



ASTR 1303 01W – Stars and the Universe Online
COURSE SYLLABUS: Spring 2015

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Please include "ASTR Online" in the subject line.

COURSE INFORMATION

Course Description:

Astronomy is an ancient science with records dating back to the dawn of civilization. Despite this long history, it remains an exciting and vibrant area of ongoing study. With the advancement of technology, astronomers are rapidly making new discoveries. In the coming years, astronomers may discover Earth-sized planets around other stars, see the first stars emerging from the cosmic dawn, and explore new physics in realms and laboratories that Earth-bound scientists can only dream of.

The content for this course, will focus on studying stars and galaxies, as well as the natural laws and tools that astronomers use to study these distant objects. We'll begin by studying gravity, light, and telescopes. We will then study our Sun as an example star and use it as a stepping stone to reach further into the Universe. Along the way we will explore new worlds around other stars, peer into the mystery of black holes, witness galactic cannibalism, and piece together vital clues pointing to the origins of the Universe.

The Solar System, the planets around our sun, will not be a topic of study for this course. If you are interested in studying the eight planets, their moons, asteroids, meteors, and comets, please take ASTR 1304.

Student Learning Outcomes:

1. Students will be able to explain the characteristics of stars and their life cycles.
2. Students will be able to identify the classes of galaxies and their basic properties.
3. Students will be able to state evidence supporting astronomers' explanations of the origin and fate of the Universe.
4. Students will be able to evaluate statements about astronomy using the scientific method.
5. Students will be able to identify constellations, stars, and deep-sky objects visible from Texas.

COURSE REQUIREMENTS

Materials – Textbooks, Software and Additional Reading:

Required:

- 21st Century Astronomy, Volume 2: Stars and Galaxies, 4th edition, by Kay, Palen, Smith, & Blumenthal, ISBN 978-0-393-92057-4
- A subscription to SmartWork, an online astronomy homework and tutoring system (see more below)
- A computer (PC or Mac) on which you can access the internet and install software
- Stellarium (www.stellarium.org) – FREE planetarium software
- Access to a scanner or other means of turning in written work and sketches.

Suggested:

- Headphones for listening to online videos and participating in online office hours

Options for purchasing: (Prices as of 8/24/2014)

- 21st Century Astronomy Volume 2 with SmartWork and eBook access
 - Best if you are taking this astronomy course only
 - From TAMU-C Bookstore: \$107.15
 - From wwnorton.com: \$93.75
- 21st Century Astronomy (entire book) with SmartWork and eBook access
 - Best if you are sure you will take Astr 1304: The Solar System as well as this course
 - From wwnorton.com: \$141.25
- 21st Century Astronomy (entire book), eBook with SmartWork ONLY (no hard copy)
 - Best if you are sure you are happy with eBooks; 360 day access
 - From wwnorton.com: \$57.08
- **Important:** Used print textbooks or new versions purchased from other vendors usually do NOT include access to SmartWork, which will then cost an additional \$20 for 1 semester access.

Course Prerequisites: None

HOW THIS COURSE WILL WORK

Instructional Methods / Activities / Assessments

Course pace

Student interaction is a crucial part of learning which requires that students work together at a coordinated pace. Therefore units will be opened and closed according to posted dates. It is important that students work at a common pace so that interaction is productive.

The course is organized into 13 units. Most units last one week, with **work due by 9 pm on Sundays**. You are responsible to keep track of due dates and your progress through eCollege. All due dates will be announced when the assignment is available. eCollege has a Course Checklist tool to help you track what has and/or has not been completed. You can access the “Course Checklist” at the bottom of course home page.

Participation

Research into how people learn shows that the best learning occurs through interaction. Simply reading material and taking online quizzes won't help you learn and retain knowledge. Therefore to increase content retention, you will be required to actively participate in the course. Some methods that may be used for participation include threaded discussions through eCollege, live chat, and live meetings using Adobe Connect in eCollege.

For each activity, instructions, due dates, grading procedures, and minimum requirements will be provided. Of course, if you want to continue discussions beyond the minimum requirements, I encourage you to do so! The more effort you put into the course, the more you will learn and remember.

SmartWork: Reading Quizzes and Homework

SmartWork is an online astronomy homework and tutoring tool. SmartWork will provide instant feedback on content indicating if you answered a question right or wrong and offer hints and tools to better learn the material.

There will be two types of SmartWork assignments: reading quizzes and homeworks. Reading will be assigned for each unit, and the reading quiz checks to see (a) if you did the reading, and (b) where you might be having problems. The reading and reading quizzes are intended to be completed *before* you watch the minilectures. There will be material covered in the reading that will not be covered in minilectures but you will be expected to know. If a topic is not covered in a minilecture but appears on a reading quiz and/or homework, it may appear again.

Homework assignments will also be assigned for each unit. The homework is intended to be the "capstone" each week; and should usually be the last thing you complete in each unit. If you do the homework and find you still don't understand something, you definitely want to follow up via office hours, chat, or by email.

The grading policy for each SmartWork assignment is shown in each assignment. You may have multiple attempts to answer a question correctly; however, submitting an incorrect answer will reduce credit. Some more difficult or mathematical questions may be assigned as extra credit for students who want more of a challenge. SmartWork will identify these questions as extra credit. Late homeworks are penalized 10% per day, up to a maximum of 70%.

The following are considered forms of cheating and will not be tolerated: Directly copying text from a website or other printed source, obtaining copies of solutions to homework questions (whether from past students or other sources), directly copying another student's work, etc. See the section on "Academic Integrity" below for full details.

Mini-Lectures and Response Questions

Within each unit, mini-lectures will be provided. It is recommended that you view each mini-lecture. These videos are approximately 15 minutes each and will focus on specific concepts.

Each video will be paired with a minilecture response activity in eCollege. The responses contain a few critical-thinking questions that allow you to check learning and content mastery covered in the mini-lecture.

These offer opportunity for you to begin to think about and work with the concepts before they are included on homework or exams and without the pressure of getting a right or wrong answer.

Some questions will be easy, some more challenging, and some will require you to put together more than one concept in order to figure out an answer.

The minilecture responses are not graded but provide an opportunity for you to check your understanding in a no-pressure environment.

Exams:

Three online exams will be given during the semester through eCollege: the first after Unit 5: Telescopes, the second after Unit 9: Star Death, and the third at the end of the term. For the exams you may use whatever materials you like (text, homework solutions, internet searches, etc). However, the exams are *timed* and may only be taken once, so you will want to study the material before taking the exam. Once the exam is opened, you are required to complete the full exam. The exams are not officially cumulative, but astronomy is a very intertwined science and topics covered on exam one will be required knowledge to answer questions on the following exams.

Activities:

Activities include learning constellations in the night sky and exploring current astronomy news and issues. The night sky activities will make use of **Stellarium**, a free downloadable program for your computer. The installation and basic usage of this program will be covered in Unit 1.

Labs:

As of Fall 2014, labs are a separate class (Astr 1103/1104); you do not need to be enrolled in a laboratory section to earn credit in this course. You should speak with your academic advisor to determine if signing up for a lab section is right for your degree plan. You can also take the lab courses independently in future semesters; they do not need to be taken concurrently. At the present, we do not offer online labs for astronomy.

Extra Credit: Observatory Visit, Do-It-Yourself Observing, or a Planetarium Show:

If you live close to Commerce, you will have an opportunity to visit our observatory, located about 5 miles south of Commerce. Several conditions contribute to the viewing conditions and observation dates will be announced accordingly. At each session, there will be an activity you must complete in order to earn extra credit.

Another option for extra credit can be made by attending a planetarium show. The A&M-Commerce Planetarium exhibits different shows every Friday night at 7pm and 8pm. The shows change periodically and the schedule is available online. Tickets are \$4 for children and students, \$4.50 for senior citizens, and \$5 for adults per show. Visit the planetarium website for a current listing of shows. <http://www.tamuc.edu/communityOutreach/planetarium/default.aspx>

If you attend a show, tell the staff that you are a member of this class. They will record your attendance and turn names in to me. Then email two paragraphs: one summarizing the show, and a second of something specific about the show that you found interesting and why. You must complete both of these steps to earn extra credit.

Extra Credit Terms, Conditions, and Caveats: You may only earn extra credit once, though you are welcome to attend as many of the observatory and planetarium events as you like. All extra credit work must be turned in on or before midnight on 01 May 2015. Family of any age is welcome to attend the planetarium shows; be sure to check the age-appropriateness of shows (all shows are fine for all audiences, but some are targeted for children and others shows are more advanced).

If you are not near Commerce or cannot make it to these opportunities, a do-it-yourself observing activity will be posted on eCollege and available after the night-sky laboratory.

Grading

Grading will be done on an absolute scale with no competition. If the entire class earns an A, all will receive an A. Your current grades will be available through the gradebook in eCollege. Note that the gradebook in SmartWork is not official.

Extra credit opportunities may be announced during the semester. Outside of announced opportunities available to the entire class, no other extra credit will be available.

Grading is weighted by assignment using the following weights:

Discussions	15%
Reading Quizzes	15%
Homework Assignments	25%
Exams	30% (10% each)
Activities	15%

The grading scale is:

90% to 100%	A
80% to 89.9%	B
70% to 79.9%	C
60% to 69.9%	D
Below 60%	F

TECHNOLOGY REQUIREMENTS

This course is a fully online course. You need to be comfortable with basic computing skills and web browsing, and learn to use the various tools on eCollege even if you are not yet familiar with them.

You will need the following technologies and software to be successful in this course:

- Internet access/connection – high speed recommended (not dial-up).
- A computer or laptop on which you have permission to install software for one of the following operating systems: Windows or Mac OSX.
- Headset and/or microphone
- Access to a scanner or other way of making digital copies of handwritten materials.
 - I prefer PDF files to JPGs, but that is not required
 - Be sure that I can easily read your work by looking at the PDF or images before uploading them.
- Word processor
 - I can see the following types of files:
 - MS Word .doc/.docx
 - Apple Pages

- If you have another type of word processor, you will need to save your output as a plain text file or PDF. Feel free to send me a test file early in the semester to make sure I can read it.
- Stellarium – a free planetarium program available for PC, Mac, and Linux at www.stellarium.org
- Software to read PDF files (such as Acroread or Preview)
- SmartWork – the web-based astronomy homework system at smartwork.wwnorton.com. See *Course Requirements* section (above) for details on how to purchase a subscription.

Additionally, the following hardware and software are necessary to use eCollege:

- Our campus is optimized to work in a Microsoft Windows environment. This means our courses work best if you are using a Windows operating system (XP or newer) and Internet Explorer (6.0, 7.0 and 9.0).
- eCollege claims to support Mac OS X and iPads (iOS 5.1 or later with some features disabled), as well as the Safari browser (on Macs) and Firefox or Chrome on Windows machines. Be advised that there are often problems, especially after a software update.
- I strongly recommend that you check that your computer and browser are compatible with eCollege by performing a “Browser Test” prior to the start of your course. To launch a browser test, login in to eCollege, click on the ‘myCourses’ tab, and then select the “Browser Test” link under Support Services.

HOW TO GET STARTED

SmartWork and eCollege Access Information

Homework and Reading Quizzes must be completed using SmartWork, smartwork.wwnorton.com. You are required to purchase a subscription to this site; it comes included with the textbook bundle available through the bookstore, or it can be purchased separately. Our Enrollment Key in SmartWork is **ASTRO4E7522** (case sensitive). SmartWork has support available at: books.wwnorton.com/books/buysmartwork

This course will be facilitated using eCollege, the Learning Management System used by Texas A&M University - Commerce. To access these materials, go to: <https://leo.tamuc.edu/Login.aspx>. You will need your CWID and password to log in. If you do not know your CWID or have forgotten your password, contact Technology Services at 903-468-6000 or helpdesk@tamuc.edu. I am unable to assist your login issues.

Being a Successful Student

I *strongly* encourage you to check out the following resources to see if you are likely to succeed in an online course. This course will require just as much, if not more, work than a non-online course. If you are uncertain, you are always welcome to switch sections to join our face-to-face version of Astr 1303 (see the Schedule of Classes for meeting times and course numbers).

- [What Makes a Successful Online Student?](#)
- [Self-Evaluation for Potential Online Students](#)

Organization

This course is organized by units. Most units will last just one week, but some units will cover multiple weeks. Some units cover one chapter in the text, others cover multiple chapters. You should check the course page often to see what activities and assignments are due during the week.

What Should You Do First?

After reading this syllabus, you should proceed to the course page on eCollege and complete the activities and assignments listed under Unit 1. Due dates are specified on eCollege.

How Should You Proceed For Each Unit?

1. All activities and assignments for a unit will be listed on the unit's main page on eCollege. The unit home pages are found in the left navigation bar of eCollege. A course announcement will be made when each unit is available.
2. You should complete any reading assignments and complete the reading quizzes first.
3. After completing reading quizzes, you may listen to any online minilectures listed within the unit and complete the associated response questions.
4. Complete any other listed activities and assignments given in the weekly unit.
5. If there is an activity under the unit, be sure to complete it by the deadline.
6. Even after completing the unit, you may want to check for any new content (such as new minilectures or external links) that may be posted in order to clarify any confusing topics.
7. New assignments should not be posted in a unit after the announcement that the unit is available.

NEED ASSISTANCE?

Are you lost, confused, or worried?

First, **DON'T PANIC!**

Next, step back and try to pinpoint the source of your confusion:

- Have you read the textbook sections? If not, go read them! If you have, maybe you need to try a different reading method. Science textbooks are not like novels; they present information in a completely different format than most reading material, and there is no plot thread unfolding as you get further into a chapter. Here are some websites with suggestions on how to read science textbooks:
 - How to Read Effectively in the Sciences: <http://academic.cuesta.edu/acasupp/AS/621.htm>
 - Reading Assignments in Science: <http://www.studygs.net/science/readingtexts.htm>
 - The SQ4R Method for Reading: <http://scs.tamu.edu/?q=node/105>
- Have you watched the minilectures? These are designed to go over the main points where I think you might struggle with concepts.
- Do you just need some time away? Astronomy can be a lot to take in at once. Work on the assignment over the week and give your brain some time to absorb and mull over the information. Except for the exams, activities are untimed. You can start your homework on SmartWork, take a break, and pick up where you left off, and not lose any points.
- Review the How To Get Started section above, and focus on how to be a successful student and how to proceed in each unit.

- If after all of this you are still confused or uncertain, it's time to seek help. Don't wait until the exam! Options include:
 - Talk to your classmates! Use the student lounge or email to solicit help.
 - Attend office hours (see next section). You can come to face-to-face or virtual hours, or make an appointment with me if none of those times work.
 - If you are on or near campus, go to the JAMP room (Science 110). JAMP offers peer counselling and tutoring in many of the sciences; look for times when a physics tutor is available.
 - If you are still stuck, contact the Academic Success Center to search for other options that may help you.
<http://www.tamuc.edu/studentLife/campusServices/academicSuccessCenter/>

Are you experiencing technical difficulties?

If your problems are with eCollege:

Texas A&M University-Commerce provides student technical support in the use of eCollege. The student help desk may be reached by the following means 24 hours a day, seven days a week.

- **Chat Support:** Click on '*Live Support*' on the tool bar within your course to chat with an eCollege Representative.
- **Phone:** 1-866-656-5511 (Toll Free) to speak with eCollege Technical Support Representative.
- **Email:** helpdesk@online.tamuc.org to initiate a support request with eCollege Technical Support Representative.
- **Help:** Click on the '*Help*' button on the toolbar for information regarding working with eCollege (i.e. How to submit to dropbox, How to post to discussions etc...)
- **Please don't contact me** for eCollege problems. I will just tell you to take the above steps.

If your problems are with SmartWork:

- If you are having trouble joining the class, see the "Joining SmartWork" link in the eCollege menu bar and the links on that page.
 - The most common problems are that you are confusing your registration code, which comes with your book or your online purchase, and the enrollment key, which is listed under How To Get Started above.
- If you are having other problems, go to the SmartWork student support page at <http://books.wwnorton.com/books/buysmartwork>.

STAY CONNECTED

Interaction with Instructor

Email: I can be reached by email at Cheri.Davis@tamuc.edu. Please include "ASTR Online" in your email subject header. It may take up to 24 hours to respond (48 hours on the weekend or holidays). If you don't hear back from me in that time, please send another email or give me a call. I expect you to check your campus email daily since you are taking an online course, so if I send out a class email, I will assume you read it.

Virtual Office: Virtual Office is a link in the left menu bar of eCollege that allows you to start discussion threads with me. Note that these threads are not necessarily private. It may take me up to 24 hours to reply (48 hours on the weekend or holidays). Again, bug me after that time if you don't hear anything.

Adobe Connect and Class Live Pro: These are two tools that we will use for virtual office hours. Participation is optional, and instructions are provided on eCollege.

Texts & Automated Emails: I have set up an SMS (text and/or email) account for brief messages (like reminders of due dates, updates on class events, and things I find that are cool). Your use of these is completely optional; no critical information will be provided without a class email and/or eCollege announcement also being made.

To register for text (SMS) updates, text “@astroweb” (without quotes) to (754) 333-5306. The service is free, but any standard messaging fees charged by your mobile provider will apply. To get automated email copies of any texts (like if you don’t have texting or don’t want to pay for it), send a blank email to: astroweb@mail.remind101.com. The service is also private: nobody (including myself) will see your phone number or email, and only I can send messages. So you will only get my reminders.

Office Hours: Office hours are available in both real-world and virtual formats. Office hours are times set aside when I will be in my office so that you can come by and talk to me. During real-world office hours, you can ask questions about the course material, ask about homework, see your current grade, or ask other questions about the class or astronomy in general. During virtual office hours, I will have a preset list of topics and you’ll be free to ask questions when we get to that time.

It’s important to realize that office hours are *not* just for students who are having problems in the course. If you are uncertain about anything, please visit, email, phone or drop into virtual hours before your small problems grow into big ones. If you are worried about what might be on the test, stop in.

Office hours work best if you have your textbooks, class notes, and homework sets with you.

If you want to talk but cannot come during office hours, please contact me by email in order to set up an individual appointment. By setting an appointment, you both guarantee that I will be in my office (or online) and that I will have plenty of time to talk with you. You may feel free to stop by my office any time my door is open, but if you do not have an appointment and if it is not my scheduled office hours, please understand if I’m not free to talk at that instant.

Netiquette

I expect all students to behave to basic standards of etiquette on the web (and in real life). Abusive or inappropriate comments will be removed and earn a reprimand; any additional lapses could result in disciplinary action. For a simple guide to netiquette, see <http://www.albion.com/netiquette/corerules.html>

RULES, RULES, RULES (UNIVERSITY POLICIES)
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Academic integrity

A major goal of this and most every university course is for you to learn and appreciate subject material. Academic dishonesty (“cheating”) actively prevents you from achieving this goal. Academic dishonesty is taken seriously by the University and by me, and **will not be tolerated**. (See the TAMU-C Code of Student Conduct and the TAMU-C Procedures A 13.04, 13.12, 13.31, and 13.32.)

Cheating is not only considered wrong in this course and at this University, but also in the real world. Engaging in these activities will get you fired from a job and prevent you from getting another job.

Unethical student conduct includes:

- **Plagiarism**, or copying the words of others with the intent of making it look like your own. Whether you use someone else's phrase word for word, or whether you try and change a few words, or even if you just borrow someone else's original idea and don't give them credit, that's unethical. Use your own words whenever possible, give credit to wherever you got an idea, and put direct quotes inside quotation marks.
- **Cheating** involves trying to trick me or others into thinking you did work that you really didn't do, or into thinking you know what you really don't know. This can include stealing exams, changing your answers on a graded exam or assignment and claiming it was graded wrongly, putting your name on someone else's homework, and so on.
 - ***Searching the Internet for homework solutions and cutting/pasting the text you find is considered cheating.*** Searching the Internet for help on a topic is okay. For example, suppose a question asks "Describe the life cycle of a star that has the same mass as the sun." Typing that phrase into Google and cutting and pasting the text in the answer box is considered cheating. Typing "star life cycles" into Google, reading a few web pages, and summarizing the information in your own words is not cheating.
 - ***Borrowing a previous student's homework, exams, or solution sets is considered cheating.*** "Borrowing" includes looking at someone's submitted homework, screen shots, stealing returned homeworks, and so on.
- **Collusion** is working with another person to cheat. This can include copying someone else's answers to an exam or assignment, doing work for another student, buying or otherwise obtaining homework/exam solutions from any source online or off-line, or any other instance of multiple people engaging in some form of cheating or dishonesty. Working with other students on an assignment is fine as long as everyone contributes and each student does their own work.
- **Any other activity that, to a reasonable person, looks wrong, don't participate.** If you have any doubt whatsoever whether a certain action is considered dishonest, please ask me *before* engaging in the activity. There is no need to be embarrassed about asking, there is no penalty for asking! In this class, if you follow the maxim "it's easier to beg forgiveness than to ask permission", don't expect forgiveness to be forthcoming.

If you engage in academic dishonesty during any graded activity, you will receive no credit for that activity. More than one instance of dishonesty by a student will result in automatic failure of the course and referral of the student for disciplinary action.

For further information, search the Texas A&M-Commerce website for "academic integrity policy".

SmartWork and eCollege provide me with tools that check for common forms of online cheating and collusion. These include, but aren't limited to: time stamps, location stamps, and automated comparison of essay answers. I will use these tools.

Examination Policy

- **You must work on the exam alone** – you may not discuss the exam with other students prior to the due date, you may not use any sort of communication like email, Skype,

texting, ChaCha, talking, writing, semaphore, etc., etc., etc. to communicate with any other human during or after the exam.

- When an exam is assigned, you will have one week to complete the exam. Be aware of the due date. Once the test closes, it will no longer be available.
- The exams are *timed* and *may only be taken once*, so you will want to study the material before opening/taking the exam.
- For the online exams you may use whatever static materials you like, including your text, homework solutions, internet searches (as long as you do not cut-and-paste), etc. However, you may not use another person.

“Attendance” Policy

While this class will have no required synchronous (live online) meetings, you will be required to participate in online discussions. As such, you should be active in the class weekly. If life happens and you will be unable to log on for an extended period of time (like a couple of days), please contact me in advance to discuss options. Initial prompts should be addressed within a day or two so others will have the opportunity to join the discussion.

Assignment Policy and Due Dates

All assignments will be posted at least one week before they are due. Assignments and due dates will be posted on the main page for each unit. Submission requirements for each assignment will also be provided on that page.

Late Work

Late assignments are penalized 10% for each day late (including weekends), up to a maximum 70% penalty. Late exams will receive a zero.

Dropping The Course

A student may drop this course by logging into their myLEO account and clicking on the hyperlink labeled 'Drop a class' from among the choices found under the myLEO section of the Web page.

Incompletes

Incompletes are offered only in extraordinary circumstances. Any student interested in an incomplete should contact me as soon as possible, and should keep in mind that I am not required to give you an incomplete therefore this may not be an option. Please note that this course will only be available in eCollege for two weeks following the final day of term.

Administrative Withdrawl

Although I have the right to drop you for excessive absences, I won't do so. Just as you have the right to earn an A in this course, you have a right to get an F if you decide to quit working but don't withdraw.

University Specific Procedures

ADA Statement

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for

reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services
Texas A&M University-Commerce
Gee Library
Room 132
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148
StudentDisabilityServices@tamuc.edu

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. (See *Code of Student Conduct from Student Guide Handbook*).

A&M-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

COURSE OUTLINE / CALENDAR

The course will cover many of the topics outlined below. The dates below may change (never earlier, but possibly later) so pay attention to announcements on eCollege for final due dates. Units will open on the dates posted and remain open for one additional day. Once the unit closes, it will not be reopened so please be aware of due dates.

1st Block: Tools of the Astronomer

- Unit 1: Introductions (Jan 20-Jan 26)
- Unit 2: The Scientific Method & Astronomy (Jan 27-Feb 2)
- Unit 3: Radiation (Feb 3-Feb 9)
- Unit 4: Spectroscopy (Feb 10- Feb 16)
- Unit 5: Telescopes (Feb 17-23)
- ***Week of February 23: Exam 1, the exam will open Monday, February 23 and closes on Monday, March 02 at midnight.***

2nd Block: Stars

- Unit 6: The Sun (Feb 24- March 2)
- Unit 7: Properties of Stars (March 3-March 16); due dates will be spread over two weeks)
- Spring Break (March 16-March 20)
- Unit 8: Stellar Evolution (March 23-March 30)
- Unit 9: Star Death (March 31-April 6)
- ***Week of April 6: Exam 2, opens on Monday, April 6 and closes on Monday, April 13 at midnight.***

3rd Block: Galaxies and the Universe

- Unit 10: The Milky Way and its Neighbors (April 7- April 13)
- Unit 11: Cosmology (April 14- April 20)
- Unit 12: The Big Bang (April 21- April 29)
- Unit 13: Life in the Universe (April 30- May 5)
- **Final: Exam 3 will open May 6 and remain available through midnight May 11.**

As of midnight on May 11 all work should be completed and turned in for this course.

Final grades for the class will be posted when grading has been completed. Grades are due from the professors by 5 pm on May 18.

Observatory Visits will be determined as the semester progresses and posted in the "announcements" for our course. There are many factors which determine the options for observing, such as the weather, therefore dates are not set at this time.