Version 1

AST 203 (Fall 2025): Astronomy

(Recitation will be taught by Prof. Calder and have a separate syllabus)

Class Meeting: Tu & Th. 8:00-9:20, Frey Hall 317 (See the last page for schedule)

Instructor: Prof. Jin Koda
Office: Room 455, Earth and Space Sciences Building
Email: jin.koda@stonybrook.edu
Office Hours: Tue & Thu 2:30-4:00PM (in-person) or by appointment

Teaching Assistants: Mackenzie Baird
Email: Mackenzie.baird@stonybrook.edu
Office Hours:

Course Description and Learning outcomes:
A survey of the physical nature of the universe, for students with some background in physics and mathematics. Students will use physics and calculus to study stars, the interstellar medium, galaxies, and the Universe.

Prerequisite:
PHY 125 or 131/133 or 141. It is very important that you have the necessary prerequisites. We will assume the knowledge of mechanics from the physics class. Any other material needed from physics will be introduced during the course. *As this (+recitation) is a 4-credit course, you should expect to spend 8-12 hours per week on this course.*

Course Website / Syllabus
The syllabus, course material, and class announcements will be available on the course webpage on Brightspace.

Textbook:
The required textbook is ***"Astronomy: A Physical Perspective, 2nd Ed."*** **by Kutner (Cambridge)**. This book is at the appropriate mathematical level for our course. To provide a complimentary discussion, *"Cosmic Perspective: Stars, Galaxies, Universe"* by Bennett et al. (5th or later edition) is also recommended, but not required.

Recitation:
There is a weekly recitation associated with this course. The purpose of the recitation is to review the lecture material and practice problem solving. *All students are required to attend.*

Homework:
There will be 10 homework assignments throughout the course (see the course schedule for due dates). **Homework should be submitted through Brightspace.** Students will typically have 1 week to complete an assignment. While it is recognized that students sometimes work together and discuss the homework as part of the learning process, *what you turn in*

must be your own work. You should not copy from Artificial Intelligence (AI). **Copying will not be tolerated.** Homework is due at the time/date listed on the assignment. **Late homework will not be accepted under any circumstance.** Your answers must be concise and legible. Lengthy or illegible answers are subject to score reduction. Homework grades will be posted to the Brightspace gradebook approximately 1 week after due date. Graded assignments will be returned in class. Students should report any errors/missing grades promptly. **No makeup of missed homework will be allowed.**

Observing Sessions:
There will be no observing session scheduled for this course in this semester. Students are encouraged to attend the monthly Astronomy Open Night series, which may provide observing sessions throughout the semester.

Course Materials:
Lecture notes will complement, but do not replace, the course texts. *You are responsible for any information in the assigned readings that is not covered in lectures*. The course notes, homework, exams, and solutions are intended for AST 203 students only, *and cannot be shared on third-party websites (if you do, you violate the copyright law).*

Assigned Reading:
The course schedule lists the chapter numbers of the textbook for each lecture —this is your assigned reading. The lectures will not cover everything in the textbook, but students should become familiar with the materials in the textbook.

Exams:
There is no exam in classroom, but consider each homework is an exam as they determine the final grade.

Extra Credit:
No extra credit is offered under any circumstance.

Course Grade:
The final grade will be based on homework scores. Each homework carries the same weight for final grade. *Two lowest homework scores will be dropped* to accommodate *all* unforeseen circumstances. The overall course grade will be scaled to 0–100. Letter grades will be based on a standard grade scale (i.e. an overall score > 90-100 would be an A or better). However, if necessary, a curve will be applied to the overall course grade, considering the overall performance of the class. For privacy reasons, grades will not be discussed via e-mail or phone.

Student Accessibility Support Center Statement:
If you have a physical, psychological, medical or learning disability that may impact your course work, please contact Student Accessibility Support Center, ECC (Educational Communications Center) Building, Room 128, (631) 632-6748. They will determine with you what accommodations, if any, are necessary and appropriate. All information and documentation are confidential. Students who require assistance during emergency evacuation are encouraged to discuss their needs with their professors and Student Accessibility Support Center. For procedures and information go to the following website: https://www.stonybrook.edu/commcms/studentaffairs/dss/

Academic Integrity Statement:
Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Faculty are required to report any suspected instances of academic dishonesty to the Academic Judiciary. Faculty in the Health Sciences Center (School of Health Technology & Management, Nursing, SocialWelfare, Dental Medicine) and School of Medicine are required to follow their school-specific procedures. For more comprehensive information on academic integrity, including categories of academic dishonesty, please refer to the academic judiciary website at http://www.stonybrook.edu/commcms/academic_integrity/

Critical Incident Management:
Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of Judicial Affairs any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn. Faculty in the HSC Schools and the School of Medicine are required to follow their school-specific procedures. Further information about most academic matters can be found in the Undergraduate Bulletin, the Undergraduate Class Schedule, and the Faculty-Employee Handbook.

Electronic Communication:
Email to your University email account is an important way of communicating with you for this course. For most students the email address is 'firstname.lastname@stonybrook.edu'. It is your responsibility to read your email received at this account. For instructions about how to verify your University email address see this:
http://it.stonybrook.edu/help/kb/checking-or-changing-your-mail-forwarding-address-in-the-epo
If you choose to forward your University email to another account, we are not responsible for undeliverable messages.

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AST 203 Fall 2025 Schedule (Recitation Friday by Prof Calder)						
Class #	**Date**	**Kutner Chapter**	**Bennett Chapter**	**Topic**	**HW assigned**	**HW due**
1	Aug 26	1	1, 2, 3	Organization/Basic Concepts		
2	28	2	5	Continuum Radiation		
3	Sep 2	2	5	Continuum Radiation		
4	4	3	5	Spectral Lines	1	
5	9	3	5	Spectral Lines and H-R Diagram		
6	11	5	15.1	Binary Stars	2	1
7	16	5	15.1	Binary Stars		
8	18	6	14	The Sun	3	2
	23			*No class (Read Kutner Ch. 6, 9, 10, 11)*		
	25			*No class (Read Kutner Ch. 6, 9, 10, 11)*	4	3
9	30	6	14	The Sun		
10	Oct 2	9	15, 17	Main-Sequence	5	4
11	7	9	15, 17	Main-Sequence		
12	9	10	17	Stellar Old Age		5
	14			*Fall Break*		
13	16	10,11	18	Stellar Old Age/Stellar Death		
14	21	11	18	Stellar Death		
15	23	13	15.5	Star Clusters	6	
16	28	14	19.2	Interstellar Medium		
17	30	14	19.2	Interstellar Medium	7	6
18	Nov 4	15	16	Star Formation		
19	6	16	19	The Milky Way	8	7
20	11	17	20	Normal Galaxies		
21	13	18	20	Cluster of Galaxies	9	8
22	18	19	20, 21	Active Galaxies and Galaxy Evolution		
23	20	20,21	22, 23	Cosmology	10	9
24	25	20,21	22, 23	Cosmology		
	27			*Thanksgiving Break*		
25	Dec 2	20,21	22, 23	Cosmology		
26	4	4	6	Telescopes		10