Course Syllabus

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ASTR-1115L-501, CRN 81180, Fall 2026

Faculty Contact Information

Name: Dr. Amanda Truitt (she/her)

Campus Email: artruitt@unm.edu (mailto:artruitt@unm.edu)

Virtual Office Hours (JOIN ZOOM (https://us06web.zoom.us/j/88519509358?pwd=yCTGUOpwKHCzTMDG5UMk6pxajkIsbH.1) passcode ASTRO**):** Thurs 11-11:30 am **or by appointment**

BOOK A MEETING WITH ME

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

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

Welcome to Astronomy 1115L, Introduction to Astronomy Lab!

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 Canvas messages. If you haven't received a response from me within **48 hours** during the regular work week or within **72 hours** if it's a weekend/holiday, please consider sending a follow-up message. Always feel free to contact me with questions or concerns about the coursework or content! I am happy to set up personal appointments as needed.

Required Textbook & Technology

No textbook is required for this lab course, but you may find the textbook helpful, if you'd like extra resources or support. It is available free of charge with fully digital (OER) options.

All other course materials (including the lab assignments and any supplemental material) will be

available directly through the Canvas class shell.

Textbook Title: Astronomy (2e) (https://openstax.org/details/books/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/update) ~ Web Version Last Updated: Apr 23, 2026

This is an entirely online class, so a computer and a reliable internet connection are both necessary to be successful in this course. You will be expected to submit assignments directly through Canvas. You may also be asked to access science simulations online that are required to complete certain lab assignments. You will need a way to -EITHER- print out the assignments to complete by hand and then scan/take a photo to upload back into Canvas -OR- you need a way to digitally edit and, in some cases, draw or "sketch" directly on a PDF or word document. ALL PDF and word documents provided in this class are ADA accessible.

Course Description

This course will include hands-on (virtual) lab exercises that will reinforce concepts covered in the lecture and may include additional components that introduce students to the night sky. Math will be required for most of the lab assignments. Lab assignments are designed to solidify and expand your quantitative and general understanding of astronomy.

Pre-requisite (or co-requisite): ASTR-1115-501 (lecture section)

Credit-hour statement: This course meets New Mexico General Education Curriculum Area 3: Physical and Natural Sciences. This is a 1 credit-hour lab course delivered in an asynchronous/online modality over 16 weeks. The expectation is that each credit hour should correspond to a minimum of 3 hours of student engagement per week. Therefore, please plan to spend AT LEAST **3 hours per week** on lab assignments!

Major Topics & Student Learning Outcomes

Upon successful completion of the course, students will:

	Discuss the night sky as seen from Earth, including coordinate systems,

1	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

This course is online and asynchronous. We do NOT have a designated meeting time or place for this class, but I am available for individual student appointments as needed. Because this course is asynchronous, your general expectation for responses from me is that I will always 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. Please navigate to the **Home Page (https://canvas.unm.edu/courses/69535)** in this Canvas course if you'd like to book a meeting with me on my calendar app.

Asynchronous classes allow students to complete work on their own time, but you will still have

deadlines that you will be required to meet. Following instructions and meeting deadlines is a major part of this class! Students are given a time frame during which they need to complete their assignments and meet the requirements of the course, and an automatic penalty will apply for any late submissions.

I will post reminders via Canvas announcements, as well as relevant content and supplemental resources in the **Pages (https://canvas.unm.edu/courses/69535/pages)** section. You will NOT be responsible for reviewing all of the material provided but the suggested information may provide some additional context for your labs, if needed. **Modules (https://canvas.unm.edu/courses/69535/modules)** will also be assigned 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 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 assignments in this course. Grades on assignments are not necessarily final until class is over, meaning I reserve the right to go back and review earlier classwork in the event where I need to correct any errors I may have made grading the first time around. This may result in a higher -OR- lower grade. This is primarily so that an equitable grading process is applied for ALL students; for example, if I notice an error on one person's graded assignment that does not match how the assignment was graded for other students, I reserve the right to go back and make that correction.

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

Grading in this course will be based ONLY on points you earn from **Lab Assignments.**

Virtual Lab Activities (14 x 25 pts) _____ 350 points (100% of total grade)

Grades are calculated out of maximum possible points and converted to a %.

Coursework Expectations

LABS: These are data-based exercises that incorporate basic mathematics and physics principles to align with concepts discussed in the *Astronomy* textbook and to coincide with the lecture material presented concurrently in the ASTR-1115-501 course. There will be 14 lab assignments in total. There will typically be just on lab assignment designated in each weekly module. They will be available at the beginning of the week (Monday) until the end of the week (Sunday, before midnight) to complete on your own time. The exception of this weekly rule is the last week of class, which ends on a Saturday. I am available to help with these assignments if you are struggling with the concepts. There is also UNM tutoring available for math and astronomy (**Tutoring Information** is available at the end of this syllabus).

For these quantitative assignments, you are encouraged to use a scientific calculator, though something like Google calculator should be sufficient for the level of mathematics presented in this course. Astronomy is fundamentally based on physics and mathematics, so you will need to be able to convert units, perform multiplication/division, rearrange equations to solve for a variable, consider exponents in equations, and use scientific notation. There is a math-based "pre-lab" assignment in the **Before You Begin (https://canvas.unm.edu/courses/69535/modules/659701)** Module to help you assess whether you will feel comfortable with the level of math that will be utilized in this course. If you don't feel comfortable with basic algebra and manipulating equations and units for different quantities,

please reach out to me.

Please always keep in mind that if you are ever stuck on a lab assignment and not being able to finish it is impacting your ability to progress through to the subsequent Modules, you can always upload a BLANK lab (or any stand-in blank document) so that Canvas recognizes that you made a submission. If that was the only blockade preventing you from the next Module unlocking, that may be a temporary solution for you. Just remember to go back and re-submit a completed version later on! I will put in a zero as a placeholder grade until the actual assignment is eventually turned in.

Generally speaking, I don't mind if students work with each other (or with a tutor) to complete the lab assignments, but if I notice any identical lab submissions (i.e. you have copied each other directly without showing your work or putting your answers in your own words) I reserve the right to give each of you a zero. Please be aware that you will also receive a zero if it is obvious you have stolen your lab answers from an online "resource" such as ChatGPT, Chegg, etc. If I see any matching written answers on two different assignments, you will both receive a major point deduction, if not a zero for the entire assignment. This will be the case whether you actually worked together or not, because Generative AI can give almost identical answers when given the same prompt. I am getting pretty good at noticing similar phrasing or stilted or unnatural answers. Please write things in your own words and don't copy/paste!

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.

LABS: I will almost always grant an extension on lab assignments (AKA no late penalty will be applied for an extended time frame) 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 first priority! However, if communication with me has not been established about an extension **in advance**, I reserve the right to decline the request.

Because assignments will remain OPEN for you to submit throughout the entire semester, I will only allow for extensions that are requested ahead of time, or for a situational emergency that is communicated to me *as soon as possible after the due date passes* (e.g. a flare up of a documented health issue). Please note that 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 do always welcome any discussion with you that would provide me with context for your circumstances!

For late work that is not otherwise granted an extension, there will be an automatic **PER DAY late penalty applied of 1% off** from the total assignment score.

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 (https://www.britannica.com/topic/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 (https://canvas.unm.edu/courses/69535/modules)** which are listed in the course calendar outline, below.

Modules will be made available at the beginning of each week (Mondays), with homework assignments due at the end of the week (Sundays), except for the last week of class, which ends on a Saturday. 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).. Topic/Textbook chapters are provided as a guide for supporting conceptual understanding. For those who are concurrently enrolled in ASTR 1115, these topics/chapters will align weekly.

Please visit the **UNM Registrar Page (https://registrar.unm.edu/semester-deadline-dates/index.html)** for details on important **Semester Deadline Dates**. This affects fees, refunds, registration changes, withdraw records, and grades. Midterm/Finals Week and breaks are noted.

Fall 2026 Semester: Course Calendar

Dates	Topic/Recommended Associated Textbook Chapters	Assignments/Due Dates
Week 1 August 17-23	**Getting Started Module** & Syllabus Quiz Chapter 1 (Science & The Universe, A Brief Tour)	**Module 1 (Introduction):** Lab 1 due Sunday, August 23rd
Week 2 August 24-30	Chapter 2 (The Birth of Astronomy)	**Module 2 (Astronomy Basics):** Lab 2 due Sunday, August 30th
Week 3 Aug. 31-Sept. 6	Chapters 3 and 4 (Orbits; Earth, Moon and Sky)	**Module 3 (Earth, Moon & Sky):** Lab 3 due Sunday, September 6th
Week 4 September 7-13	Chapters 5 and 6 (Radiation, Spectra; Astronomical Tools)	**Module 4 (The Study of Light):** Lab 4 due Sunday, September 13th
Week 5 September 14-20	Chapters 7 and 8 (Intro to Solar System; Earth as a Planet)	**Module 5 (The Solar System):** Lab 5 due Sunday, September 20th

Week 6 September 21-27	Chapters 9 and 10 (Cratered Worlds; Earth-like Planets)	**Module 6 (Terrestrials):** Lab 6 due Sunday, September 27th
Week 7 Sept. 28-Oct. 4	Chapters 11 and 12 (Giant Planets; Moons and Rings)	**Module 7 (Giants & Moons):** Lab 7 due Sunday, October 4th
Week 8 October 5-11	**FALL BREAK**	**No Lab Due (optionally: catch up on any late/missing lab assignments)**
Week 9 October 12-18	Chapters 15 and 16 (The Sun and Nuclear Fusion)	**Module 8 (The Sun & Other Stars):** Lab 8 due Sunday, October 18th
Week 10 October 19-25	Chapters 17, 18, 19 (Stellar Characteristics; Distances)	**Module 9 (Stellar Classification):** Lab 9 due Sunday, October 25th
Week 11 Oct. 26-Nov. 1	Chapter 21 (The Birth of Stars and Exoplanets)	**Module 10 (Exoplanets):** Lab 10 due Sunday, November 1st
Week 12 November 2-8	Chapters 22, 23, 24 (Star Death, Black Holes, Spacetime)	**Module 11 (Dead & Dying Stars):** Lab 11 due Sunday, November 8th
Week 13 November 9-15	Chapters 25 and 26 (The Milky Way; Galaxies)	**Module 12 (Galaxies, Part 1):** Lab 12 due Sunday, November 15th
Week 14 November 16-22	Chapters 27 and 28 (The Distribution & Evolution of Galaxies)	**Module 13 (Galaxies, Part 2):** Lab 13 due Sunday, November 22nd

Week 15 November 23-29	**THANKSGIVING BREAK**	**No Lab Due (optionally: catch up on any late/missing lab assignments)**
Week 16 Nov. 30-Dec. 6	Chapters 29 and 30 (Big Bang; Astrobiology, Life in Universe)	**Module 14 (Cosmology & Life):** Lab 14 due Sunday, December 6th
Week 17 December 7-12	**Important Note:** For ALL grading consideration, turn in any remaining lab assignments no later than **SATURDAY, December 12th**	**Module: FINAL WEEK** **No Lab Due**

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: Limited Use

The use of Generative Artificial Intelligence (GAI) tools/programs (e.g. ChatGPT, Claude, Gemini, Grammarly Pro, etc.) to complete work for this course is generally not allowed, except for specific instances that would be clearly indicated. There may be some activities or assignments for which limited use of GAI tools may be allowed. However, you are not to interpret this as permission to freely use GAI in any other aspect of this course. You are, for example, not allowed to use GAI for generating responses to lab questions or to create images, but you may use GAI in the scope of brainstorming or organizing your thoughts.

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 (https://pathfinder.unm.edu/code-of-conduct.html)** 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 (https://community.canvaslms.com/t5/Student-Guide/How-do-I-select-personal-pronouns-in-my-user-account-as-a/ta-p/456)**.

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, please contact **Accessibility Resource Center (https://arc.unm.edu/)** at **arcsrvs@unm.edu (mailto: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 (https://lobowellbeing.unm.edu/resources/emotional-mental.html)** and **report (https://ceeo.unm.edu)** incidents. Find confidential services at **LoboRESPECT Advocacy Center (https://loborespect.unm.edu)**, the **Women's Resource Center (https://women.unm.edu)**, and the **Arcoíris Center (https://arcoiris.unm.edu/)**. UNM prohibits discrimination on the basis of sex

(including gender, sex stereotyping, gender expression, and gender identity). All instructors are "responsible employees" who must **communicate reports** (https://ceeo.unm.edu/reporting/how-do-i-report.html) of sexual harassment, sexual misconduct and sexual violence to **Compliance Ethics and Equal Opportunity** (https://ceeo.unm.edu). For more information, please see **UAP 2720** (https://unmpolicy.policystat.com/policy/17084818/latest/) and **UAP 2740** (https://unmpolicy.policystat.com/policy/17084862/latest/).

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 (http://shac.unm.edu) (SHAC) at (505) 277-3136

PASOS Resource Center (mailto:PASOS%20Resource%20Center) (505) 925-8546, or email **pasos@unm.edu** (mailto: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** (https://outlook.office365.com/owa/calendar/TESTLearningCommons@unmm.onmicrosoft.com/bookings/)

If you are making an email appointment with the Writing Center, email your draft to **tutor@unm.edu** (mailto: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** (mailto: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.

Course Summary:

Date	Details	Due
Sun Aug 23, 2026	**LAB 1: Stellarium** (https://canvas.unm.edu/courses/69535/assignments/1446880)	due by 11:59pm
	LAB 2: Scale of the Universe	

Sun Aug 30, 2026	(https://canvas.unm.edu/courses/69535/assignments/1446881)	due by 11:59pm
Sun Sep 6, 2026	LAB 3: Moon & Orbits (https://canvas.unm.edu/courses/69535/assignments/1446882)	due by 11:59pm
Sun Sep 13, 2026	LAB 4: Electromagnetism & Waves (https://canvas.unm.edu/courses/69535/assignments/1446884)	due by 11:59pm
Sun Sep 20, 2026	LAB 5: Plate Tectonics (https://canvas.unm.edu/courses/69535/assignments/1446886)	due by 11:59pm
Sun Sep 27, 2026	LAB 6: Planetary Atmospheres & Temperature (https://canvas.unm.edu/courses/69535/assignments/1446888)	due by 11:59pm
Sun Oct 4, 2026	Lab 7: Jupiter's Galilean Moons (https://canvas.unm.edu/courses/69535/assignments/1446893)	due by 11:59pm
Sun Oct 18, 2026	LAB 8: Nuclear Fusion (https://canvas.unm.edu/courses/69535/assignments/1446890)	due by 11:59pm
Sun Oct 25, 2026	LAB 9: HR Diagrams (https://canvas.unm.edu/courses/69535/assignments/1446891)	due by 11:59pm
Sun Nov 1, 2026	LAB 10: Exoplanets (https://canvas.unm.edu/courses/69535/assignments/1446874)	due by 11:59pm
Sun Nov 8, 2026	LAB 11: Black Holes and Revelations (https://canvas.unm.edu/courses/69535/assignments/1446876)	due by 11:59pm
Sun Nov 15, 2026	LAB 12: Hubble Constant & Universe Age (https://canvas.unm.edu/courses/69535/assignments/1446877)	due by 11:59pm
Sun Nov 22, 2026	LAB 13: Galaxies & Dark Matter (https://canvas.unm.edu/courses/69535/assignments/1446878)	due by 11:59pm
Sun Dec 6, 2026	LAB 14: Astrobiology	due by 11:59pm

(https://canvas.unm.edu/courses/69535/assignments/1446879)