The Solar System – Hybrid
Physics 1052.450
Fall 2025

Online Lecture, with in-Person Labs

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Welcome! As members of the UNT community, we have all made a commitment to be part of an institution that respects and values the identities of students and employees with whom we interact. UNT does not tolerate identity-based discrimination, harassment, and retaliation. Everyone should feel comfortable being their authentic selves in our class. If you have any questions or concerns, do not hesitate to contact me.

Course Description: This introductory astronomy course offered by the UNT Physics Department emphasizes exploration of celestial motions, phases of moon, eclipses, the history of astronomy, gravity, electromagnetic radiation, telescopes, physical properties of the planets, asteroids, meteoroids, comets, the discovery of extrasolar planets, and the search for life in the universe.

Format: This is a HYBRID COURSE which is primarily internet based. Only seven laboratory exercises will take place on campus. Several opportunities for each of these labs will be given from which students will need to schedule. More info on this will be given during Orientation. This course may be used to satisfy the University Core Curriculum requirement for Life and Physical Sciences.
You can contact me via email at jens.neu@unt.edu or by sending a message in Canvas. In most cases, you can expect to receive a response within 24 hours. You are also always welcome to come by my office during office hours or at other times. You are expected to check your UNT email and Canvas messages at least once a day.

Course Orientation: A recorded orientation is provided on Canvas 'Orientation' page under the 'Start Here' Module after the meetings conclusion. This orientation is critical you attend to be successful in the course. It will get you familiar with the format of the course and aid your success. You will complete your Orientation Quiz after you have viewed the Orientation and reviewed this Syllabus.

Course Objectives: This course will cover history of astronomy and the physical properties of the earth, moon, planets and minor bodies. Includes weekly outdoor and indoor laboratory exercises. Students will learn how to:

- **Critical Thinking Skills**, including creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
- **Communication Skills**, including effective development, interpretation and expression of ideas through written, oral and visual communication
- **Empirical and Quantitative Skills**, including the manipulation and analysis of numerical data or observable facts resulting in informed conclusions
- **Teamwork**, including the ability to consider different points of view and to work effectively with others to support a shared purpose or goal"

Course Pre-requisites: None

Course Goals:
By the end of this course, students will be able to:
- appraise our place in the universe
- assess the connections between human life and the universe as a complex, orderly system
- apply basic scientific principles to explain everyday phenomena
- recognize science as a process through which we seek to understand the world around us
- apply the critical thinking, empirical and quantitative skills needed to solve scientific problems
- express their scientific ideas in clear, logical, organized, and concise ways
- effectively communicate within small groups
- evaluate scientific validity as life-long learners

Textbook and Online Homework System:
Text: *The Essential Cosmic Perspective* (9th Edition)
by Jeffrey O. Bennett, Megan O. Donahue, Nicholas Schneider, Mark Voit

Homework + Study Guide: MasteringAstronomy (purchased access code)

Required Materials:
You will have free access Mastering Astronomy for 14 days after the date that you first access the site. After that time, you must have purchased and entered an access code to complete pre-lecture and homework assignments.

Access to a Computer or Laptop: Some assignments cannot be completed from mobile devices such as phone, tablets, or Chromebooks. You will need administrator access to this computer to install software for labs.

Other: A scientific calculator will be needed for labs. An app on your phone should do the trick. A ruler (mm precision) and scientific calculator will be needed for labs.

Technical Skill Requirements
To be successful in this course, you will need to be proficient in the following:
- Using Canvas
- Downloading and uploading files
    - Includes downloading and installing software on your computer
    - Scanning or taking pictures of documents and uploading them to Canvas
- Sending and receiving emails
- Using *MasteringAstronomy* (tutorials available in course as extra credit assignments)
- Using Zoom Online meeting software to access office or tutoring hours

<u>Course Communication and Assistance:</u>

Weekly Announcements
Each week an announcement will be posted on Canvas. Make sure and read these announcements. They are our weekly contact and you will get important information such as that week's activities, changes in due dates, ways to resolve problems, or hints for success.

Email
Since this is predominantly an online course, email will be our main point of contact. Make sure to check your email associated with Canvas frequently. Canvas conveniently keeps and inbox for you on the course webpage,

so in the very least, check there. I will generally respond to emails within 24 hours unless it's the weekend, in which case I will get back to you Monday. Questions about labs should be emailed to astrolab@unt.edu or the Astrolab contact in Canvas. **IMPORTANT**: For any emails you send make sure to **include PHYS 1052 in the subject** of the email. This will help me prioritize your email so I can get back to you quickly.

Office Hours:
During my office hours, I will be available to answer any questions my Zoom Personal Meeting room. The links for these can be found at top of this Syllabus and under "Office Hours, Tutoring, and Other Student Support" on the course Canvas page. We can also schedule a meeting if you email me 24 hours in advance so we can coordinate a time. Please only access the room at the times listed as other meetings might be held for different purposes at other times.

On Campus Tutoring/Open Lab Hours:
Times for Tutoring or Open Lab will be posted during the first week of class. Students may come with questions or any other course help.

Technical Support:
The UIT Helpdesk will provide support with any issues you might have with Canvas and they may be able to help you troubleshoot other computer issues. 940-565-2324 or helpdesk@unt.edu

Mastering Astronomy Support:
Help with Mastering Astronomy for Canvas
(https://help.pearsoncmg.com/integration/cg/canvas/student/en/content/get_started.htm)
Pearson Back to School Website| Direct Support | Phone: (833)-585-1828

Physics Resource Center: Physics tutors are available to provide help throughout the week in **Hickory Hall 266.** This is a free service and does not require any reservations or prior planning - just drop in. There is plenty of seating and computers in so you can go there to work on your homework and have tutors available nearby if you get stuck.

Course Outline, Assignments, and Grades:
The course is divided into **14 Modules**. Each module contains a Reading Assignments, Pre-lecture Videos and Questions, Homework Assignments, and Self Tests. These items are outlined in each Modules To-Do Checklist and Objectives section. There are 4 Exams. There are 5 Labs that will take place on campus. Important information on Labs and how to schedule them can be found in a Lab Syllabus document which can be found in the 502 section of Canvas. **The Course Calendar at the end of the syllabus lists the full course outline and due dates for items to be submitted but does not include Lab work. You will need to review the Lab Section in Canvas (502 section) for that information.** The Table below outlines the all the assignments for the course and how they will be weighted towards your final grade.

Assignment	Points Possible	Percentage of Final Grade
Orientation Quiz	20 points	2%

• Attempt after reading Syllabus and watching Orientation Video		
Prelecture Video and Questions • 14 Assignments @ 10 points each — The lowest scores will be dropped — The second lowest will be bonus	120 points	12%
Homework • 14 Assignments @ 20 points each — Two lowest scores will be dropped — The second lowest will be bonus	240 points	24%
Labs • See **Lab Syllabus** for breakdown	200 points	20%
Exams • 4 Exams @ 105 points each • Additional approx. 5 extra points	420 points	42%
Total Points Possible	1000 points	100%
Extra Credit Points added to Course Point Total	≤ 60 points	106%

Divide your total points earned by 10 to obtain the percentage and determine your final grade

A = 90 to 100 B = 80 to 89 C = 70 to 79 D = 60 to 69 F = below 60

All assignments are due by the time/date listed on the Course Calendar at the end of the Syllabus. We drop two (2) Prelecture assignments and two (2) Homework assignments (one from each group becomes bonus points). Therefore, we do not extend due date deadlines for any assignments unless you provide documentation of an exceptional situation. ***If for any reason you miss an Exam, you must notify your instructor within 48 hours of missing it in order to get an opportunity to make it up.***

Orientation Quiz:

This is a quiz to ensure you are familiar with the course. You will complete it after reading carefully through this document and attending the Zoom Orientation meeting on the first day of class (or watching the recording of it). You can find the time of the Zoom Orientation meeting in on the Course Canvas page under the "Announcements". You will get 3 attempts and will be awarded the highest score you receive.

Prelecture Video and Questions:

Each of the Modules 1-14 has a Prelecture Video and Questions assignment posted in MasteringAstronomy and accessed through the course Canvas website.

— Each pre-lecture assignment is worth 10 points.

— The best 13 scores (of 14 possible) will count toward your course grade.

— Each assignment will consist of a short video and a few questions to be answered and submitted online for grading.

— **Timing of these assignments is key. No extensions will be granted, and late assignments will not be graded.**

Homework:

Each of the Modules 1-14 has a Homework assignment posted in MasteringAstronomy and accessed through the course Canvas website.

— Each homework assignment is worth 20 points.

— The best 13 scores (out of 14 possible) will count toward your course grade.

— You will have 3 attempts for each question

— **Late assignments will receive a 10% penalty off for each day the assignment is late**

Labs:

MAKE SURE TO REVIEW LAB SYLLABUS AND LAB ORIENATION VIDEO IN PHYS 1052 Section 501/502 in CANVAS. Make sure you schedule you labs!

Exams:

Four 70-minute, 50 question exams will be given during this course. Each exam is worth 105(plus bonus) points toward your course point total. See the Course Calendar for the exam dates. Exam review or review material will be posted along with the Exams.

— Exam #1 covers Modules 1-4

— Exam #2 covers Modules 5-7

— Exam #3 covers Modules 8-10

— Exam #4 covers Modules 11-14 + 'Common Knowledge' Assessment Questions

Extra Credit:

Extra Credit may be earned in three ways:

1) Up to 10 points of credit may be earned by completing the Introduction to MasteringAstronomy Tutorial and the Math Basics Tutorial posted in the MasteringAstronomy section of the course website. We strongly suggest you complete the first tutorial before you attempt the homework assignments.

2) Up to 30 points will be added from the lowest Prelecture (10) and Homework (20) score.

3) Additional extra points of approximately 5 points can be achieved in the exams.

Course Expectations:

As the instructor in this course, I am responsible for

- providing course materials that will assist and enhance your achievement of the stated course goals, guidance,
- providing timely and helpful feedback within the stated guidelines, and
- assisting in maintaining a positive learning environment for everyone.

As a student in this course, you are responsible for

- reading and completing all requirements of the course in a **timely manner**,
- working to remain attentive and engaged in the course and interact with your fellow students, and
- assisting in maintaining a positive learning environment for everyone.

Taking on online course is very different from taking an on-campus course. **You, the student is responsible for his/her own learning**. We have provided tools that you can use to facilitate this learning, but it will require self-discipline and motivation as well as **effective time management** to get the most out of this course and have the best shot at getting a good grade.

Hints to being a successful online student (Strongly suggested!):

1. Start early in the week! Do not wait until the day you are supposed to be done with the module. If you do, you will not be able to get through all of the material and you will already be behind. We can't emphasize this point enough! Fight any tendency to procrastinate and start early!

2. Pay attention to the deadlines! You can expect to spend at least as much time on this course as you would an on-campus course. So if you normally spend 3 – 4 hours a week attending class, 3 – 6 hours a week reading and doing homework, then expect to spend at least 6 – 12 hours a week on this course. Remember, when estimating how long it will take you to accomplish a task, it always takes longer. Double your estimate and adjust your schedule accordingly.

3. No question is a dumb question. If you can't find a piece of information, or have a question about how to do something in Canvas/MasteringAstronomy, please ask! Get your answer so that you can keep moving forward with the course.

4. Start Early! Don't Procrastinate!

Dropping the Course: The last day you can drop this course and earn a grade of a W is April 5, 2024. See UNT's Registrar page for more information on dropping a course. (https://registrar.unt.edu/dropping-classes)

Course Evaluation: The Student Perceptions of Teaching (SPOT) is a requirement for all organized classes at UNT. This short survey will be made available to you on-line at the end of the semester and will provide you with an opportunity to provide feedback to your course instructor. SPOT is considered to be an important part of your participation in this class. You will receive an email from "UNT SPOT Course Evaluations" from no-reply@iasystem.org with the survey link. You will have separate SPOT evaluations for lecture, recitation, and lab. During fall and spring semesters SPOT surveys are open to students to complete two weeks prior to final exams.

UNT Policies

Academic Integrity Standards and Consequences: According to UNT Policy 06.003, Student Academic Integrity, academic dishonesty occurs when students engage in behaviors including, but not limited to cheating, fabrication, facilitating academic dishonesty, forgery, plagiarism, and sabotage. A finding of academic dishonesty may result in a range of academic penalties or sanctions ranging from admonition to expulsion from the University.

ADA Accommodation Statement: UNT makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide a student with an accommodation letter to be delivered to faculty to begin a private discussion regarding one's specific course needs. Students may request accommodations at any time; however, ODA notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information see the ODA website at disability.unt.edu.

Emergency Notification & Procedures: UNT uses a system called Eagle Alert to quickly notify students with critical information in the event of an emergency (i.e., severe weather, campus closing, and health and public safety emergencies like chemical spills, fires, or violence). In the event of a university closure, please refer to Canvas for contingency plans for covering course materials.

Sexual Assault Prevention: UNT is committed to providing a safe learning environment free of all forms of sexual misconduct, including sexual harassment sexual assault, domestic violence, dating violence, and stalking. Federal laws (Title IX and the Violence Against Women Act) and UNT policies prohibit discrimination on the basis of sex and therefore prohibit sexual misconduct. If you or someone you know is experiencing sexual harassment, relationship violence, stalking, and/or sexual assault, there are campus resources available to provide support and assistance. UNT's Survivor Advocates can assist a student who has been impacted by violence by filing protective orders, completing crime victim's compensation applications, contacting professors for absences related to an assault, working with housing to facilitate a room change where appropriate, and connecting students to other resources available both on and off campus. The Survivor Advocates can be reached at SurvivorAdvocate@unt.edu or by calling the Dean of Students Office at 940-565-2648. Additionally, alleged sexual misconduct can be non-confidentially reported to the Title IX Coordinator at oeo@unt.edu or at (940) 565 2759.

Important Notice for F-1 Students taking Distance Education Courses

Federal Regulation

To read detailed Immigration and Customs Enforcement regulations for F-1 students taking online courses, please go to the Electronic Code of Federal Regulations website (http://www.ecfr.gov/). The specific portion concerning distance education courses is located at Title 8 CFR 214.2 Paragraph (f)(6)(i)(G).

The paragraph reads:

(G) For F-1 students enrolled in classes for credit or classroom hours, no more than the equivalent of one class or three credits per session, term, semester, trimester, or quarter may be counted toward the full course of study requirement if the class is taken on-line or through distance education and does not require the student's physical attendance for classes, examination or other purposes integral to completion of the class. An on-line or distance education course is a course that is offered principally through the use of television, audio, or computer transmission including open broadcast, closed circuit, cable, microwave, or satellite, audio conferencing, or computer conferencing. If the F-1 student's course of study is in a language study program, no on-line or distance education classes may be considered to count toward a student's full course of study requirement.

University of North Texas Compliance

To comply with immigration regulations, an F-1 visa holder within the United States may need to engage in an on-campus experiential component for this course. This component (which must be approved in advance by the instructor) can include activities such as taking an on-campus exam, participating in an on-campus lecture or lab activity, or other on-campus experience integral to the completion of this course.

If such an on-campus activity is required, it is the student's responsibility to do the following:

(1) Submit a written request to the instructor for an on-campus experiential component within one week of the start of the course.

(2) Ensure that the activity on campus takes place and the instructor documents it in writing with a notice sent to the International Student and Scholar Services Office. ISSS has a form available that you may use for this purpose.

Because the decision may have serious immigration consequences, if an F-1 student is unsure about his or her need to participate in an on-campus experiential component for this course, s/he should contact the UNT International Student and Scholar Services Office (telephone 940-565-2195 or email internationaladvising@unt.edu) to get clarification before the one-week deadline.

Student Verification

UNT takes measures to protect the integrity of educational credentials awarded to students enrolled in distance education courses by verifying student identity, protecting student privacy, and notifying students of any special meeting times/locations or additional charges associated with student identity verification in distance education courses.

See UNT Policy 07-002 Student Identity Verification, Privacy, and Notification and Distance Education Courses (https://policy.unt.edu/policy/07-002).

Use of Student Work

A student owns the copyright for all work (e.g. software, photographs, reports, presentations, and email postings) he or she creates within a class and the University is not entitled to use any student work without the student's permission unless all of the following criteria are met:

- The work is used only once.
- The work is not used in its entirety.
- Use of the work does not affect any potential profits from the work.
- The student is not identified.
- The work is identified as student work.

If the use of the work does not meet all of the above criteria, then the University office or department using the work must obtain the student's written permission.

Download the UNT System Permission, Waiver and Release Form

Transmission and Recording of Student Images in Electronically-Delivered Courses

1. No permission is needed from a student for his or her image or voice to be transmitted live via videoconference or streaming media, but all students should be informed when courses are to be conducted using either method of delivery.

2. In the event an instructor records student presentations, he or she must obtain permission from the student using a signed release in order to use the recording for future classes in accordance with the Use of Student-Created Work guidelines above.

3. Instructors who video-record their class lectures with the intention of re-using some or all of recordings for future class offerings must notify students on the course syllabus if students' images may appear on video. Instructors are also advised to provide accommodation for students who do not wish to appear in class recordings.

Example: This course employs lecture capture technology to record class sessions. Students may occasionally appear on video. The lecture recordings will be available to you for study purposes and may also be reused in future course offerings.

No notification is needed if only audio and slide capture is used or if the video only records the instructor's image. However, the instructor is encouraged to let students know the recordings will be available to them for study purposes.

Academic Support & Student Services

Mental Health

UNT provides mental health resources to students to help ensure there are numerous outlets to turn to that wholeheartedly care for and are there for students in need, regardless of the nature of an issue or its severity. Listed below are several resources on campus that can support your academic success and mental well-being:

- Student Health and Wellness Center (https://studentaffairs.unt.edu/student-health-and-wellness-center)
- Counseling and Testing Services (https://studentaffairs.unt.edu/counseling-and-testing-services)
- UNT Care Team (https://studentaffairs.unt.edu/care)
- UNT Psychiatric Services (https://studentaffairs.unt.edu/student-health-and-wellness-center/services/psychiatry)
- Individual Counseling (https://studentaffairs.unt.edu/counseling-and-testing-services/services/individual-counseling)

Chosen Names

A chosen name is a name that a person goes by that may or may not match their legal name. If you have a chosen name that is different from your legal name and would like that to be used in class, please let the instructor know. Below is a list of resources for updating your chosen name at UNT.

- UNT Records
- UNT ID Card

- UNT Email Address
- Legal Name

*UNT euIDs cannot be changed at this time. The collaborating offices are working on a process to make this option accessible to UNT community members.

Pronouns

Pronouns (she/her, they/them, he/him, etc.) are a public way for people to address you, much like your name, and can be shared with a name when making an introduction, both virtually and in-person. Just as we ask and don't assume someone's name, we should also ask and not assume someone's pronouns.

You can add your pronouns to your Canvas account so that they follow your name when posting to discussion boards, submitting assignments, etc.

Below is a list of additional resources regarding pronouns and their usage:

- What are pronouns and why are they important?
- How do I use pronouns?
- How do I share my pronouns?
- How do I ask for another person's pronouns?
- How do I correct myself or others when the wrong pronoun is used?

Additional Student Support Services

- Registrar (https://registrar.unt.edu/registration)
- Financial Aid (https://financialaid.unt.edu/)
- Student Legal Services (https://studentaffairs.unt.edu/student-legal-services)
- Career Center (https://studentaffairs.unt.edu/career-center)
- Multicultural Center (https://edo.unt.edu/multicultural-center)
- Counseling and Testing Services (https://studentaffairs.unt.edu/counseling-and-testing-services)
- Pride Alliance (https://edo.unt.edu/pridealliance)
- UNT Food Pantry (https://deanofstudents.unt.edu/resources/food-pantry)

Academic Support Services

- Academic Resource Center (https://clear.unt.edu/canvas/student-resources)
- Academic Success Center (https://success.unt.edu/asc)

- UNT Libraries (https://library.unt.edu/)
- Writing Lab (http://writingcenter.unt.edu/)

COURSE CALENDAR
PHYS 1052 Sec 100
Spring 2024

ASSIGNMENTS ARE DUE AT 11:59 PM ON THE DUE DATE LISTED ON THIS CALENDAR

	MON	TUES	WED	THURS	FRI

WK 1	**Aug 18** Course Begins **Course Orientation via Canvass Video**	**Aug 19**	**Aug 20**	**Aug 21** Orientation Quiz	**Aug 22** Mastering-- Extra Credit due
WK 2	**Aug 25** ***Module 1 Begins***	**Aug 26** Prelecture 01	**Aug 27**	**Aug 28**	**Aug 29** Homework 01 Due
WK 3	**Sept 1** *Labor day*	**Sept 2** ***Module 2 Begins*** Prelecture 02	**Sept 3**	**Sept 4**	**Sept 5** Homework 02
WK 4	**Sept 8** ***Module 3 Begins***	**Sept 9** Prelecture 03	**Sept 10**	**Sept 11**	**Sept 12** Homework 03
WK 5	**Sept 15** ***Module 4 Begins***	**Sept 16** Prelecture 04	**Sept 17**	**Sept 18**	**Sept 19** Homework 04 **Exam 1 Opens**
WK 6	**Sept 22** **Exam 1 Closes @11:59pm** ***Module 5 Begins***	**Sept 23** Prelecture 05	**Sept 24**	**Sept 25**	**Sept 26** Homework 05
WK7	**Sept 29** ***Module 6 Begins***	**Sept 30** Prelecture 06	**Oct 1**	**Oct 2**	**Oct 3** Homework 06
WK 8	**Oct 6** ***Module 7 Begins***	**Oct 7** Prelecture 07	**Oct 8**	**Oct 9**	**Oct 10** Homework 07 **Exam 2 Opens**
	MON	**TUES**	**WED**	**THURS**	**FRI**
WK 9	**Oct 13** **Exam 2 Closes @11:59pm** ***Module 8 Begins***	**Oct 14** Prelecture 08	**Oct 15**	**Oct 16**	**Oct 17** Homework 08

WK 10	**Oct 20** ***Module 9 Begins***	**Oct 21** Prelecture 09	**Oct 22**	**Oct 23**	**Oct 24** Homework 09
WK 11	**Oct 27** ***Module 10 Begins***	**Oct 28** Prelecture 10	**Oct 29** **No Office Hours**	**Oct 30**	**Oct 31** Homework 10 **Exam 3 Opens**
WK 12	**Nov 3** **Exam 3 Closes @11:59pm** ***Module 11 Begins***	**Nov4** Prelecture 11	**Nov 5**	**Nov 6**	**Nov 7** Homework 11
WK 13	**Nov 10** ***Module 12 Begins*** Office Hour	**Nov 11** Prelecture 12	**Nov 12** **No Office Hours**	**Nov 13**	**Nov 14** Homework 12
WK 14	**Nov 17** ***Module 13 Begins***	**Nov 18** Prelecture 13	**Nov 19**	**Nov 20**	**Nov 21** Homework 13
WK 15	**Nov 24** **Thanksgiving break**	**Nov 25** **Thanksgiving break**	**Nov 26** **Thanksgiving break**	**Nov 27** **Thanksgiving break**	**Nov 28** **Thanksgiving break**
WK 16	**Dec 1** ***Module 14 Begins***	**Dec 2** Prelecture 14	**Dec 3**	**Dec 4**	**Dec 5** Homework 14
WK 17	**Dec 8** **Final Exam Opens**	**Dec 9**	**Dec 10** **Final Exam Closes @11:59pm** Course Ends	**Dec 11**	**Dec 12**