Course Syllabus

ASTR 1115-501, CRN 50270, Spring 2026

Faculty Contact Information

Name: Dr. Amanda Truitt (she/her)

Campus Email: artruitt@unm.edu

Virtual Office Hours (JOIN ZOOM passcode ASTRO**):** Tues/Wed 11-11:30 am **or by appointment**

BOOK A MEETING WITH ME

https://cal.com/amanda-truitt-st4rryid/10min
https://cal.com/amanda-truitt-st4rryid/30min

Welcome to Astronomy 1115, Introduction to Astronomy Lecture!

My name is Dr. Amanda Truitt, and I will be the instructor/professor for this course. I have a Ph.D. in Astrophysics from Arizona State University, with a background in modeling stellar evolution based on the diverse chemical composition of stars and simulating the evolution of exoplanet habitable zones.

My preferred contact method is by email or messages through Canvas. Sometimes things get buried in my inbox, so it's generally helpful if you follow up with another message if you don't receive a response from me **within 24 hours** during the regular work week or **within 48 hours** if it's a weekend/holiday. Please feel free to contact me at any time with questions or concerns about the coursework or content! Although we will not be meeting at a set time for the class, I would be happy to accommodate personal appointments as needed.

Required Textbook & Technology

Great news: your course material is free! All necessary course materials are available free of charge with fully digital options. We will be using the **OpenStax *Astronomy (2e)*** textbook. All other course materials, including assignments, lecture slides, and supplemental materials will be available directly through the Canvas shell.

Textbook Title: Astronomy (2e)

The second edition of the textbook has been updated according to recent discoveries and includes a significant amount of new art and images. The 1st edition of the textbook is only available to view online (as a webpage), the 2nd edition is available to download as a free PDF. You can use either first or second edition.

Authors: Andrew Fraknoi, David Morrison, Sidney C. Wolff

Publisher: *OpenStax* (View for Free Online or Download a PDF)

Publication Date: October 13, 2016 (first edition) / March 9, 2022 (second edition)

You will need a computer with internet access to participate in this course, including the ability to submit assignments and access online activities. It is imperative that you will be able to access the posted lecture material each week, watch supplemental videos and submit your assignments directly online. You will need to be able to open PowerPoint presentations and open/edit word documents and/or PDF files.

Course Description

This course surveys observations, theories, and methods of modern astronomy at a descriptive level. We will discuss the progression of astronomy through history and how scientific theories have been developed and refined over time. This course is predominantly for non-science majors, aiming to provide a conceptual understanding of the universe and the basic physics that governs it. Due to the broad nature of this course, the specific topics and concepts covered may vary. Commonly presented subjects include the general movements of the sky and history of astronomy, an introduction to basic physics concepts like Newton's and Kepler's laws of motion, and modern details and facts about celestial bodies in our solar system, as well as how to differentiation between them (e.g. Terrestrial vs. Jovian planets, exoplanets, the practical meaning of "dwarf" planets, asteroids, comets, and Kuiper Belt/Trans-Neptunian Objects). Beyond this we will also cover stars and galaxies, star clusters, nebulae, black holes, galaxy clusters, and dark matter. Finally, we will touch on concepts of cosmology and astrobiology, both the structure and history of the universe, as well as the ongoing search for life beyond our own home planet.

Credit-hour statement: This course meets New Mexico General Education Curriculum Area 3: Physical and Natural Sciences. This is a 3 credit-hour course delivered in an asynchronous/online modality over 16 weeks. The expectation is that each credit hour corresponds to a minimum of 3 hours of engagement per week, so you should expect to spend AT LEAST **9 hours per week** on coursework for this class. This may include discussions, reading the text, reviewing lecture videos & supplemental materials, taking notes, and completing assignments.

Major Topics & Student Learning Outcomes

Upon successful completion of the course, students will:

1	Discuss the night sky as seen from Earth, including coordinate systems, apparent daily and yearly motions of the sun, Moon, stars, and their resulting astronomical phenomena.
2	List and apply the steps of the scientific method.

3	Describe the scale of the Solar System, Galaxy, and the Universe.
4	Explain different telescope designs and how telescopes and spectra are used to extract information about Astronomical objects.
5	Describe the formation scenarios and properties of solar system objects.
6	Describe gravity, electromagnetism, and other physical processes that determine the appearance of the universe and its constituents.
7	Describe methods that planets are discovered around other stars and current results.
8	Describe the structure, energy generation, and activity of the sun.
9	Compare our sun to other stars and outline the evolution of stars of different masses and its end products, including black holes.
10	Describe the structure of the Milky Way and other galaxies and galaxy clusters.
11	Describe the origin, evolution, and expansion of the universe based on the Big Bang Theory and recent Astronomical observations.
12	Describe conditions for life, its origins, and possible locations in the universe.

Additional Course Information

We do NOT have a designated meeting time or place for this class. Because this course is online and asynchronous, the expectation for responses from me is that I will try to respond as soon as possible to any student messages, BUT questions that come in late at night, over a weekend, or otherwise outside of "normal" working hours are not guaranteed an immediate response. I will post weekly reminders via Canvas announcements, and chapter content and supplemental resources in the **Pages** section. **Homework** and **Discussions** will be available for submission via Canvas. Weekly **Modules** will also be assigned with required to-do items to help you keep track of due dates.

Tips for Success in Online Astronomy

My goal in grading is to reward two things: (1) the effort you put into this class, and (2) your understanding and demonstrated knowledge of course content. For those students who simply need to pass this class, I have good news: *my goal* is to pass every student who stays engaged with the course material through the end of the semester, and the course structure is designed to achieve this. **But what about those who want to get an A or a B in this class?** Here's what I recommend:

- First, realize that this *online* class requires more self-discipline, integrity, and a level of comfort with technology, than face-to-face classes do. Set aside a time to regularly work on assignments and be proactive in contacting me if you have problems with Canvas, etc.
- Second, make sure your line of communication is open! Course announcements are made directly through Canvas. Please check your notification settings to make sure you receive all important course announcements.
- Finally, use all course/Canvas resources. I am also available to help and answer questions!

Course Grading

The grade you receive in this course will be based on your individual mastery of the material, not on your standing relative to your peers (I do not curve the course grades). You may always respectfully ask me to reconsider your grade on any individual assignment, as it's always possible I've overlooked something. An "A" represents excellent work that exceeds basic requirements. A "B" is good work that meets basic requirements. A "C" represents work that is below the basic requirements but passing. A "D" represents insufficient mastery to satisfy core degree requirements or prerequisites. An "F" is failing and does not meet the minimum requirements. Please do not ask me to round your grade up! **End of semester grade bumps are a violation of academic integrity**. I will not respond to such requests, and I do not offer any extra credit in this course.

COURSE GRADES

A (90% or higher)	B (80-89.99%)	C (70-79.99%)	D (60-69.99%)	F (59.99% or lower)

Course Evaluation

1. Multiple-Choice Homework Assignments (14)
2. Discussion Topic Participation (8)
3. Midterm and Final Exams (2)
4. Astronomy Topic Essay (1)

Reading-Based Homework (14 x 25 pts) _____ 350 points (35% of total grade)

Discussion Participation (8 x 30 pts) _____ 240 points (24% of total grade)

Midterm and Final Exams (2 x 140 pts) _____ 280 points (28% of total grade)

Astronomy Topic Essay (1 x 130 pts) _____ 130 points (13% of total grade)

Grades are calculated out of maximum possible points (1,000) and converted to a %.

Coursework Expectations

HOMEWORK: There will be 14 homework assignments throughout the semester, worth 25 points each. They are based on the weekly assigned reading and additional content provided for each chapter. You are responsible for reading and watching all material posted each week. There will be

one homework assignment (Canvas Quiz) in each weekly module. Each will each consist of multiple-choice questions based on relevant chapter(s). The quizzes will not be timed. You may use the textbook as a reference and any notes you have taken **(NOT GOOGLE).** You are **NOT allowed to collaborate** with anyone on the homework quizzes. The homework assignments are set up to allow for TWO attempts, which will take the average of your two scores. If you score 100% on your first attempt, you do not need to re-take the quiz.

EXAMS: There will be 2 review-based multiple-choice exams. The exams are NOT open all semester and they must be taken during the specific week in which they are assigned. You will have only ONE attempt on each of these exams. You may use the textbook as a reference and any notes you have taken **(NOT GOOGLE).** You are also **NOT allowed to collaborate** with anyone else on the exams. This will be on the honor system, but I do have the ability to virtually moderate the exam. I can see how long you are taking to answer each question, whether you navigate away from the test-taking page (and for how long), and the overall time for submission on each question, so keep that in mind! You will have 4 hours to take your exam from the time you choose to start it. Each exam which will consist of 140 multiple choice questions (1 point each). Please reach out to me to confirm any academic accommodations to be applied.

DISCUSSIONS: There will be 8 discussion topics presented throughout this course. They will consist of a starting prompt and instructions on how to proceed. I am looking for thoughtful individual primary posts and secondary responses to classmates. Your grade will only depend on your individual submissions. I will grade your posts based on how well you have answered the prompt, including the content of your ideas, spelling, grammar, and inclusion of references. Please see the **Discussion Rules** for a detailed rubric. I do not generally participate in the discussions. I may reply to a comment if more clarification or explanation is needed about a topic (or if there seems to be a lot of general confusion about something) but often I find that students are able to reply to each other and self-correct, which is always encouraging to see! Beyond that, however, you should typically only expect private feedback from me in your personal assignment submission comments.

I will grade each discussion assignments once the due date for both the PRIMARY and SECONDARY posts has passed. Even if you have only made your PRIMARY post at that point, I will still grade your discussion assignment, and you will lose points for your missing SECONDARY comment according to the rubric. However, since the discussion assignments do stay open for you to contribute to all semester, you may always submit a late comment to earn back missing points (with late penalty applied). Please be aware of the due dates for each of the discussion topics. You will have two weeks between each PRIMARY post, due every other Wednesday. You will also be required to make at least one SECONDARY reply which will be one week following the original post due date. The secondary posts also alternate every other Wednesday.

Points may be taken off for submissions that do not pass AI/plagiarism detection software. I do not have a fundamental problem with students using an open AI platform to brainstorm or organize ideas in preparation for an assignment, but it is essential that you avoid letting AI take over as your pathway to understanding. Make sure you always write up any submission in your own words, and that you spend some time independently fact-checking any information you find online (not everything that AI comes up with is even correct, and your own HUMAN critical thinking skills are still essential). That exercise would also be helpful in meeting the rubric requirement of providing a link/citation/resource

as part of your discussion response. Please post your discussion comments directly in the Canvas forum! I will NOT accept a file attached to a comment as part of your submission.

ASTRONOMY ESSAY: There will be one astronomy essay due in this course. There are four different topics provided as your starting prompt, and you must choose ONE of the options to write about. The due date for the essay is included in the assignment instructions, as well in the course calendar. Please reach out to me directly if you have any questions about the format requirements, works cited page, etc. You may submit your essay at any point throughout the semester. You have unlimited attempts to upload your document, so you should be able to resubmit if you find an error or want to make a correction in your paper. I won't immediately grade essays that come in, so you have a bit of a buffer to resubmit the essay if you wish, but please be aware that once I do grade the essay, I will not accept a resubmission after that point.

Late Work Policy

Extension requests for assignments should be **clearly communicated** to me ahead of time whenever possible. Requests made after the due date are not guaranteed an extension, but may be considered.

HOMEWORK: I will almost always grant an extension on homework assignments with no point penalty if you request accommodations **ahead of time**. I understand that there is a lot going on in the world and coursework will not always be your priority! However, if communication with me has not been established about an extension IN ADVANCE, I do reserve the right to decline the request. Because assignments will remain OPEN for you to take throughout the entire semester, I will only allow for extensions that are requested ahead of time, or for documented emergencies that are communicated to me ***as soon as possible*** after the due date passes. For late work that is not otherwise granted an extension, **there will be an automatic PER DAY late penalty of 1% off from the total assignment score applied**.

EXAMS: Make-up exams are granted only under special/extreme circumstances (for example, you have a flare up of a documented health issue that was communicated to me in advance). You never need to provide me with any details about your health or private life that you do not feel comfortable sharing with me, but I welcome any discussion with you that would provide me with context for your circumstances. If there is something hugely unfortunate that happens outside of anyone's control (for example, the power goes out across the city), please let me know about the situation as soon as you can. I reserve the right to deduct points at my discretion on a case-by-case basis.

Since you have an entire week to take the exam and due dates have been communicated from the beginning of class, **I am strict about exam deadlines**. If a make-up exam is granted, I will rewrite a new exam for you to take. Note that the new exam will likely be more difficult, since the original exam is based largely from homework quiz questions, while a new exam will be all new questions that you have not seen before. The other potential option that I may offer, depending on the circumstances, is that the final exam may act as a stand-in grade for your midterm exam. If I allow this option, then your midterm grade that you missed will automatically be matched to whatever you end up scoring on your final exam.

DISCUSSIONS: Each discussion assignment is meant to be an active conversation/dialogue with your peers over a two-week period, or even throughout the semester if you want to continue adding posts on a topic that particularly interests you. Assignments will stay open until the end of class, but an

automatic **late penalty of 1% off per day** will be applied to your primary and secondary posts. Note that any posts beyond the required PRIMARY and SECONDARY posts will not be subject to a late penalty or point reduction.

ASTRONOMY TOPIC ESSAY: This assignment will be available from the beginning of class, and you will have all semester to work on it. The due date will be clearly stated in the assignment instructions and in the course calendar. Please reach out to me if you have any questions about the format requirements. **Absolutely NO late essays will be accepted**.

IN THIS CLASS

You have the RIGHT to be treated with respect and professionalism

- *You have the RESPONSIBILITY to interact in a respectful and constructive manner.*

You have the RIGHT to clarity about course objectives, assignments, and grades

- *You have the RESPONSIBILITY to read the syllabus, comply with course guidelines, ask questions if anything is unclear. Please keep up with email & announcements.*

You have the RIGHT to consistent grading of work, applied to all students

- *You have the RESPONSIBILITY to complete assignments, use available resources to improve the quality of your work as necessary, and respond civilly to evaluation or feedback of your work.*

You have the RIGHT to flexibility during times of crisis, which you have communicated to me

- *You have the RESPONSIBILITY to participate, complete assignments, and contact me if you will miss work or need accommodations. Please keep me informed about emergency circumstances.*

You have the RIGHT to my availability for meetings and timely responses to messages

- *You have the RESPONSIBILITY to keep scheduled appointments or cancel as soon as you know you can't make it. Please include your preferred contact information in your messages.*

***We use the Canvas Discussion feature to facilitate class conversations, guided by* Netiquette.**
Show respect and be courteous. Refrain from inappropriate language.

- Learn about, understand, and support your classmates.
- Do not make sexist, racist, homophobic, or other insensitive comments.
- Value the diversity among your classmates.
- Encourage others to develop and share their ideas.
- Challenge others constructively with the intent of expanding discussion.
- Be open to being challenged on your ideas.
- Do not demean or embarrass others.
- Consider your comments before you post them.

Course Calendar

The course is divided into **Modules** which are listed in the course calendar outline, below. The textbook chapter reading outline is included to support your ability to successfully take the homework quizzes, **but the depth and detail with which you pursue each chapter is ultimately up to you**.

Modules will be made available at the beginning of each week (Mondays), with homework assignments due at the end of the week (Sundays). Due dates are implemented for uniform pacing that will ensure you move through all the material in a timely manner by the end of the course, but assignments stay open for submission at any time (with late penalty applied).

For those who are concurrently enrolled in ASTR 1115L, these topics/chapters will align weekly.

Please visit the **UNM Registrar Page** for details on important **Semester Deadline Dates**. This affects fees, refunds, registration changes, withdraw records, and grades. Midterm/Finals Week and breaks are noted.

Course Calendar (Spring 2026 Semester)

Date	Topic/Textbook Chapters	Assignments/Due Dates
January 19-25	**Getting Started Module** & Syllabus Quiz HW 1: Read Chapter 1 (Science & The Universe, A Brief Tour)	**Module 1: Introduction** Homework 1 due on Sun. January 25th **Astronomy Topic Essay assigned**
Jan 26-Feb 1	HW 2: Read Chapter 2 (The Birth of Astronomy)	**Module 2: Astronomy Basics** **Discussion #1** PRIMARY post due Wed. Jan. 28th Homework 2 due Sunday, February 1st
February 2-8	HW 3: Read Chapters 3 and 4 (Orbits; Earth, Moon and Sky)	**Module 3: Earth, Moon & Sky** **Discussion #1** SECONDARY post due Wed. Feb. 4th Homework 3 due Sunday, February 8th
February 9 -15	HW 4: Read Chapters 5 and 6 (Radiation, Spectra; Astronomical Tools)	**Module 4: The Study of Light** **Discussion #2** PRIMARY post due Wed. Feb. 11th Homework 4 due Sunday, February 15th
February 16-22	HW 5: Read Chapters 7 and 8 (Intro to Solar System; Earth as a Planet)	**Module 5: The Solar System** **Discussion #2** SECONDARY post due Wed. Feb. 18th Homework 5 due Sunday, February 22nd

Feb. 23-Mar. 1	HW 6: Read Chapters 9 and 10 (Cratered Worlds; Earth-like Planets)	**Module 6: Terrestrials** **Discussion #3** PRIMARY post due Wed. Feb. 25th Homework 6 due Sunday, March 1st
March 2-8	HW 7: Read Chapters 11 and 12 (Giant Planets; Moons and Rings) **[Exam 1 Review activity available]**	**Module 7: Giants & Moons** **Discussion #3** SECONDARY post due Wed. Mar. 4th Homework 7 due Sunday, March 8th
March 9-15	**Midterm Exam (Ch. 1-12)**	**Midterm Module** **Discussion #4** PRIMARY post due Wed. Mar. 11th **Midterm (Exam 1)** due Sunday, March 15th
March 16-22	SPRING BREAK	**Discussion #4** SECONDARY post due Wed. Mar. 18th
March 23-29	HW 8: Read Chapters 15 and 16 (The Sun and Nuclear Fusion)	**Module 8: The Sun & Other Stars** **Discussion #5** PRIMARY post due Wed. Mar. 25th Homework 8 due Sunday, March 29th
Mar. 30-Apr. 5	HW 9: Read Chapters 17, 18, 19 (Stellar Characteristics; Distances)	**Module 9: Stellar Classification** **Discussion #5** SECONDARY post due Wed. Apr. 1st Homework 9 due Sunday, April 5th
April 6-12	HW 10: Read Chapter 21 (The Birth of Stars and Exoplanets)	**Module 10: Exoplanets** **Discussion #6** PRIMARY post due Wed. Apr. 8th Homework 10 due Sunday, April 12th
April 13-19	HW 11: Read Chapters 22, 23, 24 (Star Death, Black Holes, Spacetime)	**Module 11: Dead & Dying Stars** **Discussion #6** SECONDARY post due Wed. Apr. 15th Homework 11 due Sunday, April 19th

April 20-26	HW 12: Read Chapters 25 and 26 (The Milky Way; Galaxies)	**Module 12: Galaxies, Part 1** **Discussion #7** PRIMARY post due Wed. Apr. 22nd Homework 12 due Sunday, April 26th
Apr. 27-May 3	HW 13: Read Chapters 27 and 28 (Distribution & Evolution of Galaxies)	**Module 13: Galaxies, Part 2** **Discussion #7** SECONDARY post due Wed. Apr. 29th Homework 13 due Sunday, May 3rd
May 4-10	HW 14: Read Chapters 29 and 30 (Big Bang; Life in the Universe) **[Exam 2 Review activity available]**	**Module 14: Cosmology & Life** **Discussion #8** PRIMARY post due Wed. May 6th Homework 14 due Sunday, May 10th **Astronomy Topic Essay** due Sunday, May 10th
May 11-16	**Final Exam (Ch. 15-30) excluding Ch. 20**	**Final Module** **Discussion #8** SECONDARY post due Wed. May 13th **Final (Exam 2)** due SATURDAY, May 16th

General Course Policies

The remainder of the course policies are outlined below. I will always remind you of anything that is of particular importance, either in course announcements or in assignment instructions.

Generative Artificial Intelligence (GAI) Policy: Moderately Permissive Use

The use of GAI tools/programs (ChatGPT, Grammarly, etc.) to complete work for this course is generally permitted for early work-phase activities such as brainstorming, narrowing a topic, refining a research question, drafting an outline, and checking grammar. However, you may not use it to compose or generate wholesale something I have asked you to produce, such as, but not limited to a draft (rough or final) of a paper, a discussion post or response, or sources of information. Any use of GAI must be explicitly disclosed.

Attendance: This is an online and asynchronous class and face-to-face class attendance is not required. However, please be aware that students who miss assignments due in the few weeks of class may be dropped from class as "no show." Instructor also reserves the right to drop a student they miss an excessive number of assignments without communication.

Schedule/Assignments/Rubrics Subject to Change: Any changes will be announced through Canvas, and all efforts will be made to accommodate students. Instructor reserves the right to deduct additional points beyond what is outlined in grading rubrics if an assignment is clearly plagiarized, written with AI, or contains inappropriate language/images, etc.

Honor Code Pledge: You must complete the honor code pledge to participate in this class. Students who do not maintain their honor code pledge may be removed from the course entirely.

Responsible Learning and Academic Honesty: Cheating and plagiarism are often driven by lack of time, desperation, or lack of knowledge about how to identify a source. Please communicate with me and ask for help, even at the last minute, rather than risk committing academic dishonesty. Academic dishonesty involves claiming that work created by another source is your own original work. It is a **Student Code of Conduct** violation that can lead to a disciplinary procedure.

When you use a resource in ALL work submitted for this class, document and distinguish clearly between your original work and the material taken from the resource. If you use any sources other than those provided in the course, please clearly cite them. Allowing another student to copy your own work also constitutes academic dishonesty.

Student Accessibility

Confidentiality: I will never discuss a student's disability status with, or in front of, others. I will always be mindful of engaging a student about accommodations or disability to avoid revealing the student as someone with a disability. I will always speak with students privately about accommodation needs.

Preferred Name and Pronouns: Class rosters are provided to the instructor with a student's legal name. I will gladly honor your request to address you by your claimed name and/or (a)gender pronoun. Please advise me of this preference early so that I may make changes to my records. You may also edit your Canvas user profile to **indicate preferred pronouns**Links to an external site..

Accommodations: UNM is committed to providing equitable access to learning opportunities for students with documented disabilities. As your instructor, it is my objective to facilitate an inclusive classroom setting, in which students have full access and opportunity to participate. To engage in a confidential conversation about the process for requesting reasonable accommodations for this class and/or program, contact **Accessibility Resource Center** at **arcsrvs@unm.edu** or 505-277-3506.

UAP 2720 and 2740: Our classroom and university should foster mutual respect, kindness, and support. If you have concerns about discrimination, harassment, or violence, please seek **support** and **report** incidents. Find confidential services at **LoboRESPECT Advocacy Center**, the **Women's Resource Center**, and the **LGBTQ Resource Center**. UNM prohibits discrimination based on sex (including gender, sex stereotyping, gender expression, and gender identity). All instructors are "responsible employees" who must **communicate reports** of sexual harassment, sexual misconduct and sexual violence to **Compliance Ethics and Equal Opportunity**. For more information, please see **UAP 2720** and **UAP 2740.**

Citizenship and/or Immigration Status: All students are welcome in this class regardless of citizenship, residency, or immigration status. I will respect your privacy if you choose to disclose your status. UNM as an institution has made a core commitment to the success of all our students, including members of our undocumented community.

Additional Student Support

Student Health and Counseling (SHAC) at (505) 277-3136

PASOS Resource Center (505) 925-8546, or email **pasos@unm.edu**: on-campus center that serves as a "one-stop" for all non-academic needs of UNM-Valencia students.

Tutoring: UNM-Valencia Learning Commons Tutoring is available to you in math, science, writing, and other subjects through the Learning Commons: Learning and STEM Centers and Writing Center. In-person tutoring is in these centers in the LRC. Making use of tutoring is a great way to set yourself up to learn deeply and well in your courses. Schedule an appointment: **Learning Commons Bookings**

If you are making an email appointment with the Writing Center, email your draft to **tutor@unm.edu** after you fill out the form above. If you have difficulty with the scheduling link above, would like an appointment in a subject not listed at that link, or have a question, email **tutor@unm.edu**. You'll get answers during business hours Monday through Friday. Resources to support study skills and time management are available through Student Learning Assistance at the Center for Teaching and Learning in Zimmerman Library or online.