Course: ASTR1031 – Astronomy Lab, Spring 2015

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Office Hours: Posted on instructors office door

FAX: 423-318-2762

Secretary: 423-585-6865 (Division Assistant)

Required Text & Materials:
Textbook: Foundations of Astronomy, 12/e by Seeds/Backman & the Virtual Astronomy Labs 2.0 : 9781133535928

Catalog Course Description:
A survey of contemporary astronomy involving topics of current interest, for example: quasars, pulsars and black holes. Traditional topics on planetary, stellar and galactic astronomy will be covered. This course reviews research techniques, current knowledge and theory about the planets, stars, galaxies and the age and origin of the universe. – Total – 0 credits
The labs are conducted using the simulated labs.

Suggested apps for this course: 1) Planets
2) Star Walk
3) Star Chart
4) Sky Guide
5) GoSkyWatch

Prerequisites: None

Welcome!
Hello, and welcome to “Astronomy course”. This four-credit course begins your introduction to astronomy as an academic discipline. This course focuses on three particularly interesting areas of astronomy that are advancing very rapidly: Extra-Solar Planets, Black Holes, and Dark Energy.

Library Information: http://library.ws.edu/content.php?pid=9473&sid=62254

Course Outcomes:
The course syllabus is built around chapters covering a common core. At the end of this course, the students should be able to,

- Explain astronomy and its use in studying the universe
- Describe the cycles of the moon, gravity, light, atoms, and spectra
- Describe the formation and structure of stars including the sun
- Explain neutron starts, black holes, and galaxies.
- Use telescopes and identify different planets and stars
Chapters:
Chapter 1. Here and How
Chapter 3. Cycles of the Moon
Chapter 4. The Origin of Modern Astronomy
Chapter 5. Gravity
Chapter 6. Light and Telescopes
Chapter 7. Atoms and Spectra
Chapter 8. The Sun
Chapter 9. The Family of Stars
Chapter 10. The Interstellar Medium
Chapter 11. The Formation and Structure of Stars
Chapter 12. Stellar Evolution
Chapter 13. The Deaths of Stars
Chapter 14. Neutron Stars and Black Holes
Chapter 15. The Milky Way Galaxy
Chapter 16. Galaxies
Chapter 17. Active Galaxies and Supermassive Black Holes
Chapter 18. Modern Cosmology

General Education Course Designation: Natural Science (0 credit hours)

Instructional and Evaluation Methods:

Online lectures, discussions, projects, assignments and research: You are expected to follow the classes online, follow the PowerPoint and worksheets, and participate actively in discussions by answering questions, completing projects, assignments, and research. Learning Outcomes for students can be found in the Walters State online sections of this course. In addition to the suggested reading material, all the other information will be available via online.

Reading: The textbook provides a good general introduction to the field of research. (Most of the topics that are approached in the class are covered by the book.) Thus, it will serve to support online classes and to provide material for discussion. In addition, readings in the book will support the material that you will need in your research.

Expectations:
Satisfactory performance in college courses generally asks for three hours of study outside of class for each hour in class. This estimate applies to an "average" student expecting an "adequate" (C) grade. Students aiming higher or those with academic problems should expect to spend more effort than the minimum. Should you procrastinate, not read ahead of time, or expect to cram everything on last days before exams, this course may not be for you.
Specific Course Requirements:

Students should have a college level knowledge in their chosen subject. They must be familiar and comfortable with basic computer and Internet skills. They must be familiar with or willing to learn a variety of online tools.

Software Requirements:

- Microsoft Word is the recommended word processing software for this course. Students who do not have Microsoft Word should be able to submit essays as web pages (HTML files) or as rich text format files (RTF files). Essay assignments will be submitted to the electronic dropbox. At least one of the course assignments allows but does not require Real Player audio. This is free software available from the Internet at http://www.real.com.

Assignments:
Students will take part in projects, discussion topics, assignments, and research. Formal testing includes research proposal presentation, final research presentation, and research publication.

Grading Scale:

A  90 – 100%
B  80 - 90%
C  70 - 80%
D  60 - 70%
F  0 - 59%

Grading Procedure:

- Discussions  - 20 points each; one in each module  200 points
- Labs  - 10 points each; one in each module  100 points
- Practice quizzes  - 5 points each; one in each module  50 points
- Quizzes  - 10 points each; one in each module  100 points
- Portfolio activity  - 100 each; two check points  200 points
- Midterm  150 points
- Final Exam  200 points
- Total:  1000 points

COURSE CONTENT AND SCHEDULE

Please note that this schedule is tentative and subject to change. Changes will be announced, but it is the student’s responsibility to remain updated.

Quizzes, practice quizzes, tests, portfolio work, and labs by Modules/chapters:

Module 1
Chapter 1:
Introduce Yourself
PowerPoint
Lab Activity                       10 points
Discussion                         20 points
Practice Quiz                       5 points
Chapter Quiz                      10 points

Module 2
Chapter 2:
PowerPoint
Lab Activity                       10 points
Discussion                         20 points
Practice Quiz                       5 points
Chapter Quiz                      10 points

Module 3
Chapter 3:
PowerPoint
Lab Activity                       10 points
Discussion                         20 points
Practice Quiz                       5 points
Chapter Quiz                      10 points

Module 4
Chapters 4 and 6:
PowerPoint
Lab Activity                       10 points
Discussion                         20 points
Practice Quiz                       5 points
Chapter Quiz                      10 points

Module 5
Chapter 5:
PowerPoint
Lab Activity                       10 points
Discussion                         20 points
Practice Quiz                       5 points
Chapter Quiz                      10 points

Midterm Exam                        150 points

Module 6
Chapter 7:
PowerPoint
Lab Activity                       10 points
Discussion                         20 points
Practice Quiz                       5 points
Chapter Quiz                      10 points
Portfolio (check point 1)   100 points

Module 7
Chapter 8:
PowerPoint
Lab Activity                       10 points
Discussion                         20 points
Practice Quiz                       5 points
Chapter Quiz                      10 points
Module 8
Chapters 9 and 10:
PowerPoint
Lab Activity 10 points
Discussion 20 points
Practice Quiz 5 points
Chapter Quiz 10 points

Module 9
Chapters 11, 12, 13 and 14:
PowerPoint
Lab Activity 10 points
Discussion 20 points
Practice Quiz 5 points
Chapter Quiz 10 points

Module 10
Chapters 15, 16, 17, and 18:
PowerPoint
Lab Activity 10 points
Discussion 20 points
Practice Quiz 5 points
Chapter Quiz 10 points
Portfolio (Final Check point) 100 points

Final Exam 200 points

Discussions:
Students will participate in discussions by posting answers to questions.

Rubric for Discussions

Total Discussion Grade Grading Criteria

8 - 10 points
  • Original, thoughtful analysis of the discussion question.
  • Clear and fluent writing.
  • Student contributes meaningfully throughout the week.
  • Responses to other posts are thoughtful and advance the discussion.
  • Discussion Question is answered completely.

6 - 8 points
  • Some analysis of the Discussion Question.
  • Clear writing.
  • Student may participate meaningfully, yet inconsistently throughout the week.
  • Mainly thoughtful responses to other postings.
  • Over 75% of the Discussion Question is answered
4 – 6 points
• Postings may be too short.
• Postings may contain inconsistent and/or unclear writing.
• Student may post on only one or two days during the week.
• Limited responses to other postings.
• Over 50% of the discussion Question is answered

0 - 4 points
• Minimal postings, on very few days.
• Significant writing errors or too-short postings.
• No interaction with other postings.
• Discussion Question is unanswered.
• Less than 50% of the discussion question is answered.

0 points
• Off-topic postings.
• Posting may take place on one day only.
• Major writing errors that inhibit reading.
• No interaction with other postings.
• Discussion Question is unanswered.
• Abusive or inappropriate behavior.

**Portfolio and Labs:**

Students will also carry out portfolio and lab work and submit the work using dropbox.

The portfolio and labs provide the students with an opportunity to explore learning in real life situations. The lab activities and portfolio work should be presented with supporting references and must answer all the questions.

N.B. All writing in all assignments must be your own work.

**ASTR 1030 Student Portfolio**
(Individual or small group)

Include the following:

1. Overview
   a. Title of the research
   b. Abstract
   c. Objectives
   d. Hypothesis
   e. Literature Review

2. Method
   a. Instruments used
   b. Experts consulted
1. c. Procedure followed (Portfolio Check Point 1)

3. Results – Produce the results

4. Discussion
   a. Science principles used and/or obtained from research
   b. Any sample data or report sheets used
   c. Discussion of an “errors” in the experiment

5. Conclusion

6. References

7. Presentation to the class and the submission of the completed work. (Portfolio final check point.)

**Portfolio Assignment and Lab Rubric:**

Assign this level if these performance indicators are shown…

A 8 - 10pts  Completely addresses all of the questions in the project/assignment.

B 6 - 8pts  Completely addresses 75% of the questions in the project/assignment.

C 5 - 6pts  Completely address more than 50% of the questions in the project/assignment.

D 4 - 5pts  Completely address less than 50% of the project/assignment questions.

F 3 - 4pts  Answer only 25% of the project/assignment questions.

F 2 - 3pts  The work does not meet minimal standards of achievement.

F 0 pts  No submission.

- **Practice quizzes and chapter quizzes and exams will be graded automatically.**

**Exam Policy:**

1. **ALL** exams are to be taken at times scheduled by the instructor.

2. **ALL** exams scheduled in the course by the instructor must be taken in order for the student to receive a passing grade except as noted above.

3. Make-up exams will be given totally at the discretion of the instructor for excused absences only (excused absences include illness, death in family, and military or jury duty).

4. Make-up exams must be taken before the next scheduled exam.

**Class Participation:**

Students are expected to communicate with the instructor on a regular basis and check the calendar, news, and email frequently for announcements or changes in the course. Students must actively participate in the class consistently and at a steady pace.

**Punctuality:**
To receive full credit, all assignments, including discussions, assignments, projects, etc. must be submitted on time. Ten percent (10%) of the score will be taken away for each 24-hour period an assignment is late. Once the deadline has passed, students may lose access to submitting the assignments. Students who are able to work on class assignments only in the evenings should make plans to complete assignments on the evening before the day of the deadline.

**Course Requirements:**
Student responsibilities include:
- completion of required hours of work each week.
- keeping a journal of activities.
- posting answers to the discussion questions onto the course discussion board.
- completion of various written assignments as assigned by the hosting facility.
- attending lectures provided by the hosting facility (or appropriate substitutions).
- completion of evaluations as assigned by the hosting facility.

**The Student Can Expect from the Instructor:**
1. Email response within 24 hours during the normal work week. Holidays and vacations excluded.
2. Email during the weekend will be answered on Monday.
3. Exams to be graded and returned in a timely manner.
4. Enthusiasm for the subject and encouragement to help you when you need it.
5. A fair grading system with feedback.
6. Learning that ties concepts into the real world around us.
7. Respect for you as a learner.

**Course Ground Rules**

All students attending Walters State Community College, regardless of the time, location, or format of the class, must abide by the rules and regulations outlined in the current Walters State Catalog/Student Handbook and the current Walters State Timetable of Classes. The Catalog/Student Handbook and the Timetable of Classes are online at: [http://ws.edu](http://ws.edu)

Students must attend the first day of on-ground class or contact the instructor prior to the first class. Failure to do this may result in being dropped from the class. Excessive absences may substantially lower the course grade.

Students enrolled in web courses must follow the course attendance policy defined for online attendance during the first week of class and throughout the term. Failure to do this may result in being dropped from the class during week one OR may result in the accrual of absences which may negatively impact the student’s grade in the course.

Plagiarism, cheating, and other forms of academic dishonesty are prohibited. The minimum penalty for cheating is a “0” (zero) on the examination or assignment. Academic dishonesty may result in an “F” for the course. Additional information can be found in the WSCC Catalog/Student Handbook at: [http://ws.edu](http://ws.edu).

Students with disabilities must register with Student Support Services each semester in the Student Services Building, Room U134 (phone 423-585-6892) if they need any special facilities, services, or consideration.

Students in need of tutoring assistance are encouraged to contact the Office of Student Tutoring located as follows:
- Morristown Campus - Student Services Building Room L107 – (423) 585-6920
- Greeneville Campus – Room 420 - (423) 798-7982
- Sevierville Campus - Marshall-Maples Hall Room 118 – (865) 286-2787
Specific tutoring assistance in mathematics and writing is available in-person and online as follows:

- **Claiborne Campus – Room 123A (423) 851-4761**
- **Morristown Campus – English Learning Lab – HUM 120 – (423) 585-6970**
  - https://www.ws.edu/academics/humanities/writing-lab
- **Morristown Campus – Mathematics Lab – MBSS 222 - (423) 585-6872**
  - http://ws.edu/academics/mathematics/learning-lab

Students who need assistance with computing and technology issues should contact the IET Helpdesk by phone at Morristown: 423-318-2742 Greeneville: 423-798-8186 or Sevierville: 865-286-2789 or on-line access at: http://helpdesk.ws.edu/.

Students receiving any type of financial aid or scholarship should contact the Financial Aid Office before making any changes to their schedule. Schedule changes without prior approval may result in loss of award for the current term and future terms.

Students who have not paid fees on time and/or are not correctly registered for this class and whose names do not appear on official class rolls generated by the Walters State student information system (StarNET) will not be allowed to remain in class or receive credit for this course.

Electronic devices must not disrupt the instructional process or college-sponsored academic activity. Use of electronic devices is prohibited unless use of the device is relevant to the activity and use is sanctioned by the faculty member in charge. Electronic devices that are not relevant to the activity or sanctioned by the faculty member in charge should be set so that they will not produce an audible sound during classroom instruction or other college-sponsored academic activity.

For information related to the cancellation of classes due to inclement weather, please check the college’s Web site at [www.ws.edu](http://www.ws.edu) or call the college’s student information line, 1-800-225-4770, option 1; InfoConnect, (423) 581-1233, option 1045; the Sevier County Campus, (865) 774-5800, option 7; or the Greeneville/Greene County Campus (423) 798-7940, option 4. Also, please monitor local TV and radio stations for weather-related announcements. For additional information on this policy see the college catalog at: [http://ws.edu](http://ws.edu)

Dual Enrollment students attending on a high school campus should refer to the high school inclement weather cancellations.

In the event of a pandemic or other college-declared critical event that impacts the college’s ability to proceed with academic course activities as planned, the college reserves the right to alter this course plan. In the event of a pandemic or other event, please refer to the college’s home web page, [www.ws.edu](http://www.ws.edu) or call InfoConnect, (423) 581-1233 for further information.

Regular class attendance is a student’s obligation for any course regardless of format. (See the Walters State Catalog/Student Handbook) If a student misses class, it is his or her responsibility to contact the instructor regarding missed assignments and/or activities and to be prepared for the next class assignment.

All forms of student Financial Aid may be jeopardized or lost due to the lack of Satisfactory Academic Progress in one or multiple courses. Lack of Satisfactory Academic Progress may negatively impact a student’s degree/certificate completion pace and further jeopardize Financial Aid eligibility.

**Email:**

- Always include a subject line.
- Set email to the UNREAD option.
- Never use all capital letters; this is known as "screaming" in netiquette.
- Remember without facial expressions some comments may be taken the wrong way. Be careful in wording your emails. Use of emotions might be helpful in some cases.
- Use standard fonts.
- Do not send large attachments without permission.
- Special formatting such as centering, audio messages, tables, html, etc. should be avoided unless necessary to complete an assignment or other communication.
- Respect the privacy of other class members.
- Check email frequently; checking email once every day or once every other day is probably about right for most students.
- Respond to email from others by using the QUOTE feature in email.

Discussion Groups:
- Set discussion to UNTHEADED and UNREAD option, if you wish.
- Review the discussion threads thoroughly before entering the discussion. Be a lurker then a discussant.
- Read what other students have posted before posting your own message. Much can be learned from what others have to say.
- Reading what other students have posted before posting your own message also serves to give students models of writing that might be helpful in writing their own messages.
- Try to maintain threads by using the "Reply" or "Quote" button rather starting a new topic, when appropriate.
- Do not make insulting or inflammatory statements to other members of the class on the discussion board. Discussion boards are public communication and should be treated as such. Be respectful of other’s ideas.
- Be patient and read the comments of other students thoroughly before entering your remarks.
- Be cooperative with other students in completing assigned collaborative tasks.
- Be positive and constructive in discussion boards.
- Respond in a thoughtful and timely manner.
- Avoid responding to how something is said; usually, responding to what is said is a better idea.
- Feel free to disagree with the ideas of others, but do not attack or denigrate their opinions, analyses, or interpretations.
- Always include a subject line when posting a discussion message.
- Respond to discussion postings from others by using the QUOTE feature.
- Respond to discussion postings from others by using REPLY PRIVATELY feature if your response is sensitive or personal in nature.

Chat:
- Chat is not required in this course.
- Introduce yourself to the other learners in the chat session.
- Be polite. Choose your words carefully. Do not use derogatory statements.
- Be concise in responding to others in the chat session.
- Be prepared to open the chat session at the scheduled time.
- Be constructive in your comments and suggestions.
- Avoid creating private rooms if several people are chatting.
- If you wish to chat, be sure to set up days, dates, times, and chat rooms to enter with other students before trying to chat.

WSCC Catalog Notification Statement:
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**Alternative Teaching Plan:**

In the event of a pandemic or other college declared critical event, the lead faculty member for this course will use eLearn to communicate with the students. If the lead faculty member is affected by this event, another member from the teaching team will assume instruction for the course. The course will continue utilizing an online format of instruction and testing.

**ATTENTION:**

The Natural Science faculty members are concerned with proper academic advising of students in ALL Pre-Professional programs. It is our explicit desire to help you with any advising problems you may encounter.

The last day to drop a course or withdraw from the college-full term for Fall 2014 term is November 5, 2014.

The last day to drop a course or withdraw from the college-full term for Spring 2015 term is April 2, 2015.