

Syllabus – Fall 2019

PHYS 165: Introduction to Astronomy

Course Information

Credits	: 4 credits – 3 credits for lecture and 1 credit for lab.
Meeting Times	: TR – 11:30am ~ 1:00pm (lecture) T – 2:15pm ~ 5:15pm (lab 1) W – 2:15pm ~ 5:15pm (lab 2)
Meeting Locations	: Reichardt 203 (lecture) Reichardt 252 (lab)

Instructor Information

Instructor	: Prof. Hyunju Kim Connor
Office	: Elvey 706B and Reichardt 120
Email	: hkconnor@alaska.edu
Phone	: (907) 474-5421
Website	: https://sites.google.com/a/alaska.edu/hkconnor
Office Hours	: Thursday 2:30 – 5:30pm (Reichardt 120), or By appointment (Elvey 706B)

Prerequisites

Placement in WRTG F111X; placement in DEVM F105, or permission of instructor

Textbook

Universe, 10th Edition by Geller, Freedman, and Kaufmann, W. H. Freeman & Company

Course Description

Examination of the science of astronomy and its social consequences, with an emphasis on the interrelationships between astronomy and other sciences. Topics covered: astronomical concepts and tools, the solar system, stellar astronomy and cosmology. Designed for non-science majors.

Course Goals and Student Learning Outcomes

Upon completion of this course students will:

1. Understand the tools and techniques of scientific study, and how these have been used to establish our current knowledge of the universe.
2. Be familiar with the hierarchy of objects that make up the universe, how they are distributed through space, and how Earth is placed in this universe.
3. Understand the basic nature of these objects – how they formed, how they behave, and what their ultimate fates are likely to be.
4. Be familiar in particular with the solar-system objects that are our near neighbors in space and may one day provide additional options for human habitation and resource extraction.
5. Appreciate the societal relevance of astronomy and its connection to other fields of science.

Instructional Methods

Two 1.5-hour lectures and a 3-hour lab per week

Course Schedule

Note that this is a rather ambitious schedule because we need to finish roughly a chapter per lecture in order to cover the entire book. Based on the previous Astronomy class given by Prof. Mark Conde, I want to complete at least up to Chapter 24.

Week	Dates	Class Topics	Labs
1	Aug 26 – Aug 30	Class introduction, Chap. 1	None
2	Sep 02 – Sep 06	Chap. 2-3	Math Review
3	Sep 09 – Sep 13	Chap. 4-5	1
4	Sep 16 – Sep 20	Chap. 6-7	2
5	Sep 23 – Sep 27	Chap. 8-9	3
6	Sep 30 – Oct 4	Chap. 10-11	4
7	Oct 7 – Oct 11	Chap. 12-13	5
8	Oct 14 – Oct 18	Chap. 14-15	6
9	Oct 21 – Oct 25	Chap. 16-17	7
10	Oct 28 – Nov 01	Chap. 18-19	8
11	Nov 04 – Nov 08	Chap. 20-21	9
12	Nov 11 – Nov 15	Chap. 22-23	10
13	Nov 18 – Nov 22	Chap. 24-25	11
14	Nov 25 – Nov 29	Thanksgiving week, Chap. 26	Make up
15	Dec 2 – Dec 6	Chap 27	Recitation
16	Dec 9 – Dec 13	Final, 10:15am – 12:15pm on Dec 10	None
17	Dec 16 – Dec 20	Grades posted by Dec 18	

Homework

Homework will be assigned each week during the Thursday lecture, and will be due by 5:00 pm on Thursday of the following week. All homework must be submitted via the box for this class that is located in the physics departmental office. *Please do not put homework in my departmental mailbox*, as this will delay getting it to the TA for grading. You may work with others, but you are prohibited from simply copying other's work. Homework will count significantly toward your final grade, as well as provide me with feedback regarding your understanding of the material.

Please realize that even if you submit a correct solution to a problem, your grader may not recognize it as correct if it's poorly presented. To maximize your chance of scoring well, your homework must:

- Be neatly laid out
- Be largely free from crossing out and over-writing
- Use grammatically correct English and be well enough written that the grader can understand what you're trying to say

Labs

Generally, each student will be expected to complete one lab session per week. We will use Thanksgiving week as a chance to do makeup labs. Labs in the final week of semester will be comprised of recitations in preparation for the final exam.

There will be a total of 11 labs. Lab write ups should be completed during the lab, and turned in to the TA at the end of the session. Your worst lab score will be discarded; the remaining 10 scores for your lab participation and write up will contribute to your final grade.

Laboratory sessions are a vital part of this course, and should not be missed. To pass this course, there is an absolute requirement that you must attend and write up at least 7 of the labs. Any student failing to reach this number will automatically fail

Quizzes and Final Exam

There will be six 20-minute quizzes during the semester and one two-hour final exam. The preliminary dates for these are

- Quizzes: Sep 12, Sep 26, Oct 10, Oct 24, Nov 12, and Nov 26.
- Final: 10:15 a.m.-12:15 p.m., Tuesday, December 10

Only your best 5 quiz scores will contribute to your final grade. Your lowest quiz score will be discarded and will make no contribution. Quizzes will be held at the end of the Thursday lecture, during the last 20 minutes of our regularly scheduled class time.

Grading

Homework:	24% (2% each for 12 assignments)
Best 10 out of 11 labs:	30% (3% each for 10 labs)
Best 5 out of 6 quizzes:	25% (5% each for 5 quizzes)
<u>Final exam :</u>	<u>21%</u>
Total:	100%

Final grades will be returned as letter grades with plus/minus modifiers. These will be derived from your overall percentage grade. The approximate conversions for each letter grade will be as follows: A+ (>97.5), A(>87.5), A-(>85), B+(>82.5), B(>72.5), B-(>70), C+(>67.5), C(>57.5), C-(>55), D+(>52.5), D(>42.5), D-(>40), F (<40).

Course Policies

- (a) Attendance and participation in class is expected of all students.
- (b) Make-up quiz request and late homework will not be accepted without evidence of illness or genuine emergency.
- (c) Students will be allowed to make up at least one missed lab during Thanksgiving week.
- (d) Plagiarism and cheating are not accepted with no exception.

Academic Honesty

UAF expects and requires academic honesty from all members of the University community, and takes any act of plagiarism and cheating seriously. It is expected that all assignments, including homework and reports, that are turned in for this course must be the original work of the individual student. Failure to comply with this policy will result in penalty as stipulated under UAF regulations.

Student Protections and Services

Every qualified student is welcome in my classroom. As needed, I am happy to work with you, disability services, veterans' services, rural student services, etc. to find reasonable accommodations. Students at this university are protected against sexual harassment and discrimination (Title IX), and minors have additional protections. As required, if I notice or am informed of certain types of misconduct, then I am required to report it to the appropriate authorities. For more information on your rights as a student and the resources available to you to resolve problems, please go the following site: www.uaf.edu/handbook/.

UA is an AA/EO employer and educational institution and prohibits illegal discrimination against any individual: <https://alaska.edu/nondiscrimination/>.

Your instructor follows the University of Alaska Fairbanks Incomplete Grade Policy: “The letter “I” (Incomplete) is a temporary grade used to indicate that the student has satisfactorily completed (C or better) the majority of work in a course but for personal reasons beyond the student’s control, such as sickness, has not been able to complete the course during the regular semester. Negligence or indifference are not acceptable reasons for an “I” grade.”

Disabilities Services

The UAF Office of Disability Services implements the Americans with Disabilities Act (ADA), and insures that UAF students have equal access to the campus and course materials. Any student who may need assistance with disabilities, should feel free to contact the instructor or directly to the Office of Disabilities Services (208 WHIT) by calling 907- 474-5655, or through email: uaf-disability-service@alaska.edu.

Effective Communication

Students who have difficulties with oral presentations and/or writing are strongly encouraged to get help from the UAF Department of Communication’s Speaking Center (907-474-5470, speak@uaf.edu) and the UAF English’s Department’s Writing Center (907-474-5314, Gruening 8th floor), and/or CTC’s Learning Center (604 Barnette Street, 907-455- 2860).