ASTR 112 at FSU
Syllabus, Spring 2014

Astronomy II, Stars, Galaxies, and Cosmology
Semester Credit Hours: 4; Total Contact Hours: 5
Class Location: The Planetarium (100 Lyons Science)
Class Hours: 11:00 – 12:15 TuTh
Lab Location: Varies – each will be announced
Lab Hours: 11:00 – 12:50 F
Course schedule: http://astro.uncfsu.edu/class/112/schedule.html
On-line course information: http://astro.uncfsu.edu/class/112/

Locator Information
Professor: Dr. John Mattox
Office Location: Room 319, Science & Technology Building; Phone: 910-672-1652
Office Hours: see http://astro.uncfsu.edu/mattox/office_hours.html
Email: JMattox@uncfsu.edu

Course Description
A general introductory course covering major areas of modern astronomy. Topics include the physical nature of stars and galaxies, neutron stars, and black holes. It also covers the origin and expected destiny of the Universe and the prospects for the existence of life elsewhere in the Universe. Laboratory activities illustrate different techniques used to gather and interpret information about these topics.

The format of the ASTR 112 class will be hybrid, consisting of both face-to-face meeting in the class room and mandatory on-line work. The on-line portion of this class is to be completed through WebAssign and Blackboard. Of the 3 contact hours per week corresponding to lecture, an average of 1 will be face-to-face and 2 will be on-line. Since this is the first semester that this course is being offered in the hybrid format, there will be opportunities to attend some lectures live rather than watch a recording of them, for additional hour per week of face-to-face contact. Of the 2 contact hours per week corresponding to the lab, an average of 1.5 will be face-to-face and 0.5 will be on-line. We will be using Adobe Connect. Prof. M's Virtual Meeting Room there is at http://uncfsu.adobeconnect.com/jmattox/.

University E-mail

FSU Policy on Electronic Mail: Fayetteville State University provides to each student, free of charge, an electronic mail account (username@uncfsu.edu) that is easily accessible via the Internet. The university has established FSU email as the primary mode of correspondence between university officials and enrolled students. Inquiries and requests from students pertaining to academic records, grades, bills, financial aid, and other matters of a confidential nature must be submitted via FSU email. Inquiries or requests from personal email accounts are not assured a response. The university maintains open-use computer laboratories throughout the campus that can be used to access electronic mail.
**WebAssign**

Some homework assignments for this course (as specified in the course schedule) are to be completed through WebAssign (http://webassign.net). To register for this course, under “Account Log In” select “I Have a Class Key”, and follow the instructions. Your class key is: uncsfu 7399 2770. You will need to then create an account there if you don’t yet have one.

You will have two weeks to pay for your WebAssign account for this course, which you can do by credit or debit card online after you log in. The cost should be $22.95. Alternatively, you can use an access code card at the bookstore (which you can obtain for free if you have support, or you can purchase - for a significantly marked-up price).

**Blackboard**

Some assignments for this course are to be completed through Blackboard – as specified in the course schedule. You should automatically be enrolled by the university in the Blackboard course. Blackboard will also be used to post grades.

**Text**

Our text is *Astronomy Today* by Chaisson & McMillan, 8th edition. For the most part, the lectures will follow Chapters 16-27. Chapters 1-15 and 28 are covered in ASTR 111. You may rent the 8th edition from the bookstore after. Alternatively, you may purchase the sufficiently similar 7th, or 6th editions online for a very modest price.

See the class schedule (posted at http://astro.uncsfu.edu/class/112) for the date by which you are expected to read the material. Any material in these assignments may appear in the in mid-term tests and/or the comprehensive final. The lectures will highlight and supplement the material in the text, not simply repeat it. Therefore it is mandatory that assigned readings be completed prior to the corresponding lecture/discussion.

**More Information**

A co-requisite for this course is MATH 123 (or MATH 116). Students may enroll in ASTR 112 before or after completing ASTR 111, but the recommended sequence is 111 first and 112 second. The ability to apply high school level algebra will be expected - we will be using fractions, proportions, graphs, and scientific notation (which is reviewed in appendix A-1 of the *Astronomy Today* text).

If you miss any class without prior permission, or get a grade of D or lower on any assignment, or fail to turn in any required assignment, you are required to check-in with Professor Mattox. This course is offered by FSU's Department of Chemistry and Physics. The Department Office is in room 305 of the Science & Technology Building.

**Student Learning Outcomes**

Students are expected to be able to:
1. Identify major stars and constellations.
2. Describe the major properties of stars, galaxies and universe.
3. Explain the current theories of cosmology, and life in the universe.
4. Recognize the scientific method and to be able to apply it to problems in this class, and elsewhere; specifically, students shall be able to:
   a. Create and assess hypotheses using research methods
   b. Interpret and express the results of observation and experimentation
   c. Understand the fundamental concepts of science
   d. Apply scientific knowledge to situations common to daily life to promote physical and psychological well-being

These outcomes will be assessed through on-line assignments, examinations, and laboratory reports (see the class schedule for details).

Lab Work
ASTR 112 is a laboratory class. Lab work will correspond to 25% of your grade (250 of 1000 points). Pre-lab exercises and/or procedure documents for each lab will be linked from the schedule. You should print a copy, do pre-lab exercises, and bring your copy to lab. Lab reports are due at the end of the lecture period just prior to the next lab meeting. For some of the lab work, we will use the Stellarium open source planetarium software. It may be downloaded to a PC or Mac computer for free. You are expected to become competent with this software. Much of the work that will be done in completing laboratory activities will require the student to complete graphs and make calculations. For these reasons you MUST bring to each lab session a ruler and a calculator. Your final report should contain conclusions that you made while working on the project. The format expected for the report will be specified for each lab.

Part of the work for this course will be night observations of planets, stars, etc. Students will be notified about that approximately a week in advance of scheduled observing sessions. Observations can only be done in nearly cloud free regions of the sky. Therefore, all observing sessions are contingent upon a nearly clear sky, and will be canceled if the sky is cloudy at the time the observing session is scheduled to begin.

Exams
There will be two mid-term exams for a total of approximately 170 possible class points. A comprehensive final will account for approximately an additional 250 class points. Mobile devices may not be used, or even out, during exams.

Grading
All class assignments will be graded, and the class points for each will be available on Blackboard. You are encouraged to check Blackboard to insure your points have been accurately entered for all assignments. There will be a total of 1000 points possible for the course. Students earning 92% of these points or more will receive a grade of A; a B corresponds to 82-91.9%; a C to 70-81.9%; a D to 50-69.9%; and an F to less than 50%. You may calculate your standing in the class at anytime by dividing your current blackboard point total by what is possible at the time of your calculation, multiplying by 100%, and comparing to the grade specifications given above.
Prior to midterm, interim grades of "F", "X", or "EA" may be issued. Interim grades are used for informational and warning purposes only; they are not part of your permanent transcript and have no effect on your GPA. An interim grade of "F" indicates poor academic performance. An "X" means "no show". An "EA" means "excessive absences". At midterm, all students will be assigned an interim grade using the calculation described in the previous paragraph.

**Attendance**

Punctual attendance at each lecture and lab session for this course is essential to your success. You will be asked to sign an attendance log for each session. The attendance sheet will indicate the number of unexcused absences for each student. If your absences exceed 10% of the total contact hours, you are eligible to receive an INTERIM GRADE of EA. If you come to class late without a written excuse, or leave early without prior permission, you will receive one half of an unexcused absence. Students will be allowed a minimum of two excused absences per year for religious observances required by a student’s faith. Students are required to submit requests for such excused absences in advance.

**Extension Grade Contract**

The Extension Grade is available for this course. It allows students who fulfill their course requirements and who attend academic support to protect their GPA if they get a D or F until they re-take the course in the next semester. Think of the Extension Grade as grade insurance. It insures you against a bad grade - IF you pay the premiums by doing everything you can to succeed. That includes completing all course requirements AND making use of academic support. Prof. M. encourages all students to consider "taking out an Extension Grade Contract" for this course. More information is available through the University College Learning Center. You must sign and submit an Extension Grade Contract no later than the fifth week of the semester. Here is the Extension Grade Contract Form.

**Disabled Student Services**

In accordance with Section 504 of the 1973 Rehabilitation Act and the Americans with Disabilities Act (ACA) of 1990, if you have a disability or think you have a disability to please contact the Center for Personal Development in the Spaulding Building, Room 155; 672-1203.