## Course Information

### Course Description:
ASTR 1030 is an introduction to astronomy, with particular emphasis on what is known about the solar system and the basis for that knowledge. Topics include the history and methods of astronomy, the formation of the solar system, and the physical characteristics of the sun, planets, moons, and minor members of the solar system (asteroids, meteoroids, and comets).

### Learning Outcomes:
Upon successful completion of the course, the student will be able to:

- explain what is meant by the “scientific method” and how the theories and laws of science are developed. Beginning with our solar system, name the types of major structures in the universe and list them in their order of relative size and distance from Earth.

- describe the celestial sphere and related terminology. Describe the history of astronomy including the discoveries of the early Greek astronomers and discoveries of later astronomers Copernicus and Galileo.


- explain phenomena resulting from the motions of the Earth and Moon (eclipses, solstices, equinoxes, seasons, and precession) including terminology used to define celestial motions and positions. Describe the orbital motion of the Moon and
how it produces the observed phases, ocean tides, and eclipses.

- name and describe the structure, features and characteristics of the collective groupings of planets and their moons and other smaller objects in the solar system. Describe the scale of the solar system including the relative sizes of objects and their orbits.

- describe the processes important to the formation and evolution of the internal structure, surface, and atmosphere of the Moon and Mercury. Describe the orbital and rotational characteristics of the Moon and Mercury.

- describe the processes important to the formation and evolution of the internal structure, surface, and atmosphere of Venus and Mars. Describe the orbital and rotational characteristics of Venus and Mars.

- describe and compare the composition, internal structure, and atmospheres of the Jovian planets and explain why they are different.

- describe and compare the ring systems of the Jovian planets, how they were discovered, and explore why they are different. Describe and compare the orbital characteristics of the moon systems of the Jovian planets and explore why they are different. Describe the characteristics of Pluto and its moon.

- describe the structure, features and characteristics of the minor members (comets, asteroids, meteoroids, etc.) of the solar system.

- describe the basic structure, features, and
characteristics of the Sun. Describe the Sun’s magnetic cycle and the structure of its atmosphere.

| Prerequisites: | DSPW 0800, DSPM 0800, DSPR 0800 or equivalent documented skill levels. |

| Course Topics: | 1. Our place in the universe  
2. Discovering the universe for yourself  
3. The science of Astronomy  
4. Making sense of the universe: understanding motion, energy, and gravity  
5. Light: the cosmic messenger  
6. Formation of planetary systems: our solar system and beyond  
7. Earth and the terrestrial worlds  
8. Jovian planet systems  
9. Asteroids, comets, and dwarf planets: their nature, orbits, and impacts |

| Textbooks, Supplementary Materials, Hardware and Software Requirements | Required Textbooks: The Essential Cosmic Perspective, 6th ed. with electronic access to masteringastronomy.com; by J. Bennett, M. Donahue, N. Schneider, M. Voit |

| Instructor Information | Instructor Name: Aklilu Maasho  
Instructor Contact Information: Office: Glover, Room # 248  
E-mail: maasho@dscc.edu |

| Assessment and Grading | Method of evaluation: Highest of two tests: 25%  
Comprehensive Final Exam: 25%  
Laboratory: 25%  
Assignments/Class works/Quizzes: 25%  
Membership and Active Participation in our “Astronomy Club”: up to a max. 10% extra-credit.  
No make-up is given to missed labs and tests. Two lowest labs will be dropped. |

| Grading Scale: | 90 – 100 : A  
80 – 89 : B  
70 – 79 : C  
60 – 69 : D  
< 59 : F |
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<tr>
<th>Library:</th>
<th>Dyersburg State Community College Learning Resource Center</th>
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<tr>
<td>Students With Disabilities:</td>
<td>Dyersburg State Community College is committed to providing a discrimination free environment for all students. Students with disabilities are encouraged to inform the College of any assistance they may need. Please notify your instructor or Pam Dahl, ADA Coordinator at (731) 286-3242.</td>
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<td>Syllabus Changes:</td>
<td>From time to time during the semester it may be necessary to make changes to the material in the course syllabus. Any necessary changes to the course syllabus will be sent to you by e-mail and posted within the online course material.</td>
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<td>DSCC Attendance Policy:</td>
<td>Regular class attendance is essential to student success in college. Absence from the classroom negatively affects student success and learning outcomes. Dyersburg State Community College has established the following Class Attendance Policy which is applicable to all students attending classes both in person and online.</td>
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<td>1. Attendance at all class sessions and regular participation in any online course for which a student is registered are expected.</td>
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<td>2. Absences will be counted from the first meeting of the class.</td>
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<td>3. It is the student’s responsibility to contact the instructor prior to an absence from class or shortly after the absence. The instructor will determine whether an absence is excused or unexcused.</td>
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<td>4. The student is responsible for all work and/or lecture material covered in any missed class session. The instructor will determine whether to accept makeup work for the class.</td>
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<td>5. Students who have three (3) consecutive unexcused absences from a class that meets three (3) hours per week, or two (2) consecutive unexcused absences from a class that meets twice weekly or once weekly in a</td>
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three (3) hour block, will be reported as “stopped attending.” Students who do not participate in an online course for one week will be reported as “stopped attending.”

6. Students who exhibit a pattern of absences, even if not consecutive, may also be reported as “stopped attending.”

7. A “stopped attending” designation may negatively impact receipt of current and future financial aid.

8. It is the student’s responsibility to officially withdraw from a course if a “stopped attending” designation is reported or if continuing, regular attendance proves impossible. In these circumstances, failure to withdraw from a course by the deadline listed in the Academic Calendar will result in a grade of “F,” and may negatively impact eligibility for future financial aid and/or continued enrollment (please note that a grade of W may also negatively impact eligibility for future financial aid).

9. Failure to contact the instructor regarding an absence may result in the designation of the absence as being “unexcused.” Students wishing to appeal a determination of an unexcused absence or “stopped attending” designation should attempt to resolve the matter with the instructor within five (5) days of receiving notification from the Office of Admissions & Records. If the student still wishes to appeal, he/she must present the matter in writing to the Vice President for the College within five (5) days after attempting to clarify or resolve the matter with the instructor. After the Vice President for the College receives the appeal, a hold will be placed on the student’s account during the appeal process. The Vice President for the College will render a final decision within ten (10) days. If the Vice President for the College denies the appeal, the financial aid money will be returned to the Federal Government (as required by Federal law) and
| | the student will have an account balance.  
10. Nothing in this policy shall be construed as preventing an instructor from having a more restrictive attendance policy regarding absences for an individual class. |