



# Stars & Galaxies (Lab) – PHYS 1103.088

## Course Syllabus: Fall 2019

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

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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):** One credit hour. This laboratory-based course accompanies PHYS 1303, Stars and Galaxies. Laboratory activities will reinforce the study of solar, galactic, and universal aspects of astronomy including stellar evolution, black holes, and current cosmological concepts. This course will not satisfy a core curriculum requirement, but may satisfy a degree requirement.

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

**ISBN Number:** 978-0-393-60256-7

**Recommended Reading(s):** None

### Student Learning Outcomes

Upon successful completion of this course, students will be able to demonstrate understanding of qualitative concepts relating to the following learning outcomes:

- 1103.1** Recognize scientific and quantitative methods and the differences between these approaches and other methods of inquiry used in modern astrophysics.
- 1103.2** Communicate observations and interpretations clearly through written communication.
- 1103.3** Use basic laws of astronomy to solve assigned tasks.
- 1103.4** Translate, interpret, and extrapolate scientific theory governing the formation and evolution of stars.
- 1103.5** Translate, interpret, and extrapolate scientific theory governing the formation and evolution of galaxies and the universe.

**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 request accommodations. An appointment can be made with Shannin Garrett, Academic Advisor/Coordinator of Special Populations located in the College Connection. She can be reached at 903-434-8218. For more information and to obtain a copy of the Request for Accommodations, please refer to the [NTCC website - Special Populations](#).

**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 15: Star Formation and the Interstellar Medium

Chapter 16: Evolution of Low-Mass Stars

Chapter 17: Evolution of High-Mass Stars

Chapter 18: Relativity and Black Holes

Chapter 19: The Expanding Universe

Chapter 20: Galaxies

Chapter 21: The Milky Way – A Normal Spiral Galaxy

Chapter 22: Modern Cosmology

Chapter 23: Large-Scale Structure in the Universe

Chapter 24: Life