

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

#4101	Section 02	[units: 5]	Gen Ed Laboratory (GL)			
09/02-12/22	T		09:30 AM - 11:30 AM	UH0050	Juliana T Constantinescu	
09/02-12/22	MTWR		03:45 PM - 04:35 PM	UH0141	Juliana T Constantinescu	
#4107	Section 03	[units: 5]	Gen Ed Laboratory (GL)			
09/02-12/22	M		12:05 PM - 02:05 PM	UH0050	Paul M Rybski	
09/02-12/22	MTWR		09:55 AM - 10:45 AM	UH0141	Paul M Rybski	
#5891	Section 04	[units: 5]	Gen Ed Laboratory (GL)			
09/02-12/22	T		12:30 PM - 02:30 PM	UH0050	Juliana T Constantinescu	
09/02-12/22	MTWR		09:55 AM - 10:45 AM	UH0141	Paul M Rybski	

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

#4103	Section 01	[units: 3]	Gen Ed Math/Natural Sciences (GM)			
09/02-12/22	MWF		02:15 PM - 03:05 PM	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.

#4109	Section 01	[units: 1-3]				Dept. Consent
09/02-12/22	Arranged	Arranged			Robert Benjamin	
#4111	Section 02	[units: 1-3]				Dept. Consent
09/02-12/22	Arranged	Arranged			Juliana T Constantinescu	
#4113	Section 03	[units: 1-3]				Dept. Consent
09/02-12/22	Arranged	Arranged			Paul M Rybski	

Physics

PHYSICS 120 LIGHT AND COLOR ... An introduction to light science for students in the visual arts and for students with an interest in art. The course includes the properties of light and color, the interaction of light with matter, the formation of visual images, and color vision. Three one-hour lectures and one two-hour laboratory per week.

COREQ: MATH 141 OR 140 OR WAIVER

#5900	Section 01	[units: 4]	Gen Ed Laboratory (GL)			
09/02-12/22	W		02:15 PM - 04:15 PM	UH0050	Abdelkrim Boukahil	
09/02-12/22	TR		11:00 AM - 12:15 PM	UH0141	Abdelkrim Boukahil	

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

#4067	Section 01	[units: 5]	Gen Ed Laboratory (GL)			
09/02-12/22	R		09:30 AM - 11:30 AM	UH0058	Juliana T Constantinescu	
09/02-12/22	MF		08:50 AM - 09:40 AM	UH0141	Robert Benjamin	
09/02-12/22	TR		08:25 AM - 09:15 AM	UH0141	Robert Benjamin	
#4069	Section 02	[units: 5]	Gen Ed Laboratory (GL)			
09/02-12/22	R		12:30 PM - 02:30 PM	UH0058	Juliana T Constantinescu	
09/02-12/22	MF		08:50 AM - 09:40 AM	UH0141	Robert Benjamin	
09/02-12/22	TR		08:25 AM - 09:15 AM	UH0141	Robert Benjamin	

PHYSICS 140 PRINCIPLES OF PHYSICS I ... An algebra-based course in classical mechanics at the introductory level. The content covers kinematics, Newton's laws, conservation laws, oscillations and waves, applications to fluids and elasticity, and thermodynamics and kinetic theory. 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.

COREQ: MATH 152

#4063	Section 01	[units: 5]	Gen Ed Laboratory (GL)			
09/02-12/22	R		02:15 PM - 05:15 PM	UH0050	Jalal M Nawash	
09/02-12/22	MWF		11:00 AM - 11:50 AM	UH0141	Jalal M Nawash	

	<u>Start/End Dates</u>	<u>Meeting Days</u>	<u>Meeting Times</u>	<u>Location</u>	<u>Instructor</u>	<u>Course Topic (if applicable)</u>
#4071	Section 02	[units: 5]	Gen Ed Laboratory (GL)			
	09/02-12/22	R	09:30 AM - 12:30 PM	UH0050	Jalal M Nawash	
	09/02-12/22	MWF	11:00 AM - 11:50 AM	UH0141	Jalal M Nawash	

PHYSICS 180 PHYSICS FOR SCIENTISTS AND ENGINEERS I ... A lecture course in introductory physics including a mathematically rigorous analysis of mechanics, vibrations, wave motion, and thermodynamics using calculus. For majors and minors in physics, engineering, chemistry, mathematics. Four one-hour lectures and one three-hour lab per week. High school calculus recommended.

COREQ: MATH 253

#4051	Section 01	[units: 5]	Gen Ed Laboratory (GL)			
	09/02-12/22	T	09:50 AM - 12:50 PM	UH0058	Robert Benjamin	
	09/02-12/22	MTRF	01:10 PM - 02:00 PM	UH0141	Robert Benjamin	
#4055	Section 02	[units: 5]	Gen Ed Laboratory (GL)			
	09/02-12/22	T	02:15 PM - 05:15 PM	UH0058	Robert Benjamin	
	09/02-12/22	MTRF	01:10 PM - 02:00 PM	UH0141	Robert Benjamin	

PHYSICS 190 FRONTIERS OF ENGINEERING AND PHYSICS ... An introduction to career tracks and career opportunities in engineering and physics. This course will feature readings on different career possibilities in engineering and physics and visiting lectures by practicing physicists and engineers. Professional skills, identification of career tracks, and scientific and technical communication will be emphasized. One hour lecture per week.

#4085	Section 01	[units: 1]				
	09/02-12/22	F	12:05 PM - 12:55 PM	UH0141	Jalal M Nawash	

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

#4091	Section 01	[units: 4]	Gen Ed Laboratory (GL)			
	09/02-12/22	MW	12:05 PM - 02:25 PM	UH0166	Steven C Sahyun	
#4093	Section 02	[units: 4]	Gen Ed Laboratory (GL)			
	09/02-12/22	MW	08:25 AM - 10:45 AM	UH0166	Steven C Sahyun	

PHYSICS 221 INTERMEDIATE LABORATORY ... A laboratory course concentrating on techniques of recording, interpretation of, and reporting experimental data. Extensive use will be made of computers in data processing. Topics covered include data acquisition and the recording of data, error analysis, numerical analysis, graphing techniques, computational tools and report writing. Two two-hour laboratories per week.

PREREQ: PHYSICS 181, OR PHYSICS 141 AND MATH 254

#4087	Section 01	[units: 2]				
	09/02-12/22	TR	11:45 AM - 01:45 PM	UH0061	Paul M Rybski	

PHYSICS 305 MECHANICS - STATICS ... A study of forces on rigid bodies in equilibrium. Topics include force systems, equilibrium, distributed forces, structures, friction, internal forces, centroids and moments of inertia. This course also introduces notations and operations associated with tensor calculus.

PREREQ: PHYSICS 181 OR PHYSICS 141 AND MATH 254

#4061	Section 01	[units: 3]				
	09/02-12/22	MWF	02:15 PM - 03:05 PM	UH0140	Jalal M Nawash	

PHYSICS 324 METHODS OF THEORETICAL PHYSICS ... Topics covered include methods of theoretical physics, vector analysis, differential equations of mathematical physics, analytic functions and integration in the complex plane, Laplace transforms, Fourier series, Fourier transforms, and their applications in physics. Three one hour lectures per week.

PREREQ: PHYSICS 181, OR PHYSICS 141 AND MATH 254

#4059	Section 01	[units: 3]				
	09/02-12/22	TR	02:15 PM - 03:30 PM	UH0141	Abdelkrim Boukahil	

PHYSICS 489 PHYSICS SENIOR SEMINAR ... The course will train students in making scientific presentations, summarize the concepts and methods taught in the physics major curriculum, and prepare them for the Physics Major Field Test as the final exam in the course. Students will become familiar with physics literature and learn to write abstracts and project proposals. They will demonstrate proper methods of verbal and visual presentation by delivering a graded series of talks, concluding with a satisfactory colloquium on a physics topic. Two one-hour sessions a week.

PREREQ: SENIOR LEVEL PHYSICS MAJOR

#4089	Section 01	[units: 2]				
	09/02-12/22	MW	12:05 PM - 12:55 PM	UH0141	Juliana T Constantinescu	

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

#5102	Section 01	[units: 1]				
	09/02-12/22	W	01:10 PM - 02:00 PM	UH0141	Abdelkrim Boukahil	

Instructor Consent

PHYSICS 496 SPECIAL STUDIES ... Variable topics. Group activity. Not offered regularly in the curriculum but offered on topics selected on the basis of timeliness, need, and interest, and generally in the format of regularly scheduled Catalog offerings. Repeatable for a maximum of 3 credits in major or minor in physics.

PREREQ: MAJOR OR MINOR IN PHYSICS, JUNIOR OR SENIOR STANDING AND CONSENT OF INSTRUCTOR

#5101	Section 01	[units: 3]				
	09/02-12/22	TR	09:30 AM - 10:45 AM	UH0238	Abdelkrim Boukahil	VIBRATIONS AND WAVES

