



| | |
|----------------------------|--|
| Department/College: | Physics and Astronomy/College of Science |
| Course Title: | ASTR 1010: Solar System Astronomy |
| Semester: | Fall 2016 |
| Class Location: | Daniel Hall 100B (Sect 001), Kinard Hall 101 (Sect 002) |
| Course start date: | August 17, 2016 |
| Course end date: | December 14, 2016 |
| Class Meetings: | MWF 2:30 pm – 3:20 pm (Sect 001), TR 9:30 am – 10:45 am (Sect 002) |
| Instructor: | Lih-Sin Thé, Ph.D., Senior Lecturer |
| University Email: | tlihsin@clemson.edu |
| Office Hours: | MWF 9:30am - 2:30pm, 3:30 pm – 4:30 pm TTh 11:00am - 12:30pm, 2:00 pm - 4:00 pm |
| Office Location: | Kinard Lab, 120-D |
| Office Phone: | (864) 656 - 1644 |

Course Description

This course is a one-semester survey of basic astronomy and solar system. It is a descriptive survey of the solar system with emphasis on basic physical concepts and objects in our solar system. Related topics of current interest and new discovery are included.

This is a course for non-science majors but it applies mathematics and requires students to understand the application of scientific method throughout the course for General Education Competencies requirement.

Course Objectives

Upon successful completion of the course with exercises in critical thinking students are expected to have:

- the abilities to think critically and employ critical thinking skills in giving explanations to astronomy real problems or hypothetical astronomical questions while simultaneously consistent with the materials we learn in class.

- the understanding of the fundamental methodology of science, the nature of science, and distinguishing between scientific theories, hypotheses, and observations.
- the understanding of basics astronomy (how telescopes work, methods to measure distances of celestial objects, the motions of celestial objects in the sky, what is a star or a galaxy, etc.)
- the abilities to describe the constituents of the solar system such as the Sun, planets and their moons and rings, comets, and asteroids.
- the abilities to describe the geological and atmospheric properties of the planets and their moons.
- the knowledge of the current scientific theories of the origin of the solar system.
- the abilities to demonstrate the knowledge of recent discoveries of extra solar planets.

Required Materials

- Textbook by Bennett, Donahue, Schneider, and Voit. *The Cosmic Perspective*, 8e. ISBN-13: 9780134160306, 9780134453415 (the loose leaf version of the textbook).
- Pearson's Modified MasteringAstronomy (accessed through blackboard, see "Log in to MyLab & Mastering" below) account for online homework.
- Ancillary information (recorded lectures, lecture notes) is provided in the course site and through Internet links (in the "Content" section of blackboard).
- Laptop or desktop computer.
- Reliable internet service.
- WebBrowser either [firefox](#), [chrome](#), or safari.
- [Adobe Reader](#), Flash Player, Java, QuickTime Player.

Prerequisites

Prerequisite or concurrent enrollment: none

Student Learning Outcomes

Upon successful completion of the course students

- can describe and be familiar with astronomical terminology.
- can outline our modern understanding of the cosmos, including the scale of space and time.
- can describe the basic sky phenomena including seasons, solar and lunar eclipses, phases of the Moon, patterns in the night sky, and the time change of the constellation.
- can describe the nature of science and its development history, distinguish science from non-scientific work, and have working knowledge of scientific method.
- understand the principles of physics governing motion, force, momentum, energy, angular momentum, and gravitation.
- can describe the nature of light and matter and explain their interactions in addition to the formation of spectra, and the Doppler effect.
- can describe how astronomers use telescopes to record light from celestial objects.
- can describe the characteristics of the nine planets and their moons of the solar system.

- can describe the current theory of solar system formation including its age and its planetary formation.
- can describe the geology and atmospheres of terrestrial planets.
- can describe the characteristics of jovian planets including their moons and rings.
- can describe the characteristics of small bodies in the solar system such as asteroids, comets, and dwarf planets.
- can describe the current status of the search of exoplanets and life in the Solar System.

ASTR 1010 is a **Clemson Thinks2 (CT2)** course. It is designed to enhance students' critical thinking skills. Astronomy course is a good course to practice *critical thinking* because in astronomy in order to understand many observational facts, they need to be interpreted with hypothesis or models and simultaneously be consistent with all established physical laws that we know. We will describe astronomical observations through *logical reasoning* in order to acquire understanding of the phenomena. Students will be asked to participate in blackboard group discussions and should provide *rational explanations* to the group selected questions from "Think About it" or in "Does It Make Sense" sections of the textbook based on materials students learn in class. In addition, each student should provide critical assessments to at least one other student post in agreeing or disagreeing with the post.

Critical Thinking Student Learning Outcomes

- Explore the applications of reasoning, logic, and mathematics in providing explanations to astronomical phenomena or hypothetical (complex) questions and still supported by physics and astronomy principles.
- Analyze, explain, and interpret observational data and uncertainties in order to make meaningful conclusions.
- Extrapolate the principles we learn in class to astronomy real problems or hypothetical questions.
- Abilities to synthesize an interpretation for multi-dimension observational data based on established physical laws.
- Communicate effectively in discussion groups in agreeing or disagreeing with others' opinions.

Critical Thinking Pre and Post Testing

To measure students' improvement in critical thinking, students will take the California Critical Thinking Skills Test (CCTST) at the beginning and end of the course. This is an online test. Students will be given information on how to take the test and the dates of the tests in class. The scores will be used to assess the instructors performance in improving student critical thinking skills.

Critical Thinking in Class

In our lectures, we will apply logical reasoning and critical thinking in describing and understanding astronomical observations. Most of the times, the explanations will start with hypothesis or models that are based on established physical laws and mathematical solutions. In

almost every class, we will have quiz to test whether students can tie the new concepts learn in class to quiz problems and at the same time synthesize or extrapolate the new concepts to answer the quiz questions.

Attendance Policy

Attendance is required. Because of the pace at which material is covered and because of the cumulative nature of the principles involved it is recommended that students not miss a class unless there is a compelling reason. Students are requested to wait 10 minutes in the unlikely event that your instructor is late for class.

In the event of an emergency, the student should make direct contact with the course instructor, preferably before a class or an exam takes place. Students should speak with their course instructor regarding any scheduled absence as soon as possible and develop a plan for any make-up work. It is the student's responsibility to secure documentation of emergencies, if required. A student with an excessive number of absences may be withdrawn at the discretion of the course instructor.

Any exam that was scheduled at the time of a class cancellation due to inclement weather will be given at the next class meeting unless contacted by the instructor. Any assignments due at the time of a class cancellation due to inclement weather will due at the next class meeting unless contacted by the instructor. Any extension of postponement of assignments or exams must be granted by the instructor via email or Blackboard within 24 hours of the weather related cancellation.

Technical Support: If you are experiencing technical difficulties with any element of the course, please contact me immediately. I will direct you to the appropriate IT support (for course site issue email ithelp@clemson.edu and for Pearson's MyLab & Mastering site issue go to http://247pearsoned.custhelp.com/app/chat/chat_launch for Live Chat or phone call and <https://support.pearson.com/getsupport/s/article/MyLab-Mastering-for-Learning-Management-Systems-Help-and-Support> for technical support) to fix the issue promptly.

Faculty Response Time

Communications Response Time: Instructor response time is 36 hours for questions posted in the Learning Management System and sent via email. This response times excludes weekends, official University closures, and other times as noted by the instructor. Should you need live assistance, email me to arrange an office or phone consultation.

Faculty Grading Expectations: Most assignments will be graded within 72-hours. Some assignments may be graded by Blackboard and will be available for review after the due date of the assignment. Larger assignments may take up to one-week to be graded. Late work will be graded within one-week of submission.

Course Calendar:

ASTR 1010 Sect 002 Fall 2016 Schedule

| Monday | Tuesday | Wednesday | Thursday | Friday |
|-----------------------|-----------------------------------|------------------------|------------------------------------|--------------------|
| August 15 HW#1 Ch1 | 16 No class | 17 | 18 Rev Syllabus Ch1.1 | 19 |
| 22 | 23 Ch 1.1-1.2 | 24 | 25 Ch 1.3-1.4 App A B C | 26 |
| 29 | 30 Ch 2.1, App I | 31 | September 1 Ch 2.2-2.4 | 2 |
| 5 | 6 Ch S1.1-S1.2 | 7 | 8 Ch S1.2-S1.3 | 9 |
| 12 | 13 Ch 3.1-3.3 | 14 | 15 Ch 3.3-3.5 | 16 |
| 19 | 20 Ch 4.1-4.4 | 21 | 22 Ch 1-3, S1 Exam 1 | 23 |
| 26 | 27 Ch 4.5, 5.1-5.2 | 28 HW#5 Ch4 | 29 Ch 5.3-5.4 | 30 |
| October 3 HW#6 Ch5 | 4 Ch 6.1-6.3 | 5 | 6 Ch 6.4, 7.1 | 7 |
| 10 | 11 Ch 7.1-7.3 | 12 | 13 Ch 8.1-8.3 | 14 |
| 17 | 18 Ch 9.1-9.2 | 19 | 20 Ch 4-7 Exam 2 | 21 |
| 24 | 25 Ch 9.3-9.6 | 26 | 27 Ch 9.6, 10.1 | 28 |
| 31 HW#10 Ch9 | November 1 Ch 10.2-10.4 | 2 | 3 Ch 10.5-10.6, 11.1 | 4 |
| 7 Fall Break | 8 Fall Break | 9 | 10 Ch 11.1-11.2 | 11 |
| 14 | 15 Ch 11.2-11.3, 12.1 | 16 | 17 Ch 8-10 Exam 3 | 18 |
| 21 | 22 Ch 12.1-12.3 | 23 Thanksgiving | 24 Thanksgiving | 25 Thanksgiving |
| 28 | 29 Ch 12.4-12.5, 13.1 | 30 HW#13 Ch12 | December 1 Ch 13.1-13.4 | 2 |
| 5 HW#14 Ch13 | 6 | 7 Final Exam | 8 | 9 |

Aug. 30: Last day to drop a class or withdraw from the University without a W grade

Oct. 7: Last day for instructors to issue midterm evaluations

Oct. 21: Last day to drop a class or withdraw from the University without final grades

Final Exam: Wednesday, Dec. 7th 8:00 – 10:30am (Sect 002).

Assignments

Instructional content is organized in Modules or Chapters grouped with corresponding assessments.

Module 1: A Modern View of the Universe

- Reading Assignment: Chapter 1 (pp. 1-20)
- Read More Worked Examples in Lecture Notes Ch01.
- Watch Recorded Lectures: “A Modern View of the Universe”
- Discussion: give rational explanations to the group selected question taken from “Think About It” section in the chapter or “Does It Make Sense” near the end of the chapter for the module discussion forum. *Think critically* about the question, then write your logical explanations or arguments as your answer. Then also post a respond to at least one of your classmate’s explanations giving your rationality or justification in agreeing or disagreeing with the explanations.
- MyLab & Mastering HW#1 Ch1
- Learning outcomes: You will be able to describe that our solar system belongs to the Milky Way Galaxy and our galaxy is one of the two largest galaxies in the Local Group. You can identify on a very large scale, galaxies and galaxy clusters are arranged in giant chains and sheets with huge voids between them and are called superclusters; all these structures make up our universe. You will gain the perspective of the scale, the age, and the motion of the solar system, of the Milky Way Galaxy, and of the observable universe.

Module 2: Discovering The Universe For Yourself

- Reading Assignment: Chapter 2 (pp. 24-48)
- Read More Worked Examples in Lecture Notes Ch02.
- Watch Recorded Lectures: “Discovering the Universe for Yourself”
- Discussion: give rational explanations to the group selected question taken from “Think About It” section in the chapter or “Does It Make Sense” near the end of the chapter for the module discussion forum. *Think critically* about the question, then write your logical explanations or arguments as your answer. Then also post a respond to at least one of your classmate’s explanations giving your rationality or justification in agreeing or disagreeing with the explanations.
- MyLab & Mastering HW#2 Ch2
- Learning outcomes: You will describe what the universe look like from Earth, recognize patterns in the night sky such as the band of light around the celestial sphere that we call the Milky Way, explain why stars rise and set, explain the reason for seasons, explain why we see phases of the Moon,

explain what causes eclipses, explain why the planetary motion was so hard to explain.

Module 3 (S1): *Celestial Timekeeping and Navigation*

- Reading Assignment: Chapter S1 (pp. 83-105)
- Read More Worked Examples in Lecture Notes ChS1.
- Discussion: give rational explanations to the group selected question taken from “Think About It” section in the chapter or “Does It Make Sense” near the end of the chapter for the module discussion forum. *Think critically* about the question, then write your logical explanations or arguments as your answer. Then also post a respond to at least one of your classmate’s explanations giving your rationality or justification in agreeing or disagreeing with the explanations.
- MasteringAstronomy HW#3 ChS1
- Learning outcome: You will explore the apparent motions of the Sun, Moon, and planets in enough detail to learn the basic principles of keeping time and navigating by the stars.

Module 4: *The Science Of Astronomy*

- Reading Assignment: Chapter 3 (pp. 53-78)
- Read More Worked Examples in Lecture Notes Ch03.
- Watch Recorded Lectures: “The Science of Astronomy”
- Discussion: give rational explanations to the group selected question taken from “Think About It” section in the chapter or “Does It Make Sense” near the end of the chapter for the module discussion forum. *Think critically* about the question, then write your logical explanations or arguments as your answer. Then also post a respond to at least one of your classmate’s explanations giving your rationality or justification in agreeing or disagreeing with the explanations.
- MasteringAstronomy HW#4 Ch3
- Learning outcome: You will appreciate the development of astronomy and science and will describe how science works. Students will discover ancient observations of different cultures helped lay the groundwork for modern science. You can outline the scientific method, can distinguish science from nonscience and can explain what a scientific theory is.

Module 5: *Making Sense Of The Universe* (the rest of the modules are described in detail in **Modules** with the same structure as for **Module 1, 2, and 3**)

Module 6: *Light and Matter*

Module 7: *Telescopes*

Module 8: *Our Planetary System*

Module 9: *Formation of the Solar System*

Module 10: *Planetary Geology: Earth and The Other Terrestrial Worlds*

Module 11: *Planetary Atmospheres: Earth and The Other Terrestrial Worlds*

Module 12: *Jovian Planet Systems*

Module 13: *Asteroids, Comets, and Dwarf Planets: Their Nature, Orbits, and Impacts*

Module 14: *Other Planetary Systems: The New Science of Distance Worlds*

In-Class Quiz

We use TopHat audience response system in class. Every class, there will be several questions posted throughout class to which you will respond with your smartphone, tablets, or laptops. Students are required to sign-up and have a working account in TopHat.com. The account costs \$20 per semester or \$38 for a 5-yr subscription. Your TopHat account must be activated and registered as soon as possible. You will soon receive an email with instructions to register for TopHat. Once you get this email, please purchase (with a valid credit or debit card) and register for your TopHat account ASAP. Concerning scoring, you will receive 3 raw points for every answer (regardless of the correctness) and five raw points for each correct answer (zero points are recorded for no answer/an absence). Your grade for this portion of the class is 10% of the total score in class. The lowest three daily TopHat scores (including zeroes) will be dropped near the end of the semester. Each TopHat day score is worth the same amount of credit regardless the number of questions asked on that day. For our class, if you use a smartphone to respond to a quiz, you send your answer as a SMS to +1(315)646-0905. If you a WebBrowser (in a tablet of laptop) to respond, you send your answer to tophat.com/e/986771.

MyLab & Mastering Homework

We will be using Pearson's MyLab & Mastering as our interactive homework submission system. Homework must be submitted for each chapter in the textbook. Homework sets are posted on MyLab & Mastering website. If you purchase a new textbook, you will receive a student access kit to MyLab & Mastering packaged with it. Students who do not purchase a textbook can purchase the online access using a credit card during the registration process. The Student Access Kit that comes with the textbook consists of a card with printed online registration instructions and a pull-tab revealing a student access code. Each code can be used by only one student.

Student can access MyLab & Mastering directly from Blackboard. Every student will have a free access to MyLab & Mastering in the first two weeks of class. After log in to Blackboard, click on the Course tab, then click on Tools in the left column, and the click access MyLab & Mastering and you will be logged in your MyLab & Mastering account. If you login for the first time in MyLab & Mastering, you select "enter an access code" to enter your access code.

Homework is intended to take you between 2 and 3 hours per chapter. The worth of homework total points is 15% of the total points in class. Homework is due at 11:59 pm on the day indicated in the schedule. There is a 10%/day score reduction for a late homework. All due dates are posted in MyLab & Mastering. Each homework is worth the same amount of credit (regardless of the number of raw homework points). The homework with the lowest score will be dropped at the end of the semester.

Log in to Pearson's MyLab & Mastering

- All students will have two weeks grace period from the start date of the course to use Pearson's MyLab & Mastering for free, after that period students have to pay for the access.
- To access your MyLab & Mastering account, do the following: Log in to blackboard and click on "Courses" tab to select our course. Then click "Tools" on the left column of blackboard. Then click "Pearson's MyLab&Mastering" and "Pearson Mastering Assignments". This process should log you in MyLab & Mastering.
- Registering Access Code: Log in blackboard, then click "Tools", then click "Pearson's MyLab & Mastering", then click on "Pearson Mastering Astronomy Course Home", then quickly click on "My Courses", then click on "Upgrade Access" below TheASTR1020Fall2016 sign, then click Register.

Examinations

Midterm Exams: There will be three exams during the course schedule. Each exam lasts one hour and is worth 150 points. Each exam will be taken through the blackboard online system in our class room. It will be given on Thursday September 22nd, October 20th, and November 17th. Each exam is a multiple choice exam where some problems are given partial credits. There will be practice exams in blackboard for students to practice before the exam and to make sure student computers work with the system. If you miss an exam because of an excused absence you will be given a makeup exam. To obtain an excused absence from a test your reason must be serious and verified by University sources. Makeup exams will be given the following Thursday evening at 7 pm in G01 Kinard. There are no dropped exams, exam grade replacements, or final exam exemptions.

Final Exam:

The final exam is comprehensive that it covers all materials of the course. It will be given on Thursday, December 8th from 3:00-5:30pm for Section 001 or Wednesday, December 7th from 8:00am to 10:30am for Section 002. It will be a multiple choice blackboard online exam like the other exam to be taken in an assigned proctored room. No exemptions from this examination will be given. The final examination will be worth 200 points or 20% of your final grade.

Exam Aids:

During all of the exams, students are allowed to bring and to use the equation sheet, ASTR1020_Eqs.pdf that is available in the "Content" of our blackboard. This equation sheet can have no writing on it. You will also be allowed to bring in several blank scratch papers. You will need to bring your computer to your assigned testing room. Please make sure your computer is

fully charged before entering the room as there may not be enough outlets for all. Note that Calculators are not allowed.

Grading

Assignments in this course are divided into these general categories, which carry the following weight in your final grade calculations:

| | |
|----------------------|-------------|
| Midterm exams | 450 points |
| Final exam | 200 points |
| Assignments | 150 points |
| Quiz | 100 points |
| Discussion | 100 points |
| Total points | 1000 points |

You are treated as a professional in the course. Accordingly, the grading is strict, but fair. Reading the directions and grading criteria provided for each assignment is the key to understanding how you will be graded. Following those directions is the key to doing well.

This course follows the typical grading guidelines:

- A = 90 to 100%
- B = 80 to 89%
- C = 70 to 79%
- D = 60 to 69%
- F = 0 to 59%

Contesting Grades

Grades will be updated typically daily on Blackboard. You have one week to contest any grade after it is posted. Homework grades will be posted in MasteringAstronomy.com and any contesting of grades should be done within a week of completion of the assignment. Any requests for reexamination of scores more than one week after the grades are posted will not be granted. TopHat quiz scores are typically posted daily so there should be plenty of time to contest a score within the allotted week. Requests for quiz make-ups must also be made within the week of the question and must be backed up by a written document validating the conflict.

Critical Thinking Artifacts

- Students explanations to selected questions found in “Think About It” or “Does It Make Sense?” of the textbook are students’ practice of critical thinking.
- Students quiz and test problems including their scores will be available as artifacts.
- Pre and Post CCTST (California Critical Thinking Skills Test) scores taken online will be available as artifacts.

Academic Grievances

Academic grievances are handled by [Dr. Jeffrey Appling](#) in Undergraduate Studies or [Dr. Frankie Felder](#) for Graduate Studies. Students are advised to visit the [Ombuds Office](#) prior to filing a grievance.

Receiving Grades & Instructor Feedback

Assignment grades and feedback are provided generally **48 hours** after the assignment is due and always before an assignment of the same type is due. Unless otherwise stated, grades and feedback will be available via the **Grades** area of the course site.

Course Navigation

The buttons in the course menu provide access to these content areas:

- **Announcements:** Includes updates and reminders for the course.
- **Faculty:** Describes the instructor's background and includes contact information.
- **Syllabus:** Explains the course objectives, grading criteria, student responsibilities, and final exam information for proctoring.
- **Content:** Includes many additional study materials such as Lecture Notes, Recorded Lectures, Old Exam Solutions, and Equation Sheets.
- **Grades:** Displays instructor feedback and grades. If you see an exclamation mark for an assignment, it means the assignment has been submitted and will be reviewed by the instructor. If you see a score for an assignment, you can click on it to read feedback from your instructor.
- **Tools:** Includes email and interactive features.

Course Content

This course contains modules, each consisting of some or all of the following components:

- **Textbook Reading:** In each module, you will read a chapter, or several chapters, from the textbook and/or other course materials made available to you in the course site.
- **Worked Examples:** In lecture notes of each module, you will follow through work examples to enhance your understanding of applying the concepts to astronomy problems.
- **Recorded Lectures:** In most modules, recorded lectures are available to further clarify some topics discussed in the textbook with application to solve example problems and to show some demonstration to real life examples.
- **Assignments and Exercises:** In most modules, you will complete an assignment or assessment related to the reading. These assignments and assessments will help in your understanding of the material in the assigned chapters and related readings. The assignments include homework at MyLab & Mastering, midterm exams, and a final exam.
- **In-Class Quiz:** To assess whether students can synthesize or extrapolate the new concepts learn in class to answer quiz questions, students will participate in class quizzes. We are using TopHat audience response system in class.

CT2 Online Blackboard Discussions: You will participate in online discussions. A question or problem from “Think About It” section in the middle of the chapter or “Does It Make Sense?” section at the end of the chapter will be selected by the instructor for student discussion group. Each student will be asked to provide rational explanation to the question concurrently applying the principles that we learn in class. Also each student should post a minimum of one response either agreeing or disagreeing to other student post and it should be supported with reasonable explanations. The discussions will be worth 100 points or 10% of your final grade. The assessment of each discussion will follow this discussion rubric:

| Criteria | Inadequate | Approaches expectation | Meets expectation |
|--|------------|------------------------|-------------------|
| Effectiveness of the Explanation (Weight 50%) | 0% | 50% | 100% |
| CT Skill in Responding to Peer’s Post (Weight 50%) | 0% | 50% | 100% |

Accepting Late Work

Late work through MasteringAstronomy will be accepted up to 4 days from the original deadline, but a 10%/day reduction in credit will be given as a penalty. An extension to a deadline can be given if there is a reasonable cause. All work must be submitted by the last day of the course; no extensions or late work will be accepted beyond that date. Please plan ahead.

Communicating with Your Instructor

You have *numerous* ways of communicating with your instructor: phone, email, the *Ask the Instructor* forum, and live consultations by appointment with the Adobe Connect Meeting system.

- If you have a question about an assignment or class procedure, consider posting it in the *Ask the Instructor* forum so that other members of the class can benefit from it, too. A lot of learning can happen in this forum if you use it, so please do!
- If you have a personal concern (such as a question about a grade), send a message to your instructor through the course site or through your Clemson email account.
- I am here to help you, so please ask questions and seek clarification as early and as often as needed. Delay will only hinder your learning.

Minimum Technical Skill Requirements

Students are expected to have a minimum working knowledge of computers and a word processing program to be successful in a class. You must be comfortable with your computer system and willing to deal with any problems that may arise. Lack of technical knowledge can

greatly interfere with your learning a new subject. If you do not have these skills, consider taking a short computer course prior to enrolling in a course.

- Get your password and login to your class before the semester begins (if available)
- Attach files to email messages
- Compose written documents in a Word processor such as [Microsoft Word](#)
- Word processing tasks (type, cut, paste, copy, name, save, rename, etc.)
- Download information from the Internet
- Use of a Web browser
- Completing online forms
- Backup your files
- Install and maintain anti-virus and other software

Students are expected to be comfortable accessing the course site and downloading files such as Microsoft Office documents, YouTube videos, and PDFs. In addition, students should be able to use Microsoft Office to compose written documents.

For technical assistance with the course site, students should contact ithelp@clemson.edu or visit CCIT's website: http://www.clemson.edu/ccit/help_support/.

Submitting Work

Make sure you submit coursework according to the directions provided in the course. Here are general guidelines for assignment submission:

- **Post discussions threads and replies to the appropriate forum in the Discussions area.**
- **Submit homework assignments in MyLab & Mastering before the deadlines.**
- **Complete the midterm exam**
- **Complete the final exam**

Meeting Deadlines

Assignments are due by **11:55 pm, Eastern Time** on the day specified unless otherwise stated. Plan ahead for the unexpected! You are accountable for staying on schedule should technological or other problems arise. You should immediately contact the instructor if an emergency may affect your ability to meet course deadlines.

Many students juggle school, work, family, and other life responsibilities all at the same time. If a serious life issue prevents you from staying current in your coursework, contact your instructor as soon as possible to explain your circumstances. Do not let school or life responsibilities overwhelm you. The faculty and staff at Clemson are aware that students face challenges, and we are committed to your success. Often, we may be able to help you see a way to deal with your circumstances and still complete your courses. We have a lot of experience. Give us the chance to help you.

Learning

What matters most in any course is what you actually learn. This course allows you many different ways to learn, such as reading your textbook, following the hands-on practice in your

assignments, communicating with your classmates and your instructor, and discovering other resources across the Internet. If you actively participate in your course, you will get constructive feedback to help you with your learning. Stay active in your course and focused on your learning to get the most out of it.

Changes

Occasionally, circumstances require the instructor to change the syllabus. Should the instructor find a change necessary, you will be notified as soon as possible. You might print this syllabus for ready referral.

Agreement

If you disagree with any of the policies or procedures spelled out above or cannot accept the demands of the course (i.e., the amount of time and work required), you need to drop the course as soon as possible. By staying in the course, you agree to comply with all the policies and procedures described in this syllabus.

Reminder

Your instructor should be your first point of contact and support for any questions or concerns you have about this course.

General Policies & Procedures

Students are expected to adhere to all policies and procedure outlined by Clemson University at: [University Policies:](http://www.clemson.edu/administration/student-affairs/student-handbook/universitypolicies/index.html)
<http://www.clemson.edu/administration/student-affairs/student-handbook/universitypolicies/index.html>.

Academic Integrity

Coursework must be documented appropriately in CSE or APA format, based on your major. Content from previous classes may not be submitted.

The Clemson University Academic Integrity Statement

As members of the Clemson University community, we have inherited Thomas Green Clemson's vision of this institution as a "high seminary of learning." Fundamental to this vision is a mutual commitment to truthfulness, honor, and responsibility, without which we cannot earn the trust and respect of others. Furthermore, we recognize that academic dishonesty detracts from the value of a Clemson degree. Therefore, we shall not tolerate lying, cheating, or stealing in any form.

A simple definition of plagiarism is when someone presents another person's words, visuals, or ideas as his or her own. The instructor will deal with plagiarism on a case-by-case basis. The most serious offense within this category occurs when a student copies text from the Internet or from a collective file. This type of academic dishonesty is a serious offense that will result in a failing grade for the course as well as the filing of a formal report to the University.

See the [Undergraduate Academic Integrity Policy](#) website for additional information about academic integrity and Clemson procedures and policies regarding scholastic dishonesty.

Email Communication

Because of privacy regulations, University faculty and staff may email students only through Clemson email. Therefore, you must use your Clemson email account in this course for all email communications. Check your Clemson account at least three times per week for important messages.

Student Disability Services

Student Disability Services coordinates the provision of accommodations for students with disabilities in compliance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990.

Reasonable and specific accommodations are developed with each student based on current documentation from an appropriate licensed professional. All accommodations are individualized, flexible, and confidential based on the nature of the disability and the academic environment. Housing accommodations for a disability or medical condition are also coordinated through this office.

Students with disabilities requesting accommodations should make an appointment with Dr. Margaret Camp (656-6848), Director of Disability Services, to discuss specific needs within the first month of classes. Students should present a Faculty Accommodation Letter from Student Disability Services when they meet with instructors. Accommodations are not retroactive and new Faculty Accommodation Letters must be presented each semester. Visit the [Student Disability Services](#) website for location, contact information, as well as official policies and procedures. To learn more information or request accommodations contact Student Disability Services (SDS) at sds-l@clemson.edu or [864.656.6848](tel:864.656.6848) or visit SDS's website: <http://www.clemson.edu/campus-life/campus-services/sds/about.html>.

Academic Support Services

Students may access a variety of academic support services to support your learning in the classroom. Here are links to services available:

- Academic Success Center <http://www.clemson.edu/asc/staff.html>
- The Writing Center <http://www.clemson.edu/centers-institutes/writing/>
- Online Library Resources <http://www.clemson.edu/library/>
- CCIT (Tech Support) http://www.clemson.edu/ccit/help_support/ or CCIT (Tech Support) email: ithelp@clemson.edu
- Academic Advising <http://www.clemson.edu/academics/advising/index.html>
- Registrar <http://www.registrar.clemson.edu/html/indexStudents.htm>

The Clemson University Title IX (Sexual Harassment) Statement:

Clemson University is committed to a policy of equal opportunity for all persons and does not discriminate on the basis of race, color, religion, sex, sexual orientation, gender, pregnancy, national origin, age, disability, veteran's status, genetic information or protected activity (e.g., opposition to prohibited discrimination or participation in any complaint process, etc.) in employment, educational programs and activities, admissions and financial aid. This includes a prohibition against sexual harassment and sexual violence as mandated by Title IX of the Education Amendments of 1972. To locate information on the [Title IX policy](#), visit <http://www.clemson.edu/campus-life/campus-services/access/title-ix/>. Mr. Jerry Knighton is the Clemson University Title IX Coordinator, and is also the Director of Access and Equity. His office is located at 111 Holtzendorrf Hall, [864.656.3181](tel:864.656.3181) (voice) or [864.565.0899](tel:864.565.0899) (TDD).

Inclement Weather Statement:

University officials monitor local weather conditions before making decisions to cancel classes, close offices or delay openings. For updates on the status of Clemson classes and office closings:

- Check the Clemson University homepage (<http://www.clemson.edu/>) for messages about closings or delays;
- Check the CU Safety page (<http://www.clemson.edu/cusafety/>) for detailed messages and weather advisories;
- Check your Clemson University e-mail for CU Safe Alerts or Inside Clemson messages;
- Check your cell phone if you have signed up to receive CU Safe Alert text messages (See the CU Safety page for sign-up instructions);
- Call the Clemson University switchboard at 656-3311 for recorded updates between 8 p.m. and 8 a.m. Monday-Friday and on weekends (recorded messages provide closure information, not weather forecasts); and
- Tune in to local TV and radio stations or log on to their Web sites.
- When local county government offices are closed, local Clemson University campuses also are closed.

Copyright Notice

The materials found in this course are strictly for the use of students enrolled in this course and for purposes associated with this course; they may not be retained or further disseminated. Clemson students, faculty, and staff are expected to comply fully with institutional copyright policy as well as all other copyright laws.

Course Calendar:

ASTR 1010 Sect 001 Fall 2016 Schedule

| Monday | Tuesday | Wednesday | Thursday | Friday |
|---|-------------------|---|------------------------|---------------------------------------|
| August 15 | 16 No class | 17 Rev Syllabus Ch1.1 | 18 | 19 Ch1.1 |
| 22 Ch 1.2 | 23 | 24 Ch 1.3 | 25 | 26 Ch 1.4 App A B C |
| 29 Ch .2.1-2.2 HW#1 Ch1 | 30 | 31 App 1, Ch 2.2 | September 1 | 2 Ch 2.3 -2.4 |
| 5 Ch S1.1-S1.2 HW#2 Ch2 | 6 | 7 Ch S1.2 | 8 | 9 Ch S1.3 |
| 12 Ch 3.1-3.2 HW#3 ChS1 | 13 | 14 Ch 3.2-3.3 | 15 | 16 Ch 3.4-3.5 |
| 19 Ch 4.1-4.2 HW#4 Ch3 | 20 | 21 Ch 4.3-4.4 | 22 | 23 Ch 1-3, S1 Exam 1 |
| 26 Ch 4.5 | 27 | 28 Ch 5.1-5.4 HW#5 Ch4 | 29 | 30 Ch 5.4 |
| Oct 3 Ch 6.1-6.2 HW#6 Ch5 | 4 | 5 Ch 6.3-6.4 | 6 | 7 Ch 7.1 |
| 10 Ch 7.1-7.2 HW#7 Ch6 | 11 | 12 Ch 7.3, 8.1 | 13 | 14 Ch 8.2-8.3 |
| 17 Ch 9.1 HW#8 Ch7 | 18 | 19 Ch 9.2 | 20 | 21 Ch 4-7 Exam 2 |
| 24 Ch 9.3-9.4 HW#9 Ch8 | 25 | 26 Ch 9.5-9.6 | 27 | 28 Ch 10.1 |
| 31 Ch 10.2 HW#10 Ch9 | November 1 | 2 Ch 10.3-10.4 | 3 11.1 | 4 Ch 10.5-10.6 |
| Fall Break | 8 Fall Break | 9 Ch 11.1 | 10 | 11 Ch 11.2 |
| 14 Ch 11.2-11.3 HW#11 Ch10 | 15 | 16 Ch 12.1 | 17 | 18 Ch 8-10 Exam 3 |
| 21 Ch 12.2-12.3 HW#12 Ch11 | 22 | 23 Thanksgiving | 24 Thanksgiving | 25 Thanksgiving |
| 28 Ch 12.4-12.5 13.1 | 29 | 30 Ch 13.2-13.4 HW#13 Ch12 | December 1 | 2 |
| 5 HW#14 Ch13 | 6 | 7 | 8 Final Exam | 9 |

Aug. 30: Last day to drop a class or withdraw from the University without a W grade

Oct. 7: Last day for instructors to issue midterm evaluations

Oct. 21: Last day to drop a class or withdraw from the University without final grades

Final Exam: Thursday, Dec. 8th 3:00 – 5:30pm (Sect 001)