ASTR 1010/7010 Syllabus
Astronomy of the Solar System
CRN 27374
University of Georgia, Spring 2018

Instructor Information:
• Dr. Tara H Cotten
• Office: Rm 239
• Email: thuffor@uga.edu

Basic Class Information
• MWF 11:15-12:05 PM (Period 4) : Room 202
• Final Exam: April 27, 2017 12-3PM
• Office Hours: Thurs. 2:00-3:30 PM, Wed. 2:30-4:30PM, or by appointment.

Introduction
Welcome to ASTR 1010. This course is a general introduction to solar system astronomy for non-science majors. The principal goals of the course are to give you an idea of how a physical science like astronomy works and to introduce you to some of the latest discoveries about the solar system. Some of the topics we will cover are: our place in the Universe, the celestial sphere, the calendar, the physics of motion and gravity, the formation of the solar system, basic geology of the terrestrial planets, terrestrial planet atmospheres, the Jovian planets, and the smaller objects in the solar system. We will examine these things at an introductory level, but in enough detail to give you an understanding of each topic at a level that a well-educated person in the 21st century should have.

Note: Astronomy is a quantitative science. As such, we will treat many of the topics quantitatively using mathematics at the level of high-school algebra. We will also use a little bit of trigonometry but no calculus. I will expect you to be able to handle numerical problems involving simple algebraic equations and scientific notation, both on the homework and on the exams. Thus, you will need a scientific calculator for this course.

Required Course Materials
  ○ You can use the e-text version
• A simple scientific calculator for exams, which must be non-programmable and non-graphing. Calculator graphing, algebra solving, or programming functions will NOT be permitted on the exams. Cellphones will not be allowed during exams.
• Homework assignments will be performed online using SmartWork5 (Accessible once you have the registration code in the book and FREE)
• PackBack Curiosity Community available through https://Packback.co/questions. See description below.
Optional Course Resources

- The eLearning Commons (http://www.elc.uga.edu/) will serve as a repository for general information, announcements, and lecture materials.
- Tutoring: Department of Physics and Astronomy has a list of tutors available (http://www.physast.uga.edu/tutors/), otherwise visit the UGA Tutorial Program in Milledge Hall.
- If you cannot come to my regular office hours, or need additional help, please set up an appointment (by email, by phone, or in person) to see me outside of class. For email correspondence, include your class and time in the subject line and email: thuffor@uga.edu.

Grading Policy

Your overall grade will be weighted as follows:

- 20% Cumulative final exam grade
- 60% Three in-class exam grades (best 3 out of 4)
- 10% Homework grade
- 10% Participation through PackBack

Letter grades will be assigned following:

- A 93.0 – 100.0
- A- 90.0 – 92.99
- B+ 86.0 – 89.99
- B 83.0 – 85.99
- B- 80.0 – 82.99
- C+ 76.0 – 79.99
- C 73.0 – 75.99
- C- 70.0 – 72.99
- D 60.0 – 69.99
- F less than 60.0

Make-up Exams:
If you must miss an exam for a serious, documentable reason, then you must notify me in advance either in person or via email. You must also provide documentation for your absence within one week of the date of the missed exam. These rules do not apply to the Final Exam. If you have not notified me in advance or you have not provided documentation of your reason for missing the exam, then your score for the missed exam will be a zero.

Withdrawal and Incomplete:
The Undergraduate Bulletin and the Registrar’s Office website describe the University policies regarding withdrawals and incomplete (http://reg.uga.edu/policies/withdrawals). If you don’t complete the initial required administrative tasks of the course (e.g. the questionnaire), or are demonstrably not attending class and completing work, you may be withdrawn from the class for “excessive absence”.

A grade of Incomplete is not appropriate for a student who has missed a large portion of the course assessments, for whatever reason.

The Withdrawal Deadline is March 19, 2018.
Exam Policy

There will be four exams and a cumulative final exam. The best three out of four scores will be used towards your final grade in addition to the cumulative final exam grade. Exams will be closed-book and closed-notes. The format for exams will be multiple-choice and true-false with a few short answer questions. Occasionally, exam questions will require a quantitative answer and so an algebraic calculation means simple, scientific calculators will be allowed (as documented in the required course materials section). A programmable calculator will not be allowed during an exam. Calculator applications on cell phones will also not be allowed. If a formula is required, a formula sheet will be provided by the instructor.

Classroom Policy

We would like to have a constructive learning environment and so the atmosphere must be free from distractions and disruptive behavior. Please make a reasonable attempt to arrive on time and refrain from packing up your things and leaving early. If you must leave before class ends, use the exits at the top/back of the lecture hall. Laptops, cell phones, and tablets may be useful for taking notes, however, they can be distracting when used for social media sites, shopping, checking email, or playing games. Be mindful and respectful of those around you.

Homework Policy

You are responsible for the material covered for homework. I cannot emphasize enough the importance of doing the homework. It will not only allow you to work through the material and practice using the ideas, but it will strengthen your understanding of concepts that may prove challenging. Should you get stuck or have difficulty with the problems, I will be happy to discuss them with you during office hours. You are also encouraged to work with your fellow students, but be aware of the difference between teamwork and plagiarism. The problems sets will be due on Fridays by 11:59 PM and cannot be extended or reopened, so please complete your work before the posted deadline. If you have read this far into the syllabus, enter “astronomical” in question number 8 (Additional Comments) of the introductory survey for one bonus percentage point applied to your first homework grade.

Participation Policy

Participation is a requirement for this course, and the Packback Questions platform will be used for online discussion about class topics. Packback Questions is an online curiosity community where you can be fearlessly curious and ask BIG questions about how what we’re studying relates to life and the real world. This platform will enable more engagement since we are limited due to the large class size. Your participation on Packback will count towards 10% percent of your final grade.

In order to receive your points per week, you must post 1 Question and 1 Answers per week relevant to our class subject matter per week. Before you start posting, be sure to read the Community Guidelines (https://blog.packback.co/2013/03/05/packback-questions-community-guidelines/) found in the tutorial on Packback. If your post doesn’t follow the Packback Community Guidelines, there is a chance it will be removed and you won’t receive points for that post.
There will be a **Sunday 11:59 PM deadline** for submissions in your community each week. Each week, we will spend time in class highlighting discussions from Packback, encouraging feedback and recognizing top students!

**To start posting on Packback Questions:**
1. Navigate to [https://Packback.co/questions](https://Packback.co/questions) and click “Register as a new student”.
   
   Note: If you already have an account on Packback you can login with your credentials.
2. Make sure to register with your **SCHOOL email address and real first name and last name**.

Enter our class community’s access code into the “Join a new Community” module on your dashboard.

**Our Community access code:** `477E1A25-9438-920D-0B63-66CCA8DDCB1D`

3. Follow the instructions on your screen to finish your registration. The cost per student is $18 for the semester.

For a brief introduction to Packback Questions and why we are using it in class, watch this video: [vimeo.com/packback/Welcome-to-Packback-Questions](https://vimeo.com/packback/Welcome-to-Packback-Questions)

**Student Responsibilities**

- Arrive on time to class and do not distract your fellow classmates. You are responsible for all announcements made during class.
- You are responsible for all topics covered in class, in the book, and on homework assignments. Do all the homework assignments.
- You are strongly encouraged to read the material that is to be covered in class ahead of time. If the schedule changes, then those changes will be announced in class.
- Know the rules concerning withdrawals and incompletes, published in the UGA undergraduate Bulletin.
- Maintain “A Culture of Honesty” (see below).
- Attend laboratory meetings (if you are enrolled).
- Ask me if you don’t understand anything. There are no dumb questions. Be curious!

**Academic Honesty**

The University of Georgia has a comprehensive policy on academic honesty, described in a document entitled *A Culture of Honesty*. This document is available through the Office of the Vice President for Instruction or online at [https://ovpi.uga.edu/academic-honesty](https://ovpi.uga.edu/academic-honesty). This policy covers all academic work.

As a UGA student, you are responsible for knowing and understanding this policy. If you have any question about the appropriateness of your actions or your work, you are obligated to ask me for clarification.

I take the issue of academic honesty very seriously, and it is my responsibility to uphold the University’s policy. This means, among other things, that I won’t hesitate to report my suspicions of
dishonesty to the Office of the Vice President for Instruction. Typical consequences of cheating on homework or an exam range from receiving a zero for that grade, to failing the course.

**Tentative Class Schedule**
Any modifications to this schedule will be announced during class. Be prepared for class by reading the assigned chapter before class.

<table>
<thead>
<tr>
<th>Date</th>
<th>Chapter and Topic</th>
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<tbody>
<tr>
<td>January 5 (F)</td>
<td>Introduction, Chapter 1</td>
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<tr>
<td>Jan. 8-12 (MWF)</td>
<td>Chapter 1, 2 – Patterns in the Sky</td>
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<td><strong>Jan. 15 (M)</strong></td>
<td><strong>Holiday, MLK Day, No class</strong></td>
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<tr>
<td>Jan. 17-19 (WF)</td>
<td>Chapter 2, 3 – Motions of Astronomical Bodies</td>
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<td>Jan. 22-24 (MW)</td>
<td>Chapter 3</td>
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<tr>
<td><strong>Jan. 26 (F)</strong></td>
<td><strong>EXAM Friday, Jan. 26, 2018 – Chapters 1-3</strong></td>
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<tr>
<td>Jan. 29 – Feb. 2 (MWF)</td>
<td>Chapter 4 – Newton’s Laws and Orbits</td>
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<td>Feb. 5-9 (MWF)</td>
<td>Chapter 5 – Light</td>
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<td>Feb. 12-16 (MWF)</td>
<td>Chapter 5, 6 – Tools of the Astronomer</td>
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<td><strong>Feb. 23 (F)</strong></td>
<td><strong>EXAM Friday, Feb. 23, 2018 – Chapters 4-6</strong></td>
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<tr>
<td>Feb. 26 – Mar. 2 (MWF)</td>
<td>Chapter 8 – The Terrestrial Planets and Earth’s Moon</td>
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<td>Mar. 5-9 (MWF)</td>
<td>Chapter 9 – Atmospheres of the Terrestrial Planets</td>
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<td><strong>Mar. 12-16 (MWF)</strong></td>
<td><strong>Spring Break, No Class</strong></td>
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<td>Mar. 19-21 (MW)</td>
<td>Chapter 10 – The Giant Planets</td>
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<td><strong>Mar. 23 (F)</strong></td>
<td><strong>EXAM Friday, Mar. 23, 2018 – Chapters 7-9</strong></td>
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<td>Mar. 26-30 (MWF)</td>
<td>Chapter 11 – Planetary Moons and Rings</td>
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<td>Apr. 2-6 (MWF)</td>
<td>Chapter 12 – Dwarf Planets and Small Solar System Bodies</td>
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<td>Apr. 9-11 (MW)</td>
<td>Chapter 14 – Our Star, The Sun</td>
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<td><strong>Apr. 13 (F)</strong></td>
<td><strong>EXAM Friday, Apr. 13, 2018 – Chapters 10-12</strong></td>
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<td>Apr. 16-20 (MWF)</td>
<td>Chapter 24 – Life</td>
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<td>Apr. 23-25 (MW)</td>
<td>TBD</td>
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**Cumulative Final Exam:** Friday, April 27, 2018 12-3PM