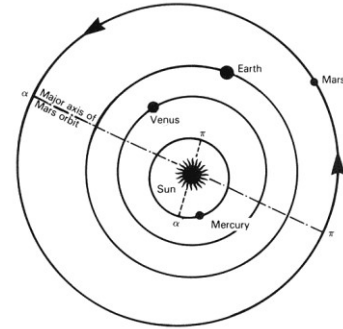


**SYLLABUS PART B  
(TECHNICAL INFORMATION THE COLLEGE ASKS ALL  
FACULTY TO INCLUDE IN A SYLLABUS, INCLUDING  
ACCOMMODATION INFORMATION.)**

AST 101 – FRONTIERS OF ASTRONOMY  
Spring 2020



**Complaint procedure**

Students with an issue or complaint concerning an instructor or course should first speak with the instructor. If that does not resolve the issue, carry the complaint further according to the following protocol:

- Instructor, Prof. C. Graney: christopher.graney@kctcs.edu, (502) 213-7292
- Physics & Astronomy Department Head, Prof. C. Howard, chad.howard@kctcs.edu, (502) 213-5028
- Division of Natural Sciences Chair, Prof. K. Muller: kaya.muller@kctcs.edu, (502) 213-7237
- Dean of Dean of General Education and Transfer Studies, Prof. R. Davis: randall.davis@kctcs.edu, (502) 213-2122

**Student Code of Conduct**

Regarding cheating and plagiarism: Cases of fraudulent work may be prosecuted to the fullest extent possible under Jefferson policies. Work honestly. Refer to the *Student Code of Conduct* for Community College System policies and procedures on cheating and plagiarism. The KCTCS *Student Code of Conduct* explains the rights and responsibilities of both students and faculty and covers such matters as classroom and campus conduct, students' academic rights, and procedures for dealing with academic dishonesty. To see an electronic version of this document, visit

<https://kctcs.edu/current-students/media/kctcs-code-of-student-conduct-revised-4-19.pdf>.

**Non-discrimination Statement**

Jefferson Community and Technical College is an Equal Opportunity institution committed to the policy of providing educational opportunities to all qualified students regardless of economic or social status, beliefs, sexual orientation, age, national origin, or physical or mental disability. The Kentucky Community and Technical College System is an equal educational and employment opportunity institution and does not discriminate on the basis of race, religion, color, sexual orientation, gender identity or expression, national origin, age, disability, family medical history, or genetic information. Further, we vigilantly prevent discrimination based on sexual orientation, parental status, marital status, political affiliation, military service, or any other non-merit based factor.

**Withdrawals (prior to mid-point of the semester)**

JCTC students may request a drop/withdrawal through JCTC’s on-line Student Self Service form. *Note that after the mid-point of the semester instructor approval is required for withdrawals (other than administrative withdrawals).* Note that Dual Credit students (high school students taking classes at Jefferson) do not have access to Self-Service and, therefore, cannot complete the online withdraw/drop request; they must contact their campus’ dual credit liaison and complete the Dual Credit Withdrawal Request Form (if unsure of whom to contact, dual credit students may email Mike Alcorn, Dual Credit Program Coordinator, at [michael.alcorn@kctcs.edu](mailto:michael.alcorn@kctcs.edu)); the withdrawal is not complete until the Dual Credit Withdrawal Request Form is fully signed, including written permission from the instructor, if required, and on file with the Dual Credit Office.

**Students Needing Special Accommodations:**

Students with disabilities who require accommodations (academic adjustments and/or auxiliary aids or services) for this course must contact the Access\*Ability Resource Center (ARC) as soon as possible. Please DO NOT request accommodations directly from the professor or instructor. If you require assistance during an emergency evacuation, notify your instructor and the ARC. All campuses of JCTC are served through a central office for the ARC located on the downtown campus. See the contract information below:

Access*Ability Resource Center (ARC) Chestnut Hall, Room 319 Downtown Campus			
Telephone: 502-213-2375 Office E-mail Address: JF-ARC-OFFICE@kctcs.edu <a href="https://kctcs.edu/current-students/academic-resources/disability-services.aspx">https://kctcs.edu/current-students/academic-resources/disability-services.aspx</a>			
NAME	POSITION	PHONE	E-MAIL
Terri Martin	Director	502-213-2449	<a href="mailto:terri.martin@kctcs.edu">terri.martin@kctcs.edu</a>
Nancy Birkla	Disability Coordinator	502-213-7120	<a href="mailto:nancy.birkla@kctcs.edu">nancy.birkla@kctcs.edu</a>
Venetia Lacy	Deaf & Hard of Hearing Student Services (DHHSS) Coordinator	502-213-4218	<a href="mailto:venetia.lacy@kctcs.edu">venetia.lacy@kctcs.edu</a>
Derek Fraser	Interpreter, American Sign Language	502-213-4104	<a href="mailto:derek.frazer@kctcs.edu">derek.frazer@kctcs.edu</a>
Nicole Hines	Administrative Assistant/Testing Coordinator	502-213-7127	<a href="mailto:nicole.hines@kctcs.edu">nicole.hines@kctcs.edu</a>

**Attendance Policy for Religious Holidays**

Jefferson notes that accommodation can be made for students to attend religious holiday observances. Students should make their requests for this accommodation in advance.

**Links to Key College Academic Support Services/Learning Commons:** The Learning Commons provides help with library research and resources online and in person at the Downtown and Southwest Campuses. It also offers tutoring at every campus in math, English, and other subjects, as well as study spaces for individuals and groups. For more information, visit <https://jefferson.kctcs.edu/current-students/student-resources/libraries/index.aspx>.

### **Use of Lecture Capture**

Instructors at Jefferson Community and Technical College are authorized to use microphones and audio-enabled video cameras in the College's classrooms. Instructors may use these cameras to record their teaching and presentation of course material, and shall direct the cameras towards themselves and/or their presentation material. Instructors may further provide these recordings to students who attend that particular course, or to students attending any section within that course. These recordings may not be provided to any other students or individuals who do not attend the course, nor may the recordings be provided beyond the enrollment period of the course.

Should any student object to participating in lecture capture, the instructor will ensure that the he/she accommodates the student by evaluating the concern and adjusting methods of lecture capture to prevent the inclusion of the student visually or by through sound. If this does not resolve the student's objection, alternatives such as non-recorded courses or online sections will be offered for the student to complete the class. If no accommodation is possible and no alternatives available, the instructor will not record audio or video during that class time.

### **Students' Rights Under Title XI**

KCTCS, which includes JCTC, has zero tolerance for illegal discrimination of any kind. Any student who thinks he or she may have been discriminated against or subjected to harassment by students or employees because of their race, color, national origin, sex, sexual orientation, marital status, religion, beliefs, political affiliation, veteran status, age, or disability (including denial of a request for an accommodation), has the right to pursue an informal and/or formal discrimination grievance. The College Title IX Coordinator and Chief Student Affairs Officer is: Dr. Laura Smith ([Laura.Smith@kctcs.edu](mailto:Laura.Smith@kctcs.edu); 502-213-2136).

### **Starfish and Blackboard**

This course will use Starfish and Blackboard for communication with students. However, the primary means of communication for the class will be the class web page and KCTCS student e-mail. Starfish and Blackboard will usually refer students to the class web page.

### **Course relationship to college's mission and goals**

This course supports the college's mission to "open the door to quality education that promotes the economic and cultural vitality of our community, encourages all to discover and achieve their potential, and provides opportunities to turn dreams into realities" in that it satisfies general science requirements for all the college's educational programs. Jefferson's mission statement and values can be found at <https://jefferson.kctcs.edu/about/mission-vision/index.aspx>.

### **Critical Thinking Skills**

This course has a strong emphasis on critical thinking. The work in the course is strongly oriented toward students thinking about and writing about what they learn. In doing this they will use many critical thinking skills, such as identification and recall of information; organization and selection of facts and ideas, and use of those facts and ideas; separating a whole in component parts or combining ideas into a new whole; and developing opinions, judgements, or decisions that are informed by logical reasoning and scientific knowledge.

### **Student learning outcomes Specific to Course**

Upon completion of this course, the student will be able to view astronomy as a microcosm of science in general, able to see how science in general develops and is practiced, acquainted with selected topics in astronomy and science covered in the course and able to use basic astronomical principles covered in the course (such as Kepler's Laws and the geometry of parallax and distance measurement), and prepared to take further science courses or other courses which require an introductory knowledge of science as a prerequisite. This course will strongly emphasize the Writing Across the Curriculum concept. As a General Education course, this class meets the college's General Education Requirements as laid out in the *KCTCS 2017-2018 Catalog*, page 72:

Competencies will be met at the level appropriate to the credential.

A general education core curriculum will enable KCTCS colleges to graduate men and women who are intellectually flexible, articulate, reflective, creative, and prepared for continuous learning. For all students, this implies some understanding of the value of higher education and the world of work and career fields related to their own abilities, interests, and needs. The general education core competencies will enable students to develop their own values, pursue goals, and contribute to the political, moral, social, and cultural enrichment of society.

General Education Competencies:

Students should prepare for twenty-first century challenges by gaining:

- A. Knowledge of human cultures and the physical and natural worlds through study in the sciences and mathematics, social sciences, humanities, histories, languages, and the arts.
- B. Intellectual and practical skills, including • inquiry and analysis • critical and creative thinking • written and oral communication • quantitative literacy • information literacy • teamwork and problem solving
- C. Personal and social responsibility, including • civic knowledge and engagement (local and global) • intercultural knowledge and competence • ethical reasoning and action • foundations and skills for lifelong learning
- D. Integrative and applied learning, including synthesis and advanced accomplishment across general and specialized skills.

**State-wide general education student learning outcomes being taught or strengthened in the course**

Upon completion of the course, the student will also be able to:

1. Demonstrate an understanding of the methods of science inquiry.
2. Explain basic concepts and principles in one or more of the sciences.
3. Apply scientific principles to interpret and make predictions in one or more of the sciences.
4. Explain how scientific principles relate to issues of personal and/or public importance.

(From the Kentucky CPE Statewide General Education Assessment Plan:

<http://cpe.ky.gov/nr/rdonlyres/3e8fdeca-4769-4b84-8194-a3ae2a60239c/0/statewidegenedassessmentplanfinal.pdf>)

**A KCTCS Physics Curriculum Committee recommends the following outcomes (not published):**

- 1) Interpret motions of the Sun, Moon, stars, and planets as viewed from the Earth's surface and from an inertial frame of reference.
- 2) Describe our understanding of the cosmos in historical context, from ancient times through the Copernican revolution.
- 3) Describe some basic properties of light, and recognize the different wavelength regimes of the electromagnetic spectrum.
- 4) Distinguish among the designs and performance characteristics of different types of telescopes.
- 5) Compare and contrast the general characteristics of the various classes of solar system objects.
- 6) Describe the solar nebula hypothesis for the origin of the solar system.
- 7) Describe the geologic and atmospheric processes, properties, and features associated with various planets, moons, and minor bodies.
- 8) Describe some observed properties of the Sun.
- 9) Describe, and recognize the interdependence of, techniques used to determine such stellar properties as distance, magnitude, luminosity, temperature, size, radial velocity, and mass.
- 10) Interpret the information on a Hertzsprung-Russell diagram.
- 11) Describe the processes of stellar evolution, from birth through death.
- 12) Discuss the structures of, and processes that occur within, galaxies, including the Milky Way.
- 13) Describe the observational evidence for the "big bang" and the accelerating expansion of the universe.