

**ASTR 320**  
**Philosophy and History of Astronomical Thought**

**Spring 2016**

**Tuesdays and Thursdays, 12:30-1:45 pm, Steward 204**

## **SYLLABUS**

ASTR320 covers the History and Philosophy of Astronomy, from prehistorical times to the present, with various philosophical perspectives on the narrative. Astronomy is central to the development of what has become science. It also plays a principal role in the stories about this development as told by various historians with their differing philosophies and presumptions.

### **Course Syllabus: Your Roadmap to ASTR 320**

Disappointment and misunderstanding often arise because of miscommunication of expectations. The goal of this document is to minimize such issues, serving as a "contract" between teachers and students.

### **Course Materials**

There is **no required textbook** for this course. Material will be made available through D2L. Once you register in ASTR320 you will see the course show up under your Student Tab. It is where you go to know what to do.

### **Honors Contract**

This course is available for an [honors contract](#).

## Meet Your Teacher



Instructor: Pavol "Paul" Gabor, S.J., Ph.D.  
Email: [pgabor@arizona.edu](mailto:pgabor@arizona.edu)  
Office: Steward Observatory, Room N209B  
Phone (office): (520) 621-6043  
Bio: [vaticanobservatory.va](http://vaticanobservatory.va)

***Dr. Gabor will respond to your emails within 24 hrs, Mon-Fri.***

## Office Hours

Monday	11:00 am – 12:00 pm
Tuesday	1:45 pm – 2:15 pm
Thursday	1:45 pm – 2:15 pm

You can also set up an appointment at other times.

*There are no stupid questions. Please do not hesitate to ask.*

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## Attendance & Active Participation

Active participation in class is strongly encouraged and students may earn extra credit for insightful contribution in class.

Attendance will be taken for each class session. Students who are regularly absent will be Administratively Dropped from the course. The main guideline is, *Communicate!* If you know of your absence beforehand, tell the instructor. If your reasons are personal, let the Dean of Students staff provide you with a note to your instructors so that you do not have to explain your reasons more than once. Then, forward the note to your instructor.

## Activities & Grading

The final course grades will be on a curve, but you can be assured that if your weighted average is > 90% you will receive an A, 80 to 90% at least a B, 65 to 80% at least a C, and 50 to 65% at least a D.

Your grade will be based on the weighted average of the following components:

COMPONENT		#	@	sub/total
reading exercises	online	7	1-3 pts	11 pts
précis	writing	5	3 pts	15 pts
preparatory exercises	writing	1	8 pts	8 pts
essays	writing	2	10 & 20 pts	30 pts
test	in class	3	12 pts	36 pts
				100 pts

The requirements for written work will be explained and the assessment criteria will be expressed in appropriate rubrics. (Most of the "preparatory exercises" will develop your skills in using the rubrics to your best advantage.)

## Course Schedule

See the D2L "Calendar" tool (remember to set "Display Options" >> "Course Events" appropriately). For an illustrative draft, see the attached sheet. Course material and activities may not follow the exact dates indicated in the draft with the notable exception of the three tests. The tests will be administered on the dates given in the schedule: (1) Feb 18, (2) March 29 and (3) at the appointed time in the week set reserved for finals examinations.

## Questions

Students are encouraged to ask questions. The teachers are available during class, after class, by e-mail, during office hours, and by appointment. Asking questions during class is particularly useful:

- Your fellow students will be grateful to you not only for making the teachers explain better or more in depth, but also for the diversity of backgrounds and approaches manifested by your questions.
- Your teachers will be grateful to you for the stimulus as well as for the instant feedback a query represents.

*There are no stupid questions!*

## Etiquette

Everyone in the class is expected to abide by and follow the UA's Student Code of Conduct

<http://deanofstudents.arizona.edu/policiesandcodes/studentcodeofconduct>

Eating and drinking is not permitted in class (unless the teacher gives you special permission). Unless otherwise stipulated by the teacher, talking is strictly prohibited with the notable exception of asking questions of a teacher. Cell phones and similar devices must remain in quiet mode. Texting is only acceptable if allowed by a teacher. If you use a computer in class, make sure it does not create a nuisance (various acoustic signals, images and animations that draw undue attention) and please refrain from loud typing. Analogous guidelines apply to the use of printed materials.

Correct conduct includes general rules of netiquette, being polite in online discussions, no flaming/teasing, no swearing/cursing, and being mindful and tolerant that everyone has their own personal belief system and is due full respect. <http://www.albion.com/netiquette/corerules.html>

## Late Work

No credit, with no exceptions, will be given for late work. In order to be fair to those that turn in their work on time, late work will not be accepted. If you are concerned about not being able to turn in your work on the due date, please turn it in early! **Err on the side of prudence!** If you choose to wait until a few hours before the deadline to do your assignment, you are taking a risk. Should your printer break, internet go down, or an emergency arise, these will NOT be valid excuses.

## Missed Tests

No makeup tests, with no exceptions, will be administered. The tests are already scheduled and posted on the class schedule. If you know that you will miss a test, for valid reasons, contact the instructor as soon as possible.

## Makeup Credit?

Near the end of term, there will be no makeup or extra credit assignments. Do not expect to compensate for poor work at the end of the term with additional work.

## **Disputing Grades**

You have one week from the time an assignment or exam is returned to challenge any perceived errors. Although rare, there are occasions when grading errors occur, and you should review your returned work.

## **Academic Honesty**

Presentation of any work other than your own is considered academic dishonesty. This includes copying test answers or homework assignments, other persons taking exams for you, or reference to any unauthorized materials during a test. Any other technique that gains unfair advantage over other students is also considered academically dishonest. All students must be prepared to present valid picture identification if requested during an exam period. Any incidents of academic dishonesty will be dealt with according to the University of Arizona's Code of Academic Integrity. <http://deanofstudents.arizona.edu/codeofacademicintegrity>

Tips for avoiding Academic Dishonesty: <http://deanofstudents.arizona.edu/tipsforavoidingacademicdishonesty>

You should also be aware of the University's policies on disruptive and threatening behavior:

<http://deanofstudents.arizona.edu/disruptiveandthreateningstudents>

## **Turnitin.com**

If you decide to take and continue in this course, you are agreeing to submit your papers online, when so instructed, to a plagiarism-prevention program called [Turnitin.com](http://Turnitin.com). You should note that [Turnitin.com](http://Turnitin.com) – always without your name and any personal information – will retain your paper as part of their database so that students who plagiarize from it can be detected. Because of this program, the vast majority of you who do your own work and cite your sources of information properly will not have to compete with students who commit undetected plagiarism.

## **Disabilities**

If you anticipate barriers related to the format or requirements of this course, please meet with the instructor to discuss how to ensure your full participation in the course. If you determine that disability-related accommodations are necessary, please register with Disability Resources (621-3268; [drc.arizona.edu](http://drc.arizona.edu)) and notify the instructor of your eligibility for reasonable accommodations.

Date	Material	Assignment due
		online
		written
Thu 14 Jan	Cosmic scales. Introduction	
Tue 19 Jan	Night sky. Archaeoastronomy	Reading 1
Thu 21 Jan	Babylonians. Egyptians	Reading 2
Tue 26 Jan	Pythagoreans. Miletians	Reading 3
Thu 28 Jan		
Tue 02 Feb	Plato. Saving the Phenomena. Eudoxus	Reading 4
Thu 04 Feb	Eratosthenes	Rubric - initial
Tue 09 Feb	Aristotle	Rubric - application
Thu 11 Feb	Hipparchus	Rubric - final
Tue 16 Feb	Ptolemy	Mock essay
<b>Thu 18 Feb</b>	<b>Test 1</b>	
Tue 23 Feb	Aristotle's physics	Reading 5
Thu 25 Feb		
Tue 01 Mar	Copernicus	Reading 6
Thu 03 Mar	Tycho Brahe	Précis 1
Tue 08 Mar	Kepler	Reading 7
Thu 10 Mar		Précis 2
<b>Tue 15 Mar</b>	<b>SPRING RECESS</b>	
<b>Thu 17 Mar</b>	<b>SPRING RECESS</b>	
Tue 22 Mar	Galileo	Essay 1
Thu 24 Mar	Riccioli	Précis 3
<b>Tue 29 Mar</b>	<b>Test 2</b>	
Thu 31 Mar	Descartes	Essay 2 outline
Tue 05 Apr	Newton	
Thu 07 Apr	Halley. W. & C. Herschel	Précis 4
Tue 12 Apr	Photography. Spectroscopy	
Thu 14 Apr	Astrophysics	Précis 5
Tue 19 Apr	Nebulae and the Galaxy. Shapley. Curtis. The Great Debate. Hubble	
Thu 21 Apr	Extraterrestrials. Atomists, Epicureans, Cusanus, Bruno, Fontenelle.	Essay 2
Tue 26 Apr		
Thu 28 Apr	Historiography. Flat Earth, "martyrs of science", progress. Whig history	
Tue 03 May		
<b>Thu 05 May</b>	<b>READING DAY</b>	
<b>Tue 10 May</b>	<b>Test 3</b>	

