PHYS 1304 Solar System (Online)

Course Syllabus: Fall 2020

"Northeast Texas Community College exists to provide personal, dynamic learning experiences empowering students to succeed."

Instructor: Dale Loughmiller

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Office Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Online
	Online	Online	Online	Online	Online	Every Day

This syllabus serves as the documentation for all course policies and requirements, assignments, and instructor/student responsibilities.

Information relative to the delivery of the content contained in this syllabus is subject to change. Should that happen, the student will be notified.

Course Description: This course is the study of the sun and other bodies in our solar system, including the origin of our solar system. Three hours college credit.

Prerequisite(s): TSI Complete Status

Student Learning Outcomes:

1304.1 Recognize scientific and quantitative methods and the differences between these approaches and other methods of inquiry used in modern astrophysics.

1304.2 Communicate observations and interpretations clearly through written communication.

1304.3 Use basic laws of astronomy to solve assigned tasks.

1304.4 Translate, interpret, and extrapolate scientific theory governing the formation and evolution of solar system.

1304.5 Use simple astronomy laboratory techniques to collect, manipulate, analyze, and draw conclusions from data representing physical phenomenon while working individually and in teams.

Core Curriculum Purpose and Objectives:
Through the core curriculum, students will gain a foundation of knowledge of human cultures and the physical and natural world; develop principles of personal and social responsibility for living in a diverse world; and advance intellectual and practical skills that are essential for all learning.

Courses in the foundation area of mathematics focus on quantitative literacy in logic, patterns, and relationships. In addition, these courses involve the understanding of key mathematical concepts and the application of appropriate quantitative tools to everyday experience.

Program Student Learning Outcomes:

Critical Thinking Skills

CT.1 Students will demonstrate the ability to 1) analyze complex issues, 2) synthesize information, and 3) evaluate the logic, validity, and relevance of data.

Communication Skills

CS.1 Students will effectively develop, interpret and express ideas through written communication.

Empirical and Quantitative Skills

EQS.1 Students will manipulate numerical data or observable facts by organizing and converting relevant information into mathematical or empirical form

EQS.2 Students will analyze numerical data or observable facts by processing information with correct calculations, explicit notations, and appropriate technology.

EQS.3 Students will draw informed conclusions from numerical data or observable facts that are accurate, complete, and relevant to the investigation.

Teamwork

TW.2 Students will work with others to support and accomplish a shared goal.

Evaluation/Grading Policy:

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

Homework Assignments 20%
Chapter Quizzes 10%
Laboratory Assignments 20%
Test Average 50%

Tests/Exams:
There will be a Mid-Term Exam and a Final Exam. The Mid-Term Exam will cover Chapters 1-7 and the Final Exam will cover Chapters 8-14. These will be **exams** that will require using Respondus Browser.

Assignments:
Each chapter will have a reading review homework assignments as well as a process of science and exploration assignment. A web exploration assignment will be submitted each week from which you will have a choice of at least three different topics. A chapter quiz will also be taken each week.

Required Instructional Materials: Kay, Palen, Smith, Blumenthal, *21ST Century Astronomy: The Solar System*, Fifth Edition, Norton, New York, 2013

Publisher: Norton **ISBN Number:** 9780393675528

Optional Instructional Materials: None

Minimum Technology Requirements:

Required Computer Literacy Skills:

1) Communicate via email.
2) Saving and reloading saved files.
3) Navigate Blackboard to access posted materials and assignments.

Course Structure and Overview:

Students will work through several online assignments and simulations designed to round out the knowledge required for assessments. It is strongly recommended that the student read the text as well.

Communications:

Emails will be responded to within 24 hours. Posts in the Discussion Forum, "Virtual Office" will be monitored by the instructor. Responses by the instructor will be within 72 hours following the post. Students are expected to abide by Netiquette rules when communicating online. See this link for details: **www. https://coursedesign.colostate.edu/obj/corerulesnet.html.**

The college's official means of communication is via your campus email address. Your instructors will use your campus email and Blackboard to communicate with you outside of class. Make sure you keep your campus email cleaned out and below the limit so you can receive important messages.

Institutional/Course Policy:

No late work will be accepted without prior approval by the instructor. It is the student's responsibility to check Blackboard for important information/announcements regarding the course. Students should be working on course material via Blackboard every week. Do not wait until the last minute to complete and submit assignments in case of technology issues.

Alternate Operations During Campus Closure and/or Alternate Course Delivery Requirements
In the event of an emergency or announced campus closure due to a natural disaster or pandemic, it may be necessary for Northeast Texas Community College to move to altered operations. During this time, Northeast Texas Community College may opt to continue delivery of instruction through methods that include, but are not limited to, online through the Blackboard Learning Management System, online conferencing, email messaging, and/or an alternate schedule. It is the responsibility of the student to monitor NTCC's website (http://www.ntcc.edu/) for instructions about continuing courses remotely, Blackboard for each class for course-specific communication, and NTCC email for important general information.

Additionally, there may be instances where a course may not be able to be continued in the same delivery format as it originates (face-to-face, fully online, live remote, or hybrid). Should this be the case, every effort will be made to continue instruction in an alternative delivery format. Students will be informed of any changes of this nature through email messaging and/or the Blackboard course site.

NTCC Academic Honesty/Ethics Statement:
NTCC upholds the highest standards of academic integrity. The college expects all students to engage in their academic pursuits in an honest manner that is beyond reproach using their intellect and resources designated as allowable by the course instructor. Students are responsible for addressing questions about allowable resources with the course instructor. Academic dishonesty such as cheating, plagiarism, and collusion is unacceptable and may result in disciplinary action. This course will follow the NTCC Academic Honesty and Academic Ethics policies stated in the

Student Handbook. Refer to the student handbook for more information on these subjects.

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 request accommodations. An appointment can be made with the Academic Advisor/Coordinator of Special Populations located in Student Services and can be reached at 903-434-8264. For more information and to obtain a copy of the Request for Accommodations, please refer to the special populations page on the NTCC website.

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.

Tentative Course Timeline (*note* instructor reserves the right to make adjustments to this timeline at any point in the term):

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

Start Here

Chapter 1: Thinking like an Astronomer – August 30th

Chapter 2: Patterns in the Sky – Motions of Earth and the Moon – September 6th

Chapter 3: Motion of Astronomical Bodies – September 13th

Chapter 4: Gravity and Orbits – September 20th

Chapter 5: Light – September 27th

Chapter 6: The Tools of the Astronomer – October 4th

Mid-Term Exam – October 11th

Chapter 7: The Birth and Evolution of Planetary Systems – October 18th

Chapter 8: The Terrestrial Planets and Earth's Moon – October 25th

Chapter 9: Atmospheres of the Terrestrial Planets – November 1st

Chapter 10: Worlds of Gas and Liquid – The Giant Planets – November 8th

Chapter 11: Planetary Moons and Rings – November 15th

Chapter 12: Dwarf Planets and Small Solar System Bodies – November 22nd

Final Exam – December 6th