# Classical and Modern Astronomy

**Astronomy 105 Online**  
**AST 105.502**  
**Dr. N. L. Markworth**  
Department of Physics and Astronomy

## Lab Syllabus

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<th>Study Guides</th>
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## Course Description

Introductory study of planetary astronomy, astrophysics, and cosmology. Computation of lecture and laboratory grades into one grade; same grade recorded for both lecture and laboratory. Corequisite: AST 105L.

This is a survey course that will stress the historical and descriptive aspects of our knowledge of astronomy. The major aim will be to give each student an appreciation and understanding of the size, scale, and structure of the cosmos, to gain an understanding of the nature of science and astronomy, to see that the universe is comprehensible through the scientific principles that can be understood by everyone, and to gain an increased interest in studying current events in astronomy as a life-long learning activity. The methods of science will be strongly emphasized.

The student will demonstrate knowledge and comprehension of the basic and applied fields of physics.

1. To understand and apply method and appropriate technology to the study of natural sciences.
2. To recognize scientific and quantitative methods and the differences between these approaches and other methods of inquiry, and to communicate findings, analyses, and interpretation both orally and in writing.
3. To identify and recognize the differences among competing scientific theories.
4. To demonstrate knowledge of the major issues and problems facing modern science, including issues that touch upon ethics, values, and public policies.
5. To demonstrate knowledge of the interdependence of science and technology and their influence on, and contribution to, modern culture.

The overall objectives of this course are that the learner will:

- Recognize that the universe can be described by a few natural laws.
- Describe the characteristics of objects within the solar system including the sun, planets, moons, asteroids, and comets.

Demonstrate a basic familiarity with stellar life cycles, galaxies, and extragalactic objects.

The text is *The Essential Cosmic Perspective*, sixth edition by Jeffrey Bennett, Megan Donahue, Nicholas Schneider, and Mark Voit. New books will include a "personal access kit" for the Mastering Astronomy web site that contains the assignments I will make. You can purchase the personal access kit online if you have a used book. Please use this link to help you access the site and register for the course. The course ID is MARKWORTH502111. I have left some useful tips at this link for the use of masteringastronomy, if you are having trouble.

The order of the course as well as the timing of the exams is indicated in the Course Calendar link. AST 105L, the Astronomy Laboratory is a co-requisite and a new edition of the online lab manual is available in the BPSC bookstore only (Barnes and Noble). Students enrolled in the face-to-face labs may pick up copies of the lecture CDs from me in my office. Textbooks may be ordered from the SFASU Bookstore online at this link.

The course is fully developed in Blackboard (formerly WebCT, also Blackboard Learning System) and we will be using the Blackboard email facility. This is a closed email system (only Blackboard traffic), so that the class email will be separate from any other email accounts you may have. It is imperative that you check the Blackboard email very frequently (several times per day). Please print important email and keep the messages in a class folder. Even though I have my titan account posted above, please contact me through Blackboard for class business.

I can be reached via email anytime, but interactively via chat or phone during my office hours listed above. I will also be setting up arranged times for the class to meet in the Blackboard chatroom.

SFA maintains a technical support line at 1-888-dlsfasu (1-888-357-3278) that may be of help with your computer problems.

The test dates in the Course Calendar are deadlines by which the exams must be completed. These dates are to insure sufficient progress in the course to allow you to complete it within the semester you are enrolled.

Tests can be administered in three ways (all of which are proctored):
1. In the Steen Library InfoLab 1 at 5:00 PM on the dates in the Course Calendar (note: the August 12 exams begin at 3 PM in the library). Those who are close to Nacogdoches are encouraged to take the tests at these times.

2. In my office (Science 322f), if you are close to Nacogdoches but can’t make the 5:00 PM testing time. Please schedule these tests well in advance so that I can get you on my calendar.

3. If your schedule or your distance prohibit you from making the regular test time or place, it is possible to test remotely. Please use the following procedure for remote testing:

   - Locate a proctor and a testing site. I must approve the proctor PRIOR to the administration of the test. The site may be a local school, or a library, even your place of business, but not your home. The site must have email and FAX service. The proctor may not be a relative or a student.
   - Make arrangements for the remote test 3-5 days in advance. Include the FAX and phone numbers as well as the name and email address of your proctor.
   - Prior to the testing day, I will email the proctor instructions, including a test authorization form and test password. You and the proctor are to sign the form and return it by FAX to me. The form verifies that you are being proctored, that you are not using your textbook or notes, and that you will not copy any testing materials.
   - Upon receiving the return FAX and on the testing day, I will make the test available to your Blackboard account. The test will be a form on which you simply click on the correct answer. At the end of the form is a submit button to send the results to me.
   - Timeliness is an important part of testing as well as a courtesy to your proctor. If you have any difficulty in receiving or sending the test, please get in touch with me as soon as possible.
   - There will be four major tests each covering a limited amount of material. Consult the calendar for a breakdown of the course content. The fourth exam contains a section which is comprehensive. The lab exam is scheduled separately from the fourth exam. Twenty-five (25%) percent of the lab portion of the course comes from this exam.

Homework: Look for the masteringastronomy assignments under Course Content in Blackboard. Review quizzes on Blackboard will also be assigned for each section of the course (look under the Assessments tab). Lastly, participation (in chatrooms and discussion questions) will be used as part of the lecture grade. See the next section for point values for these activities.

Grading: Each major exam will be graded on a 100-point scale. No grade curving is done on any grade in this course. The lecture and lab grades will be combined and the same grade will be
recorded for both lecture and lab.

<table>
<thead>
<tr>
<th>Lecture</th>
<th>% of Lecture</th>
<th>% of Course</th>
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</thead>
<tbody>
<tr>
<td>Exams (equally weighted)</td>
<td>75</td>
<td>52.5</td>
</tr>
<tr>
<td>Blackboard Review Quizzes</td>
<td>10</td>
<td>7.5</td>
</tr>
<tr>
<td>Masteringastronomy Homework</td>
<td>10</td>
<td>7.5</td>
</tr>
<tr>
<td>Class Participation</td>
<td>10</td>
<td>7.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lab</th>
<th>% of Lab</th>
<th>% of Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exercises</td>
<td>75</td>
<td>18.75</td>
</tr>
<tr>
<td>(11 indoor labs + 1 night lab)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lab Final</td>
<td>25</td>
<td>6.25</td>
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I am aware that the sum of the lecture part of the course comes to 105%. This is your “technology bonus.” Take advantage and maximize your point totals in Review Quizzes (in Blackboard), Homework (in masteringastronomy) and Class Participation (divided between Discussion Group Questions and Chat).

A 90 – 105   B 80 – 89   C 70 – 79   D 60 – 69   F < 60

**Academic Integrity (A-9.1)**

Academic integrity is a responsibility of all university faculty and Faculty members promote academic integrity in multiple ways instruction on the components of academic honesty, as well as university policy on penalties for cheating and plagiarism.

**Definition of Academic Dishonesty**

Academic dishonesty includes both cheating and plagiarism. Cheating includes but is not limited to

- using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class
- the falsification or invention of any information, including citations, on an assigned exercise; and/or
- helping or attempting to help another in an act of cheating or plagiarism.

Plagiarism is presenting the words or ideas of another person as if they were your own. Examples of plagiarism are (1) submitting an assignment as if it were one’s own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from an Internet source or another source; and (3) incorporating the words or ideas of an author into one’s paper without giving the author due credit.

Please read the complete policy at http://www.sfasu.edu/policies/academic_integrity.asp

**Withheld Grades Semester Grades Policy (A-54)**

Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the course work
because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average.

**Students with Disabilities**

To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. This syllabus and other course materials can be made available in other formats. This course meets certain objectives of the ExCET/TEKS. A copy of the objectives and course correlations is available in the ExCET Advisor's office.

**F-1 Visa Holders**

There are important federal regulations pertaining to distance education activity for F-1 Visa holders. All students with an F-1 Visa should follow the instructions at the following link to make sure they are in compliance. [http://www.oit.sfasu.edu/disted/facsup/f1visa.html](http://www.oit.sfasu.edu/disted/facsup/f1visa.html)

Other than the minimum Web-course technical requirements for any course, students will need access to a CD-ROM drive, PowerPoint software, Real Player software. Consult the tools link at here for specific download information.

- Complete the startup check list located here.
- Register and pay for the course just as you would any other SFA course.
- An online Blackboard Orientation is provided for students who cannot come to the campus orientation at Blackboard Orientation.

Prepare for an online course: Distance Education Student Support
SFA mandatory email policy: Enable your SFA email account

- If you have slow connectivity, you may wish to order the CD, Keys to myCourses - CD, from the Office of Instructional Technology (OIT), which contains software programs such as Internet Explorer, Netscape Navigator, RealPlayer, PowerPoint Viewer and others to work on your assignments. [http://sfaonline.sfasu.edu/software.html](http://sfaonline.sfasu.edu/software.html)
- If you need assistance with the technology of myCourses during the semester, we urge you to follow this procedure for help:
  - first, refer to the "HELP" button in their myCourses course
  - next, refer to the Keys to myCourses Users Guide -
http://www.oit.sfasu.edu/webct/webctfaq.html

- then, post a question in the course discussion area
- If the points listed above have not assisted you, contact Dr. Markworth
- If you need to contact a help support person directly, contact Andra Floyd, Distance Education Support Specialist, during office hours Monday - Friday, 8 - 5, at (936) 468-1919 or 1-888-357-3278.