

Start/End Dates

Meeting Days

Meeting Times

Location

Instructor

Course Topic (if applicable)

**PHYSICS****Astronomy**

**ASTRONOMY 112 INTRODUCTION TO ASTRONOMY ...** An examination of concepts regarding the organization of the universe. The solar system, astronomical principles and instruments, stellar evolution and galaxies are among topics covered. Activities include field trips, observations of the night sky and of the sun with telescopes, and laboratory work. Four one-hour lectures and one two-hour laboratory/observation period per week. There are two required evening observation sessions during the semester.

**COREQ: MATH 141 OR WAIVER**

#3350	Section 01L	[units: 5]	Gen Ed Laboratory (GL)			
	01/20-05/20	T	03:45 PM - 05:45 PM	UH0050	Paul M Rybski	
	01/20-05/20	MTWR	02:15 PM - 03:05 PM	UH0141	Paul M Rybski	
#3354	Section 02L	[units: 5]	Gen Ed Laboratory (GL)			
	01/20-05/20	M	11:00 AM - 01:00 PM	UH0050	Juliana T Constantinescu	
	01/20-05/20	MTWR	03:45 PM - 04:35 PM	UH0141	Juliana T Constantinescu	
#3356	Section 03L	[units: 5]	Gen Ed Laboratory (GL)			
	01/20-05/20	M	01:10 PM - 03:10 PM	UH0050	Juliana T Constantinescu	
	01/20-05/20	MTWR	03:45 PM - 04:35 PM	UH0141	Juliana T Constantinescu	

**ASTRONOMY 114 DESCRIPTIVE ASTRONOMY ...** A non-laboratory course that introduces the basic aspects of astronomy, including cultural and historical considerations. The study of galaxies, stars, as well as our solar system is included. Observational activities and field trips may be included as integral parts of the course. Three one-hour lectures per week.

**COREQ: MATH 141 OR WAIVER**

#3358	Section 01C	[units: 3]	Gen Ed Math/Natural Sciences (GM)			
	01/20-05/20	MWF	09:55 AM - 10:45 AM	UH0141	Juliana T Constantinescu	

**ASTRONOMY 498 INDEPENDENT STUDY ...** Study of a selected topic or topics under the direction of a faculty member. Repeatable. Department Consent required.

#3360	Section 01	[units: 1-3]				Dept. Consent
	01/20-05/20	Arranged	Arranged		Robert Benjamin	
#3362	Section 02	[units: 1-3]				Dept. Consent
	01/20-05/20	Arranged	Arranged		Juliana T Constantinescu	
#3364	Section 03	[units: 1-3]				Dept. Consent
	01/20-05/20	Arranged	Arranged		Paul M Rybski	

**Physics**

**PHYSICS 130 PHYSICS FOUNDATIONS ...** This course will explore topics in classical physics (motion, heat, sound, electricity, magnetism, and light) and modern physics (atomic structure, quantum mechanics, and relativity) with an emphasis on how the principles explain and predict phenomena we observe every day. Four one-hour lectures and one two-hour laboratory per week.

**COREQ: MATH 141 OR CONSENT OF INSTRUCTOR**

#3304	Section 01L	[units: 5]	Gen Ed Laboratory (GL)			
	01/20-05/20	T	09:30 AM - 11:30 AM	UH0058	Saeed Ahmad	
	01/20-05/20	MWRF	08:50 AM - 09:40 AM	UH0141	Saeed Ahmad	
#4808	Section 02L	[units: 5]	Gen Ed Laboratory (GL)			
	01/20-05/20	T	01:10 PM - 03:10 PM	UH0058	Saeed Ahmad	
	01/20-05/20	MWRF	08:50 AM - 09:40 AM	UH0141	Saeed Ahmad	

**PHYSICS 141 PRINCIPLES OF PHYSICS II ...** An algebra-based course in electricity and magnetism, circuits, electromagnetic waves, optics and an introduction to modern physics. Applications to the life and health sciences are emphasized, and essential MCAT subject matter is included. Basic understanding of trigonometry and the manipulation of vectors is necessary. Students with adequate mathematical preparation may wish to consider taking the PHYSICS 180 series. Four One-hour lectures and one three-hour laboratory per week.

**PREREQ: PHYSICS 140**

#4811	Section 01	[units: 5]	Gen Ed Laboratory (GL)			
	01/20-05/20	W	02:15 PM - 05:15 PM	UH0050	Abdelkrim Boukahil	
	01/20-05/20	TR	11:00 AM - 12:15 PM	UH0141	Abdelkrim Boukahil	
#3340	Section 02	[units: 5]	Gen Ed Laboratory (GL)			
	01/20-05/20	R	02:15 PM - 05:15 PM	UH0050	Abdelkrim Boukahil	
	01/20-05/20	TR	11:00 AM - 12:15 PM	UH0141	Abdelkrim Boukahil	

**PHYSICS 181 PHYSICS FOR SCIENTISTS AND ENGINEERS II ...** A course in introductory physics including a mathematically rigorous analysis of electricity and magnetism, light and optics, and modern physics using calculus. For majors and minors in physics, engineering, chemistry, and mathematics. Four one-hour lectures and one three-hour lab per week.

**PREREQ: PHYSICS 180 OR CONSENT OF INSTRUCTOR COREQ: MATH 254**

#3328	Section 01L	[units: 5]	Gen Ed Laboratory (GL)			
	01/20-05/20	W	02:15 PM - 05:15 PM	UH0058	Robert Benjamin	
	01/20-05/20	MTWF	01:10 PM - 02:00 PM	UH0141	Robert Benjamin	
#3346	Section 02L	[units: 5]	Gen Ed Laboratory (GL)			
	01/20-05/20	R	02:15 PM - 05:15 PM	UH0058	Saeed Ahmad	
	01/20-05/20	MTWF	01:10 PM - 02:00 PM	UH0141	Robert Benjamin	

Start/End Dates Meeting Days Meeting Times Location Instructor Course Topic (if applicable)

**PHYSICS 212 PHYSICS FOR ELEMENTARY TEACHERS ...** This course is a one-semester introduction to physics with curriculum and instruction designed as an activity-based hands-on course for K-8 elementary education students and open to all education majors. The course emphasizes a student-oriented pedagogy in order to develop various physics concepts and the nature of science. Topics covered include motion, forces, energy, light, heat, electricity, and magnetism.

**PREREQ: MATH 141 AND RESTRICTED TO STUDENTS WITH BSE PROGRAM**

#3314 Section 01 [units: 4] Gen Ed Laboratory (GL)  
01/20-05/20 MW 08:25 AM - 10:45 AM UH0166 Steven C Sahyun  
#4786 Section 2 [units: 4] Gen Ed Laboratory (GL)  
01/20-05/20 MW 12:05 PM - 02:25 PM UH0166 Steven C Sahyun

**PHYSICS 240 PHYSICS OF SOUND AND MUSIC ...** A descriptive course that deals with various properties of sound, the generation of sound by traditional musical instruments and the electronic production and reproduction of sound. The physical process of hearing and the acoustical properties of rooms are also included. Three one-hour lecture periods per week.

**COREQ: MATH 140 OR MATH 141**

#3312 Section 01C [units: 3] Gen Ed Math/Natural Sciences (GM)  
01/20-05/20 TR 12:30 PM - 01:45 PM UH0166 Juliana T Constantinescu

**PHYSICS 310 MECHANICS - DYNAMICS ...** A study of classical mechanics. Topics to be covered will include vector calculus techniques, dynamics of particles and systems and central force systems. Required of all majors and minors in physics. Three one-hour lectures per week.

**PREREQ: PHYSICS 324**

#3310 Section 01C [units: 3]  
01/20-05/20 TR 12:30 PM - 01:45 PM UH0142 Abdelkrim Boukahil

**PHYSICS 325 CLASSICAL ELECTROMAGNETISM ...** A study of the electrostatic field, electric multipoles, dielectrics, special methods in electrostatics, the magnetic field, magnetic materials, time-varying fields, conservation laws, and electromagnetic waves. Three one-hour lectures per week.

**PREREQ: PHYSICS 324**

#5315 Section 01 [units: 3]  
01/20-05/20 TR 09:30 AM - 10:45 AM UH0142 Abdelkrim Boukahil

**PHYSICS 330 ANALOG AND DIGITAL ELECTRONICS ...** An introductory course in electronics with emphasis on solid state devices, diode and amplifier circuits, waveform generation, operational amplifiers, digital circuitry and microcomputer applications to physical measurement. Three one-hour lectures per week.

**PREREQ: PHYSICS 174 AND PHYSICS 175 OR PHYSICS 162, AND PHYSICS 163**

#4766 Section 01 [units: 3]  
01/20-05/20 MW 04:50 PM - 06:05 PM UH0141 Paul M Rybski

**PHYSICS 331 ANALOG AND DIGITAL ELECTRONICS LABORATORY ...** A laboratory course in electronics with emphasis on solid state devices, diode and amplifier circuits, waveform generation, analog computer circuitry, digital circuitry and microcomputer applications to physical measurement. One two-hour laboratory per week.

**COREQ: PHYSICS 330**

#4767 Section 01 [units: 1]  
01/20-05/20 R 03:45 PM - 06:45 PM UH0053 Paul M Rybski

**PHYSICS 344 MODERN PHYSICS ...** Topics covered include relativity, elementary quantum physics, atomic and molecular structure, elementary nuclear physics and fundamental particles. Laboratory experiments complement material presented in lectures. Three one-hour lectures and one three-hour laboratory per week.

**PREREQ: PHYSICS 181, OR PHYSICS 141 AND MATH 254**

#4809 Section 01L [units: 4]  
01/20-05/20 R 11:00 AM - 02:00 PM UH0061 Saeed Ahmad  
01/20-05/20 MWF 11:00 AM - 11:50 AM UH0166 Saeed Ahmad

**PHYSICS 494 PHYSICS SEMINAR ...** Variable topics. Group activity. An advanced course of study in a defined subject matter area emphasizing a small group in intense study with a faculty member. Repeatable.

**PREREQ: SENIOR STATUS**

#4765 Section 01 [units: 1] Instructor Consent  
01/20-05/20 T 01:50 PM - 02:40 PM UH0238 Abdelkrim Boukahil MATHEMATICAL PHYSICS I

**PHYSICS 498 INDEPENDENT STUDY ...** Study of a selected topic or topics under the direction of a faculty member. Repeatable for a maximum of 3 credits in major or minor in physics.

**PREREQ: JUNIOR/SENIOR STATUS OR CONSENT OF INSTRUCTOR**

#3344 Section 01 [units: 1-3] Dept. Consent  
01/20-05/20 Arranged Arranged Robert Benjamin  
#3316 Section 02 [units: 1-3] Dept. Consent  
01/20-05/20 Arranged Arranged Abdelkrim Boukahil  
#3318 Section 03 [units: 1-3] Dept. Consent  
01/20-05/20 Arranged Arranged Juliana T Constantinescu  
#3320 Section 04 [units: 1-3] Dept. Consent  
01/20-05/20 Arranged Arranged Paul M Rybski  
#3322 Section 05 [units: 1-3] Dept. Consent  
01/20-05/20 Arranged Arranged Steven C Sahyun