

# COURSE NUMBER PHYS1304

## COURSE TITLE Astronomy of the Solar System

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**Office Hours: virtual by arrangement, M-F. Contact me by e mail anytime 9am to 9 pm**

Please feel free to contact me if you have any problems whatsoever in this course—or if you're doing well, and just want to talk about the wonders and mysteries of the Universe. It's in all our interests, and I care, that you do well! The best way to contact me is by personal in-office visit, or by e mail. Telephone is often less useful because the visual aspect is missing, and it is often important if I am to respond properly to you.

## Course Information

### Course Description

This course is a three-hour introduction to Solar System astronomy. A separate laboratory course can be taken. The sequence of astronomy courses (PHYS 1303 and PHYS 1304) plus labs (PHYS 1103 and PHYS 1104) satisfies the eight-hour physical science with lab requirement for most degree programs. This course can be used for elective credits in most degree programs. Physics 1304, Astronomy of the Solar System, is an introduction to astronomy of the Solar System, covering night sky observations, the techniques and methods of modern astronomy, and basic concepts related to Solar System objects such as planets, asteroids, and comets. This is an eight-week, online course.

**Note: This course is a full 16-weeks' material done in 8 weeks. It demands a lot of work in a compressed time. It cannot be done by working a couple hours on an evening trying to look**

up answers in the text. It requires some effort every day, a minimum of 3-4 hours and no less per week.

## **Prerequisite and Co-requisite Courses**

None

## **Prerequisite Skills**

Students can expect to spend a minimum of 6 hours per week to complete all the readings and assignments. The lessons themselves take as long as the student will require to read the materials and watch or listen to media presentations. Assignments are due throughout the week, so it is not possible to do the course successfully by doing it only on weekends.

**Note: This course cannot be done successfully by attempting to do a week's work on the weekend. Binge studying is counterproductive and seldom gives decent results. Each week's material opens on Monday just after 12 AM and closes the following Sunday at 11:59 PM. If you forget to do your work during the week and the lesson closes you won't be able to access it late.**

## **Goals, Objectives, and Outcomes**

### **Course Goals**

Apart from the utility of Astronomy in the ordinary sense of the word, the study of the science is of the highest value as an intellectual training. No other science so operates to give us on the one hand just views of our real insignificance in the Universe of space, matter, and time, or to teach us on the other hand the dignity of the human intellect as the offspring, and measurably the counterpart, of the Divine; able in a sense to "comprehend" the Universe, and know its plan and meaning. The study of the science cultivates nearly every faculty of the mind; the memory, the reasoning power, and the imagination all receive from it special exercise and development. By the precise and mathematical character of many of its discussions it enforces exactness of thought and expression and corrects that vague indefiniteness which is apt to be the result of pure literary training. On the other hand, by the beauty and grandeur of the subjects it presents, it stimulates the imagination and gratifies the poetic sense. In every way it well deserves the place which has long been assigned to it in education.

## Course Objectives:

The following two objectives are the major performance goals for the course.

**Objective One:** After completing this course you should comprehend the most important scientific models governing modern astrophysics and be familiar with the astronomical objects studied by astronomers.

**Objective Two:** After completing this course you should comprehend the practices and methodologies used by modern astronomers in constructing astrophysical models.

In addition, there are multiple learning objectives for each of the 8 weeks of the course. I won't burden you with listing them all, but if you are so inclined to know the nitty-gritty details, feel free to ask.

## Learning Outcomes

When you finish this course, you should be able to:

1. Apply scientific reasoning to future astronomical discoveries to understand their validity as well as to everyday situations.
2. Demonstrate an understanding that science is based upon observations of the Universe and how that is used to understand some basic phenomenon of our world.
3. Discuss how gravity is related to the formation, interaction, and evolution of the Solar System.

Student learning outcomes will be assessed through a combination of assignments submitted each week online. Every question is underwritten by a specific learning objective *and* a reference to Bloom's taxonomy. (I doubt most of you will care much about this.)

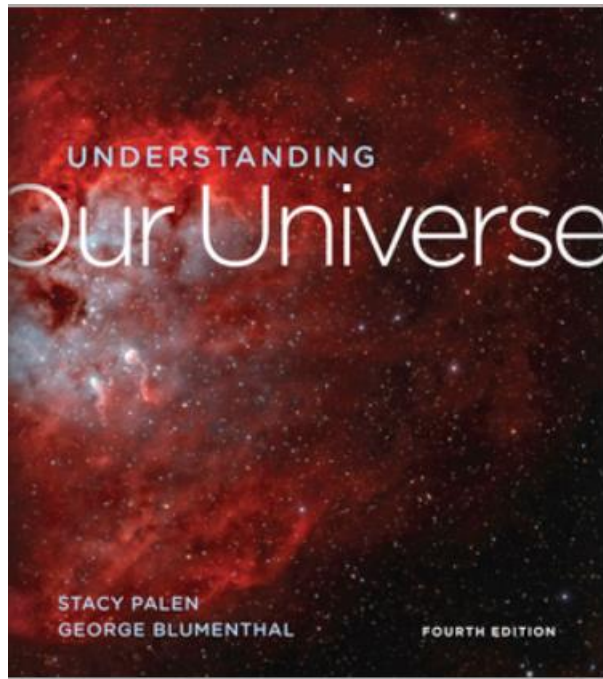
## Course Delivery

This is an online course offering that will be delivered via Blackboard. If you are unfamiliar with Blackboard there is basic set of guidelines posted on the Blackboard site for the course (in the main menu). You may also request this from me, your instructor.

## Required Texts and Materials

For this class, we will be using *Understanding our Universe* 4<sup>th</sup> ed. w/access. **You must use the 4<sup>th</sup> edition as well as have access to Smartwork5 that comes with the text.** You can purchase

the book from the Angelo State University bookstore (all new print copies will come with access to the e-book and Smartwork5). To purchase the e-book or Smartwork5 directly from the publisher or to register a code, please see the instructions below:



To purchase access or register a bookstore code, please follow these instructions:

1. Navigate to your Blackboard Course
2. Click on "Norton Resources"
3. Select "E-book"
4. From there, you will be navigated to a log in screen. Select "No, I need to register, purchase, or sign up for trial access."
5. Create and account using your **school email address**. If you have a registration code, enter your code. If you would like to purchase access to the e-book or Smartwork5 standalone select "I want to view purchase options."

This is an 8-week course. See the table below for the dates. Each "module" covers one week of the course. Each week's work is available Monday morning at 12:01 AM. Each week's work closes at midnight Sunday. [Even though a holiday may occur during the 8 weeks, the course will be open at 12:01 AM on Monday, and all work is due by Sunday night at midnight.] ONE

You may obtain the course material from the Angelo State Bookstore. The website is:

<http://shopangelo.com>

All versions of the texts are available through the bookstore. The bookstore phone is 325-942-2335. To order, you must supply your Angelo State e mail and your CID to the bookstore.

## Technology Requirements

You must have access to a good enough Internet connection to be able to use Blackboard and e mail. You will require a computer. You will not be able to do the course using a phone or a pad.

## Communication

In this class, we will communicate primarily by writing, mostly in e mail. In any form of communication, you are expected to treat your fellow students and your instructor with courtesy and respect. In this class, the following rules of etiquette apply:

- Spelling and grammar count. Don't use slang terms or shorthand "text-speak" abbreviations.
- It's okay to disagree, but it's not okay to insult. Flame-wars and [ad-hominem](#) attacks are not acceptable.
- No profanity. Offensive language will not be tolerated.
- No racial, ethnic, or cultural slurs. This may result in your removal from the class.

## Grading

### Evaluation and Grades

Above are listed the course requirements and the points available for each activity. The base points for the course are 1000. It is possible to earn more than 1000 points by doing extra credit activities (listed on Blackboard).

Since this is an ONLINE COURSE, it is really important that you feel part of a group instead of a lone wanderer trying to navigate astronomy. To that end there is a **Discussion Board**. There are non-graded forums where you may ask questions and offer suggestions for the course. In week 1 you are to **introduce yourself**. The forum explains what you are to do. This can be significant in your grade, since you may earn up to 23 points for a set of posts each week (your thread and responses to at least two other students' threads). **For every graded forum to get full credit you must create a thread and post at least two responses to threads created by other students Threads must be set by Thursday midnight, and responses by midnight, Sunday.**

There are three astronomy papers, described in Blackboard. Projects require very little time. They are due at the end of the 3<sup>rd</sup>, 5<sup>th</sup>, and 7<sup>th</sup> weeks (Sunday, Midnight). Each project is worth 50 points, total points for Research Projects is 150.

**Extra credit** is also available for attending Planetarium shows. An optional final will also be available for extra credit. Other extra credit may be earned as described in the Extra Credit tab in the Main Course Menu on Blackboard.

This is an 8-weeks course, and things become due awfully fast. NO MAKEUPS unless you can justify (to my satisfaction) dire circumstances, **beyond your control**. You just have to keep up with the course. Getting a late start for whatever reason is not, in itself, justification for makeup work.

### Smartwork5 access:

Smartwork5 will be used in this class for homework assignments. To access all Smartwork5 assignments, please follow the following instructions:

1. Navigate your Blackboard Course
2. Click on “Norton Resources”

Week	Begin	End	Number of Questions (& Points)	Book Material
Week 1	27-Mar	3-Apr	Smartwork (86.1 pts) + Discussion (12.5 pts) =98.6 pts	Ch 2
Week 2	3-Apr	10-Apr	Smartwork (104.1 pts) + Discussion (12.5 pts) =116.6 pts	Ch 3
Week 3	10-Apr	17-Apr	Smartwork (107.7 pts) + Discussion (12.5 pts) + Project 1 (50) = 170.2 pts	Ch 4
Week 4	17-Apr	24-Apr	Smartwork (82.5 pts) + Discussion (12.5 pts) =95 pts	Ch .5
Week 5	24-Apr	1-May	Smartwork (89.7 pts) + Discussion (12.5 pts) + Project 2 (50) = 152.2 pts	Ch 6
Week 6	1-May	8-May	Smartwork (99.3 pts) + Discussion (12.5 pts) =105.8 pts	Ch 7
Week 7	8-May	15-May	Smartwork (89.7 pts) + Discussion (12.5 pts) + Project 3 (50) = 152.2 pts	Ch 8
Week 8	15-May	22-May	Smartwork (96.9 pts) + Discussion (12.5 pts) =109.4 pts	Ch 9
Total Points			Total available =1000 GRADE BASE POINTS = 1000	

## Grading System

Course grades will be dependent upon completing course requirements and meeting the student learning outcomes.

- A = 90 – 100 % (900 or more points).
- B = 80 – 89 % (800—899 points)
- C = 70 – 79 % (700-799 points)
- D = 60 - 69 % (600-699 points)
- F = 59 % and below (below 600 points).

## General Policies Related to This Course

All students are required to follow the policies and procedures presented in these documents:

- [Angelo State University Student Handbook](#)<sup>1</sup>
- [Angelo State University Catalog](#)<sup>2</sup>

## **Academic Integrity**

Students are expected to maintain complete honesty and integrity in all work. Any student found guilty of any form of dishonesty in academic work is subject of disciplinary action and possible expulsion from ASU.

The College of Science and Engineering adheres to the university's [Statement of Academic Integrity](#).<sup>3</sup>

## **Accommodations for Students with Disabilities**

ASU is committed to the principle that no qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs or activities of the university, or be subjected to discrimination by the university, as provided by the Americans with Disabilities Act of 1990 (ADA), the Americans with Disabilities Act Amendments of 2008 (ADAAA) and subsequent legislation.

Student Disability Services is located in the Office of Student Affairs, and is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability. It is the student's responsibility to initiate such a request by contacting an employee of the Office of Student Affairs, in the Houston Harte University Center, Room 112, or contacting the department via email at [ADA@angelo.edu](mailto:ADA@angelo.edu). For more information about the application process and requirements, visit the [Student Disability Services website](#).<sup>4</sup> The employee charged with the responsibility of reviewing and authorizing accommodation requests is:

Dallas Swafford  
Director of Student Disability Services  
Office of Student Affairs  
325-942-2047  
[dallas.swafford@angelo.edu](mailto:dallas.swafford@angelo.edu)  
Houston Harte University Center, Room 112

## **Incomplete Grade Policy**

It is policy that incomplete grades be reserved for student illness or personal misfortune. Please contact faculty if you have serious illness or a personal misfortune that would keep you from

completing course work. Documentation may be required. See ASU Operating Policy 10.11 [Grading Procedures](#)<sup>5</sup> for more information.

## Plagiarism

Plagiarism is a serious topic covered in ASU's [Academic Integrity policy](#)<sup>6</sup> in the Student Handbook. Plagiarism is the action or practice of taking someone else's work, idea, etc., and passing it off as one's own. Plagiarism is literary theft.

In your discussions and/or your papers, it is unacceptable to copy word-for-word without quotation marks and the source of the quotation. It is expected that you will summarize or paraphrase ideas giving appropriate credit to the source both in the body of your paper and the reference list.

Papers are subject to be evaluated for originality. Resources to help you understand this policy better are available at the [ASU Writing Center](#).<sup>7</sup>

## Student Absence for Observance of Religious Holy Days

A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. See ASU Operating Policy 10.19 Student Absence for [Observance of Religious Holy Day](#)<sup>8</sup> for more information.

## Title IX at Angelo State University

The University prohibits discrimination based on sex, which includes pregnancy, sexual orientation, gender identity, and other types of Sexual Misconduct. Sexual Misconduct is a broad term encompassing all forms of gender-based harassment or discrimination including: sexual assault, sex-based discrimination, sexual exploitation, sexual harassment, public indecency, interpersonal violence (domestic violence and/or dating violence), and stalking. As a faculty member, I am a Responsible Employee meaning that I am obligated by law and ASU policy to report any allegations I am notified of to the Office of Title IX Compliance.

Students are encouraged to report any incidents of sexual misconduct directly to ASU's Office of Title IX Compliance and the Director of Title IX Compliance/Title IX Coordinator at:

Michelle Boone, J.D.  
Director of Title IX Compliance/Title IX Coordinator  
Mayer Administration Building, Room 210  
325-942-2022



[michelle.boone@angelo.edu](mailto:michelle.boone@angelo.edu)

**You may also file a report online 24/7 at [www.angelo.edu/incident-form](http://www.angelo.edu/incident-form).**

If you are wishing to speak to someone about an incident in confidence you may contact the University Health Clinic and Counseling Center at 325-942-2173 or the ASU Crisis Helpline at 325-486-6345.

For more information about Title IX in general you may visit [www.angelo.edu/title-ix](http://www.angelo.edu/title-ix).

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<sup>1</sup> <https://www.angelo.edu/student-handbook/>

<sup>2</sup> <https://www.angelo.edu/catalogs/>

<sup>3</sup> <https://www.angelo.edu/student-handbook/community-policies/academic-integrity.php>

<sup>4</sup> <https://www.angelo.edu/services/disability-services/>

<sup>5</sup> <https://www.angelo.edu/content/files/14197-op-1011-grading-procedures>

<sup>6</sup> <https://www.angelo.edu/student-handbook/community-policies/academic-integrity.php>

<sup>7</sup> [https://www.angelo.edu/dept/writing\\_center/academic\\_honesty.php](https://www.angelo.edu/dept/writing_center/academic_honesty.php)

<sup>8</sup> <https://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of>