assignments. The instructor will keep a healthy eye out for possible plagiarism when reading your work.

Here is some advice to help you avoid plagiarizing:

It is best to express the ideas you use in your own words. In the case of both individual and group work, words or ideas that come from someplace or someone else must be cited: “A good rule of thumb is this: Whenever you consciously borrow any important element from someone else, any sentence, any colorful phrase or original term, any plan or idea—say so, either in a footnote, bibliography, or parenthesis” (from “Academic Honesty in the Writing of Essays and Other Papers,” Carleton College, 1990).

For specific university policies concerning academic honesty, see the [University’s Academic Honor Code](#) in the Academic Catalog.

### Contract Cheating

Contract cheating occurs when a student pays someone (such as a person or company found online) to write essays or complete assignments for a class. This defeats the purpose of the course and I encourage students to follow the academic honor code and seek to develop a personal sense of academic integrity which lays the foundation for an ethical life. Contract cheating is especially dangerous because of the risk of bribery and extortion (potentially for an entire life after college!). Students are often lured into contract cheating by signing up for online tutoring services. Remember that UD provides many learning support mechanisms (see: <https://www.udayton.edu/lrc/learningresources/index.php>).

## **Dropping the Course**

You are responsible for understanding the university's policies and procedures regarding withdrawing from courses. You should also be aware of the current deadlines and penalties for dropping classes. Information on [withdrawal from courses](#) is available in the Academic Catalog under Grades and Scholarship. You may also want to speak with your academic advisor or the Deans Office from your college or school. (Website:

<http://catalog.udayton.edu/undergraduate/generalinformation/academicinformation/gradesandscholarship/>)

## **Student Evaluation of Teaching**

The university will ask for your anonymous feedback regarding instruction in this course through the online Student Evaluation of Teaching (SET) as your candid, respectful opinions and constructive suggestions have an impact on the quality of teaching at UD. Instructions for how to complete SET will be sent to your UD email account toward the end of the semester, and I may give you additional instructions (for example, whether you will complete SET in the classroom). If you encounter technical problems accessing SET, contact the UDiT Service Center at 937-229-3888 or [itservicecenter@udayton.edu](mailto:itservicecenter@udayton.edu). To learn more about SET, visit <http://go.udayton.edu/set>.

## **University Services**

It is the University's goal that learning experiences be as accessible as possible. Your learning in this course is important to me, and I want you to be aware of existing supports on campus which are available to all university students.

### **Support for Your Learning in This Course**

The Ryan C. Harris Learning Teaching Center's Office of Learning Resources (OLR) is a learning resource for students, parents, faculty, and staff at the University of Dayton. OLR offers a wide variety of information and services to help everyone become a successful learner. Peruse the web site, attend one of our offerings, or contact our office and meet with a staff member – however you look at it, OLR is Your Partner in Learning!

Please contact OLR at [937-229-2066](tel:937-229-2066) (TTY 937-229-2059 for deaf/hard of hearing individuals) or visit the office on the ground floor of Roesch Library (LTC 023) if you would like to talk about how you could become a more effective learner. You can also check out the website:

<http://go.udayton.edu/learning>.

### **Students with Disabilities**

If you anticipate or experience physical or academic barriers based on disability, please let me know immediately so that we can discuss options. You are also welcome to contact the LTC's Office of Learning Resources (OLR) to discuss reasonable accommodations. Please contact OLR at [937-229-2066](tel:937-229-2066) (TTY 937-229-2059 for deaf/hard of hearing), by email at [disabilityservices@udayton.edu](mailto:disabilityservices@udayton.edu) or stop by OLR in the LTC, room 023 Roesch Library. If you have an Accommodation Letter provided by OLR, please contact me to discuss.

If you need assistance accessing print material including textbooks and electronic material such as PDF documents, please review the OLR website information about alternative formats under Disability Resources. Go to <https://www.udayton.edu/lrc/learningresources/onlineforms/index.php> and click on Alternative Formats.

### **Information Point**

The Write Place and Roesch Library's reference services offer free research and writing assistance on any assignment, at any stage of the writing process. Additionally, Udit's TechExpress offers free technical support for printing, password troubleshooting and laptops. These services are offered at Roesch Library's first-floor Information Point. Hours are listed online at [libcal.udayton.edu/hours](http://libcal.udayton.edu/hours). No appointment is necessary, although they are available; to make an appointment with the Write Place, email [writeplace@udayton.edu](mailto:writeplace@udayton.edu); to make an appointment with a librarian, see [libcal.udayton.edu/appointments](http://libcal.udayton.edu/appointments). For more information, visit the first floor of Roesch Library or see the Get Help page on the web: <https://www.udayton.edu/libraries/help.php>.

### **Religious Accommodations**

The University of Dayton strives for an inclusive climate and welcomes students from all backgrounds, faiths and experiences. If religious observance impedes your ability to participate fully in classroom activities or a principal holiday from your religious tradition occurs during the semester and conflicts with class meetings or activities, please make the professor aware of this immediately to determine if a reasonable accommodation is possible.

### **Technical Support**

For general computer, software, and username and password issues, please contact the [IT Service Center](#).