

# Astr 1020: STELLAR ASTRONOMY

## Fall Semester 2018

Meeting Times: MWF 9:05 – 10:00AM

Meeting Place: Sundquist Science Center E-106B

Credit: 3 Credit hours

Instructor: Dr. Spencer L. Buckner

Office: SSC B-326 Phone: 221-6241

Hours: MWF 10:15am – 11:30am and M – F 2:30 – 4:00pm  
or by appointment

E-mail: buckners@apsu.edu

Website: [www.apsu.edu/astronomy](http://www.apsu.edu/astronomy)

Textbook: 21<sup>st</sup> Century Astronomy: Stars and Galaxies, 5<sup>th</sup> Edition  
By Kay, Palen and Blumenthal  
Lecture Tutorials for Introductory Astronomy, 3<sup>rd</sup> Edition  
By Prather, Slater, Adams & Brissenden

### Course Description:

The subjects of stellar astronomy such as starbirth, starlife, star death, pulsars, black holes, galaxies and quasars; the tools and methods of astronomy including locating and naming stars and constellations, light and other radiation, telescopes and spectroscopy. Laboratory Astr 1021 must be taken concurrently.

Grading:	Exams.....40%	90 - 100%...A
	Final Exam.....5%	80 – 89% ...B
	Labs.....25%	67 – 79% ...C
	Observations.....10%	50 – 66% ...D
	In-class Assignments...12%	< 50% ..... F
	Homework.....8%	

### Exams:

Approximately every ninth class meeting during the semester there will be a one-hour exam with a fifth exam being given during the final exam period. The lowest exam grade will be dropped. The exams will consist of 30 multiple-choice questions, worth 3 points each and one essay question worth 10 points. The final exam will be comprehensive and given at 8:00am on Friday December 7. The final exam will consist of five essay questions worth 10 points each. The tentative dates for the exams are listed in the Reading Assignments/Exam Dates at the back of the syllabus.

## Laboratory:

**You must register for the lab in addition to the lecture** to receive credit for the course. The lab grade will be combined with the lecture grade for a single course grade. **You will receive the same grade for the lab that you receive for the lecture.** Your lab instructor will distribute a separate syllabus for the lab during the first lab meeting.

## Observations:

The Observations requirement is to attend a 1<sup>st</sup> Quarter Observing Night and a Dark Sky Observing Night or do a Virtual Observations then write an Observations Report. A schedule for the observing nights along with the format for the report can be found in a separate document handed out on the first day of class and posted in the **Observing Nights** link on [www.apsu.edu/astronomy](http://www.apsu.edu/astronomy). Each observing night counts 3 points and the Observations Report counts 4 points for a total of 10 points.

## In-class Activities:

The in-class activities will consist of a variety of different exercises conducted in class. Among the activities will be worksheets from Lecture Tutorials for Introductory Astronomy, colored card questions, five-minute essays, group essays, question-of-the-day discussions and comment cards. Not all days will have an in-class activity, days which do have an activity will be chosen at random. The in-class activities will serve as a means of taking attendance but their primary purpose is to enhance the learning experience. Since many of the activities will be drawn from the Lecture Tutorials workbook, you should bring it to class every day. **The Lecture-Tutorial workbook will be collected at each exam to check for completeness and will count for two thirds of the in-class points (8% of your total grade).** If you bought a used Lecture Tutorials workbook, **take it back and get a new one!!!** You will not receive any credit for work done in a used workbook unless it is pre-approved by Dr. Buckner.

## D2L:

APSU uses the online learning system known as Desire-2-Learn (D2L). Many of the course materials, including the syllabus, lecture slides, Observations requirement, Sample Questions and exam solutions can be found in the Content section of the class D2L shell. In addition, the class grades are kept in D2L. You can log in to D2L at any time and check your course grade to gauge how you are doing in the class. You are encouraged to check your grades in D2L regularly to ensure there are no mistakes. If you notice a grade entered erroneously, contact Dr. Buckner immediately so that it can be corrected.

## Homework:

The homework will mostly consist of problems in the online homework system **SmartWork5**. If you purchased a new textbook, the access code can be found on the inside cover of the textbook. If you purchased a used book, the access code can be purchased at <https://digital.wwnorton.com/astro5stars>. **You must access SmartWork5 through the links in the class D2L shell.** A separate handout on how to get started in SmartWork5 will be distributed in class and can be found in the Content section of the class D2L shell. There will also be occasional homework assignments handed out in class. Those assignments will usually be due at the next class meeting.

## Attendance:

The in-class activities will serve as attendance for the lecture and counts for 12% of the course grade. The Lecture-Tutorial booklets will count half of this or 6%. **Laboratory attendance is mandatory.** If you should miss a lab, for whatever reason, you must make arrangements to make-up the lab with the instructor. **More than two un-made-up lab absences will result in automatic failure of the course (both lecture and lab!).**

## Academic & Classroom Misconduct:

Students are expected to conduct themselves appropriately at all times. Academic and classroom misconduct will not be tolerated. Students must read the "Code of Student Conduct" in the new Student Handbook for an understanding of what will be expected of them within the academic setting. **The use of cell phones in class is not allowed. If you are caught using a cell phone in class you will be given the choice of either surrendering the phone for the remainder of the day (it can be picked up in the instructor's office after 5:00pm) or leaving class immediately and receiving a zero on any in-class activities for that day. PUT YOUR CELL PHONE ON VIBRATE AND STORE IT AWAY FOR THE DURATION OF CLASS!!!**

## Course Objectives:

1. To help students develop an understanding of the scientific method.
2. To introduce students to the historical development of the science of astronomy and how that development influenced other sciences and philosophies throughout history and across cultures.
3. To help students develop competence in reading scientific materials, listening and taking notes in lectures and responding in written and oral form.
4. To help students develop the skills of critical thinking and logical analysis.

5. To promote the understanding and use of numbers, the metric system of units and statistics in making and interpreting measurements.

## The Usual Caveats

### **Disability Policy:**

At any time during the semester, a student who has a disability which may affect his/her academic performance is encouraged to make an appointment with me to discuss this matter, or you may contact Disability Services: telephone 221-6230; TTY 221-6278; FAX 221-7102; [www.apsu.edu/disability](http://www.apsu.edu/disability).

### **APSU Policy for Minors on Campus**

Minors (any non-student under the age of 18) accompanying staff, faculty students or visitors on campus are not permitted in the classroom.

### **Midterm Grades**

A midterm grade will be awarded for all students in this course. The grade awarded may or may not necessarily be based on 50% of the course requirements and may or may not differ from the final grade. Your mid-term grade will be posted on APWeb.

## Tentative Schedule

<b>Week</b>	<b>Date</b>	<b>Reading Assignment</b>	<b>Exam Date</b>	<b>Homework</b>
1	8/27	Chapter 1		
	8/29	Chapters 1 & 2		
	8/31	Chapter 2		SmartWork Chapter 1 due
2	9/3	<b>Labor Day No Class</b>		
	9/5	Chapters 2 & 3		
	9/7	Chapter 3		SmartWork Chapter 2 due
3	9/10	Chapter 3	Exam 1 Fri Sept 14	
	9/12	Chapters 3 & 4		
	9/14	Chapter 4		SmartWork Chapter 3 due
4	9/17	Chapter 4		
	9/19	Chapter 5		SmartWork Chapter 4 due
	9/21	Chapter 5		
5	9/24	Chapter 5		
	9/26	Chapter 6		SmartWork Chapter 5 due
	9/28	Chapter 6		
6	10/1	Chapter 6	Exam 2 Wed Oct 3	
	10/3	Chapter 7		SmartWork Chapter 6 due
	10/5	Chapter 7		

<b>Week</b>	<b>Date</b>	<b>Reading Assignment</b>	<b>Exam Date</b>	<b>Homework</b>
7	10/8	Chapter 7		
	10/10	Chapter 13		SmartWork Chapter 7 due
	10/12	Chapter 13		
8	10/15	Fall Break No Class		
	10/17	Chapter 13		
	10/19	Chapter 14		SmartWork Chapter 13 due
9	10/22	Chapter 14	Exam 3 Fri Oct 26	
	10/24	Chapter 14		
	10/26	Chapter 15		SmartWork Chapter 14 due
10	10/29	Chapter 15		
	10/31	Chapter 15		
	11/2	Chapter 16		SmartWork Chapter 15 due
11	11/5	Chapter 16		
	11/7	Chapter 17		SmartWork Chapter 16 due
	11/9	Chapter 17		
12	11/12	Veterans Day No Class	Exam 4 Wed Nov 14	
	11/14	Chapter 17		
	11/16	Chapter 18		SmartWork Chapter 17 due
13	11/19	Chapter 18		
	11/21	Thanksgiving No Class		
	11/23			
14	11/26	Chapters 18 & 19		
	11/28	Chapter 19		SmartWork Chapter 18 due
	11/30	Chapter 19		
15	12/3	Chapter 20		SmartWork Chapter 19 due
	12/5	Chapter 20		SmartWork Chapter 20 due Friday December 7
	Friday 12/7 @ 8:00am			Exam 5 and Final Exam

The above schedule and procedures are subject to change in the event of extenuating circumstances.