

Astronomy 1115 Syllabus

Section: 501

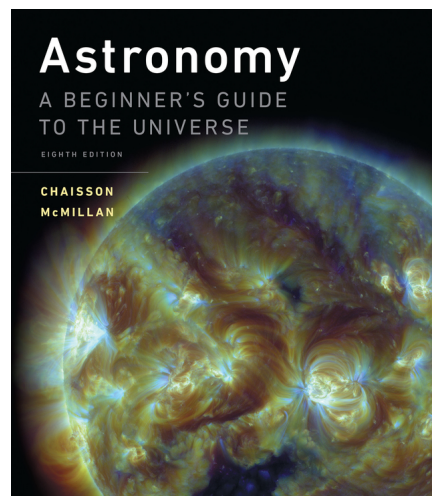
Instructor:	Jose Sanchez
Email:	jsanchez1819@unm.edu
Microsoft Teams Link:	Click Here
Office Hour:	Tuesday 6:30 pm – 7:30 pm
Website:	Click Here

Introduction

Hello and welcome to Astronomy 1115. This course is taught online. It will be your responsibility to watch the weekly lectures, complete the discussion posts, complete the homework assignments, quizzes, and exams that will be posted in UNM Learn. The class will cover a wide range of topics in astronomy including, but not limited to, the Earth, Moon, stars, our solar system, telescopes, the physics of astronomy, the Sun, space, galaxies, black holes, the life cycle of stars, the origin of the universe, and the search for life in the cosmos. I reserve the right to change/update this syllabus as needed and I will do my best to inform you of any changes that occur. I look forward to a productive semester and I will do my best to present the material in a clear, concise, and hopefully interesting manner. If you have any questions about anything please feel free to email me at any time and definitely come to office hours as often as you can. Office hours will be held on Microsoft Teams at the above link and times.

Textbook & Planetarium Software

The **required** textbook for this course is *Astronomy: A Beginner's Guide to the Universe*. 8th edition. Chaisson and McMillan. It can be found at the bookstore.



From time to time we may be using a **free** planetarium software package as well. It is from *Stellarium* and you can download it to your computer or use it directly from the web by clicking [here](#).

Course Policies

- This class will be solely taught online. It will be up to you, the student, to complete all assignments before the due dates.
- No late homework will be accepted. You will have one week to complete the homework assignments and discussion posts/replies. Only under dire circumstances will I consider homework to be turned in late and it must be supported with official documentation.
- Exams and quizzes will be posted regularly. 30 minutes will be given to complete a quiz, 1.5 - 2 hours for exams, and 2 hours for the final.
- Please be respectful of myself (Mr. Sanchez) and other students. No bullying of any kind will be tolerated.
- I am respectful to all races, genders, sexual orientations, gender identities, and religious beliefs. Please inform me if you self identify as anything other than the standard gender pronouns.
- Plagiarism will not be tolerated in this class. Failure to comply with UNM/UNM Valencia policy on plagiarism will result in a zero for the assignment, discussion post, quiz, exam, and/or final exam. Depending on the severity of the plagiarism, a formal complaint may be filed to the Dean of Students to determine if further action is needed. Please view and understand UNM's plagiarism guidelines by clicking [here](#).
- I will respond to emails within two days of receiving them. Most of the time I will respond sooner, but expect to see a response from me within two days.
- Students should let me know ahead of time if they will be out of town or otherwise unable to complete any assignments. Give me time so I can accommodate your situation to the best of my ability. That does not mean I will be accommodating (for example, if you are leaving early for spring break or just taking a "week off"), it just means communicate with me your plans so we can come to the best possible resolution.
- Covid-19: Please follow any local social distancing, mask wearing, hand-washing, and quarantine rules that are in place. I urge each of you to get your Covid vaccine/booster. We follow these rules not only to protect ourselves, but also everyone, especially those individuals that are at a higher risk of severe symptoms from this global pandemic.
- If at any point that I have failed to reasonably accommodate you or your situation, please reach out to me via email (jsanchez1819@unm.edu) and we can work together to solve the situation.
- Learning should be enjoyable. I will do my best to educate you on all things astronomy and make the course an interesting and enjoyable experience.

Course Objectives

By the end of this course you will be able to discuss and describe the following topics:

- The night sky as observed from Earth.
 - Coordinate systems.
 - Apparent daily and yearly motions of astronomical objects.
- The scientific method.
- The scale of the solar system, galaxies, and the universe.
- Telescopes and telescope designs.
- Continuous, absorption, and emission line spectra and how they apply to astronomical objects.
- Solar system objects.
- Models describing the formation of our solar system.

- Gravity, electromagnetism, and other physics related topics that can be used to describe the universe.
- The discovery of exoplanets and how they are discovered.
- The Sun.
 - Structure and the source of its power.
 - Solar activity and its effects on the solar system.
- The life and death of stars.
 - Solar life cycles.
 - Hertzsprung-Russell diagrams.
 - White dwarfs.
 - Neutron stars.
 - Black holes.
- The structure and formation of galaxies and galaxy clusters.
- The origin of the universe.
 - The Big Bang.
 - Expansion.
 - Evolution up to present day.
- The search for life beyond the Earth.

Grading

HOMEWORK 30%: There will be one weekly homework assignment that will cover the week’s course material. It will consist of questions directly related to the lecture and book readings. These homework assignments will be designed to help you understand the material and prepare you for the quizzes and exams.

DISCUSSION ASSIGNMENT 10%: Each week I will propose a topic in astronomy that will require you to discuss the question in a 50 word minimum discussion post. You will create a discussion thread in UNM Learn, briefly discussing the question. You will then need to respond to two other students’ assignments. A proper response will earn you maximum points. A proper response will be to address what your colleague stated in their discussion assignment and give a thoughtful discussion about what was posted. Responses like, “I agree”, or “good job” are not proper responses. You can agree or disagree with a post, but please follow all netiquette rules. Review UNM’s netiquette guidelines [here](#).

QUIZZES 15%: There will be a quiz roughly every other week as shown on the course schedule below. The quiz material will be based on the previous two homework assignments as well as the previous two weeks of lecture instruction. I reserve the right to add any material that I chose from material covered up to the quiz date as I see fit. To be prepared for the quiz make sure you understand and can apply the homework assignments as well as have understood the previous lectures.

EXAMS 25%: There will be three exams that will assess your understanding of the material. Understand the homework, quizzes, and lectures leading up to an exam and you will be well prepared. Please see the course schedule below for exam dates.

FINAL EXAM 20%: There will be a cumulative final exam.

Grade Distinctions:

98-100 A+	93-97.99 A	90-92.99 A-
87-89.99 B+	83-86.99 B	80-82.99 B-
77-79.99 C+	73-76.99 C	70-72.99 C-
67-69.99 D+	63-66.99 D	60-62.99 D-
Below 60 F		

Office Hours

Attending office hours will be the key to your success in this course. Office hours will be held on Microsoft Teams and the link is given at the beginning of this syllabus. I will gladly answer any questions you may have related to the assigned material. Please attend my office hours early and often.

Learning Outcomes

The following are the learning outcomes for this course. These are taken directly from the New Mexico higher education department (NMHED). You can click [here](#) to find them on the NMHED's website as well.

1. Students will discuss the night sky as seen from Earth, including coordinate systems, the apparent daily and yearly motions of the sun, Moon, and stars, and their resulting astronomical phenomena.
2. Students will list and apply the steps of the scientific method.
3. Students will describe the scale of the Solar System, Galaxy, and the Universe.
4. Students will explain telescope design and how telescopes and spectra are used to extract information about Astronomical objects.
5. Students will describe the formation scenarios and properties of solar system objects.
6. Students will describe gravity, electromagnetism, and other physical processes that determine the appearance of the universe and its constituents.
7. Students will describe methods by which planets are discovered around other stars and current results.
8. Students will describe the structure, energy generation, and activity of the sun.
9. Students will compare our sun to other stars and outline the evolution of stars of different masses and its end products, including black holes.
10. Students will describe the structure of the Milky Way and other galaxies and galaxy clusters.
11. Students will describe the origin, evolution, and expansion of the universe based on the Big Bang Theory and recent Astronomical observations.
12. Students will describe conditions for life, its origins, and possible locations in the universe.

Students with Disabilities

Qualifying students with disabilities should contact me immediately so proper accommodations can be arranged. My faculty responsibilities include:

- Being open to accommodating students.
- Providing program access.
- Meeting with students to discuss their needs.
- Implementing reasonable accommodations.
- Maintaining confidentiality.

Title IX Statement

Title IX prohibitions on sex discrimination include various forms of sexual misconduct, such as sexual assault, rape, sexual harassment, domestic and dating violence, and stalking. Current UNM policy designates instructors as required reporters, which means that if I am notified (outside of classroom activities) about any Title IX violations, I must report this information to the Title IX coordinator. If you or someone you know has been harassed or assaulted and would like to receive support and academic advocacy, there are numerous confidential routes available to you. For example, you can contact the Women's Resource Center, the LGBTQ Resource Center, Student Health and Counseling (SHAC), or LoboRESPECT. LoboRESPECT can be contacted on their 24-hour crisis line, (505) 277-2911 and online at loborespect@unm.edu. You can receive non-confidential support and learn more about Title IX through the Title IX Coordinator at (505) 277-5251 and <http://oeo.unm.edu/title-ix/>. Reports to law enforcement can be made to UNM Police Department at (505) 277-2241.

Plagiarism

Please adhere to the following UNM Valencia Policy on Academic Dishonesty:

Each student is expected to maintain the highest standards of honesty and integrity in academic and professional matters. The University reserves the right to take disciplinary action, up to and including dismissal, against any student who is found guilty of academic dishonesty or otherwise fails to meet the standards. Any student judged to have engaged in academic dishonesty in course work may receive a reduced or failing grade for the work in question and/or for the course. Academic dishonesty includes, but is not limited to, dishonesty in quizzes, tests, or assignments; claiming credit for work not done or done by others; hindering the academic work of other students; misrepresenting academic or professional qualifications within or without the University; and nondisclosure or misrepresentation in filling out applications or other University records.

Learning Center

Please take advantage of tutoring available from the Learning Center. Click [here](#) for more information. If you would like to request a tutoring appointment click [here](#) for the form that you have to fill out.

Tips and Tricks to be Successful in this Class

- Login to UNM Learn daily and check your LoboMail daily as well. Make a habit of it.
- Watch all of the lectures and take notes. Because this is an online course you have the privilege to re-watch the lectures.
- Read the book! There are questions that will come up that will be taken directly from the chapters themselves.
- Start the homework early! Starting early allows you to come to my office hours to get help if you are stuck on an assignment.
- Come to office hours!
- Don't plagiarize! I'd rather you get a C or a D on an assignment rather than you getting an F and an email sent to the Dean of Students stating that you plagiarized/cheated.
- Read the syllabus. Re-read the syllabus. Read it again. Check the syllabus often for updates.
- Ask questions! Whether via email or office hours it is my job to instruct you. I can't help you if I don't know you need the help.

Course Schedule

Please see the course schedule (calendar) on the following pages.

JANUARY
2022
ASTRONOMY 1115

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY		
						1		
2	3	4	5	6	7	8		
9	10	11	12	13	14	15		
16	<i>Martin Luther King Day (no class)</i> <i>Week 1</i> Chapter 0	17	18	19	20	21	22	
Homework 1 due Discussion post 1 due	<i>Week 2</i> Chapter 1	23	24	25	26	27	28	29
Homework 2 due Discussion post 2 due	<i>Quiz 1 posted</i> <i>Week 3</i> Chapter 2	30	31					

FEBRUARY
2022
ASTRONOMY 1115

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1	2	3	4 <i>Last day to drop w/out a "W"</i>	5 <i>Quiz 1 due</i>
6 Homework 3 due Discussion post 3 due	7 <i>Week 4</i> Chapter 3	8	9	10	11	12
13 <i>Super Bowl</i> Homework 4 due Discussion post 4 due	14 <i>Valentine's Day</i> <i>Week 5</i> Exam 1 posted Chapter 4	15	16	17	18	19 Exam 1 due
20 Homework 5 due Discussion post 5 due	21 <i>Week 6</i> Chapter 5	22	23	24	25	26
27 Homework 6 due Discussion post 6 due	28 <i>Quiz 2 posted</i> <i>Week 7</i> Chapter 6 and 7					

MARCH
2022
ASTRONOMY 1115

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1	2	3	4	5 <i>Quiz 2 due</i>
6 Homework 7 due Discussion post 7 due	7 <i>Week 8</i> Chapter 8	8	9	10	11	12 Homework 8 due Discussion post 8 due
13 <i>Spring Break (no classes)</i>	14 <i>Spring Break (no classes)</i> <i>Week 9</i>	15 <i>Spring Break (no classes)</i>	16 <i>Spring Break (no classes)</i>	17 <i>Spring Break (no classes)</i>	18 <i>Spring Break (no classes)</i>	19 <i>Spring Break (no classes)</i>
20 <i>Spring Break (no classes)</i>	21 <i>Week 10</i> Exam 2 posted Chapter 9	22	23	24	25	26 Exam 2 due
27 Homework 9 due Discussion post 9 due	28 <i>Week 11</i> Chapter 10 and 11	29	30	31		

APRIL
2022
ASTRONOMY 1115

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					1	2
3 Homework 10 due Discussion post 10 due	4 <i>Quiz 3 posted</i> <i>Week 12</i> Chapter 12 and 13	5	6	7	8	9 <i>Quiz 3 due</i>
10 Homework 11 due Discussion post 11 due	11 <i>Week 13</i> Chapter 14	12	13	14	15 <i>Last day to withdraw w/out student services permission</i>	16
17 Homework 12 due Discussion post 12 due	18 <i>Week 14</i> Exam 3 posted Chapter 15	19	20	21	22	23 Exam 3 due
24 Homework 13 due Discussion post 13 due	25 <i>Week 15</i> Chapter 16 and 17	26	27	28	29	30

MAY
2022
ASTRONOMY 1115

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<div style="text-align: right;">1</div> <p>Homework 14 due</p> <p>Discussion post 14 due</p>	<div style="text-align: right;">2</div> <p>Quiz 4 posted Week 16</p> <p>Chapter 18</p>	<div style="text-align: right;">3</div>	<div style="text-align: right;">4</div>	<div style="text-align: right;">5</div>	<div style="text-align: right;">6</div> <p>Last day to withdraw with student services permission</p>	<div style="text-align: right;">7</div> <p>Last day of instruction</p> <p>Quiz 4 due</p>
<div style="text-align: right;">8</div>	<div style="text-align: right;">9</div> <p>FINALS WEEK</p> <p>FINAL EXAM posted</p>	<div style="text-align: right;">10</div> <p>FINALS WEEK</p>	<div style="text-align: right;">11</div> <p>FINALS WEEK</p>	<div style="text-align: right;">12</div> <p>FINALS WEEK</p>	<div style="text-align: right;">13</div> <p>FINALS WEEK</p>	<div style="text-align: right;">14</div> <p>FINALS WEEK - Semester ends</p> <p>FINAL EXAM due</p>
<div style="text-align: right;">15</div>	<div style="text-align: right;">16</div>	<div style="text-align: right;">17</div>	<div style="text-align: right;">18</div>	<div style="text-align: right;">19</div>	<div style="text-align: right;">20</div>	<div style="text-align: right;">21</div>
<div style="text-align: right;">22</div>	<div style="text-align: right;">23</div>	<div style="text-align: right;">24</div>	<div style="text-align: right;">25</div>	<div style="text-align: right;">26</div>	<div style="text-align: right;">27</div>	<div style="text-align: right;">28</div>
<div style="text-align: right;">29</div>	<div style="text-align: right;">30</div>	<div style="text-align: right;">31</div>				