



# PHYS 1104.088 - Astronomy – The Solar System - Lab

## Course Syllabus: Summer 2017

“Northeast Texas Community College exists to provide responsible, exemplary learning opportunities.”

### Dale Loughmiller, Adjunct Professor of Physics

B.S. Political Science, Texas A&M University - College Station  
M.S. Educational Computing , Texas A&M University - Commerce  
M.S. Physics, Texas A&M University – Commerce

**Office:** Math Science Building

**Phone:** (903) 737-7473 (Paris ISD Central Office) Ask for Dale Lock-miller”

**Email:** dloughmiller@ntcc.edu

Office Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Online
	Appointment	Appointment	Appointment	Appointment	Appointment	Everyday

*The information contained in this syllabus is subject to change without notice. Students are expected to be aware of any additional course policies presented by the instructor during the course.*

**Catalog Course Description (include prerequisites):** This course covers the fundamental concepts concerning the formation of the Solar System. This includes the historical developmental aspects of astronomical methods and precepts. Included in the study is: Foundations of Astronomy, The Birth of Modern Science, Radiation Theory, Spectroscopic Theory, Telescopes, Introduction to the Solar System, The Earth, The Moon and Mercury, Venus, Mars, Jupiter, Saturn, Uranus, Neptune, Pluto, Comets, Asteroids, Meteors, Meteoroids, Meteorites, and Formation of Planetary Systems.

**Required Textbook(s):** Kay, Palen, Smith, Blumenthal, *Starry Night Workbook, 5<sup>th</sup> Edition*

ISBN Number            978-0-393-60256-7            STARRY NIGHT WORKBOOK

**Recommended Reading(s):** None

### Course Student Learning Outcomes:

Upon successful completion of this course, students should understand simple qualitative concepts of astronomy relating to the following:

- 1304.1 Gravity and orbits.
- 1303.2 Telescopes and light.
- 1303.3 The Earth.
- 1303.4 The Moon.
- 1303.5 The planets.

### Lectures & Discussions:

As this course is an online format, face-to-face lectures are not required. Your laboratory exercises will be completed using the Starry Nights software and the workbook listed above with the class textbook.

**Evaluation/Grading Policy:**

The student's semester grade will use the following percentages:

Homework Assignments 100%

**Tests/Exams:**

These will be quizzes that review each chapter's labs. These quizzes will be counted as homework grades with equal weight to the labs. There will not be any major test.

**Labs:**

Each lab will require the use of Starry Night software.

**Other Course Requirements: (None)****Student Responsibilities/Expectations:**

This course requires a concerted effort by the student to manage their time wisely. The student should setup a weekly schedule of 2-3 hours of study to be successful in this course. Two to three hours per week is minimal time necessary for reading, doing homework assignments and laboratory assignments.

**NTCC Academic Honesty Statement:**

"Students are expected to complete course work in an honest manner, using their intellects and resources designated as allowable by the course instructor. Students are responsible for addressing questions about allowable resources with the course instructor. NTCC upholds the highest standards of academic integrity. This course will follow the NTCC Academic Honesty policy stated in the Student Handbook."

**Academic Ethics**

The college expects all students to engage in academic pursuits in a manner that is beyond reproach. Students are expected to maintain complete honesty and integrity in their academic pursuit. Academic dishonesty such as cheating, plagiarism, and collusion is unacceptable and may result in disciplinary action. Refer to the student handbook for more information on this subject.

**ADA Statement:**

It is the policy of NTCC to provide reasonable accommodations for qualified individuals who are students with disabilities. This College will adhere to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations as required to afford equal educational opportunity. It is the student's responsibility to arrange an appointment with a College counselor to obtain a Request for Accommodations form. For more information, please refer to the NTCC Catalog or Student Handbook.

**Family Educational Rights And Privacy Act (FERPA):**

The Family Educational Rights and Privacy Act (FERPA) is a federal law that protects the privacy of student education records. The law applies to all schools that receive funds under an applicable program of the U.S. Department of Education. FERPA gives parents certain rights with respect to their children's educational records. These rights transfer to the student when he or she attends a school beyond the high school level. Students to whom the rights have transferred are considered "eligible students." In essence, a parent has no legal right to obtain information concerning the child's college records without the written consent of the student. In compliance with FERPA, information classified as "directory information" may be released to the general public without the written consent of the student unless the student makes a request in writing. Directory information is defined as: the student's name, permanent address and/or local address, telephone listing, dates of attendance, most recent previous education

institution attended, other information including major, field of study, degrees, awards received, and participation in officially recognized activities/sports.

**Other Course Policies:**

Lack of participation, two or more weeks without completing any assignments, can be considered a lack of attendance and may be subject to being withdrawn from the course.

**Course Schedule:** (Content and dates subject to change throughout the semester.)

Start Here

Chapter 1: Why Learn Astronomy

Chapter 2: Patterns in the Sky

Chapter 3: Motions of Astronomical Bodies

Chapter 4: Gravity and Orbits

Chapter 5: Light

Chapter 6: The Tools of the Astronomer

Chapter 7: The Birth and Evolution of Planetary Systems

Chapter 8: The Terrestrial Planets and Earth's Moon

Chapter 9: Atmospheres of the Terrestrial Planets

Chapter 10: Worlds of Gas and Liquid – The Giant Planets

Chapter 11: Planetary Adornments – Moons and Rings

Chapter 12: Dwarf Planets and Small Solar System Bodies

Chapter 13: Taking the Measure of Stars

Chapter 14: Our Sun – The Sun