

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**

#4838	Section 01	[units: 5]	Gen Ed Laboratory (GL)				
	09/04-12/21	M	12:05 PM - 02:00 PM	UH0050	Juliana T Constantinescu		
	09/04-12/21	MTRF	09:55 AM - 10:45 AM	UH0141	Juliana T Constantinescu		
#4840	Section 02	[units: 5]	Gen Ed Laboratory (GL)				
	09/04-12/21	M	02:15 PM - 04:10 PM	UH0050	Juliana T Constantinescu		
	09/04-12/21	MTRF	09:55 AM - 10:45 AM	UH0141	Juliana T Constantinescu		
#4843	Section 03	[units: 5]	Gen Ed Laboratory (GL)				
	09/04-12/21	T	04:30 PM - 06:30 PM	UH0050	Paul M Rybski		
	09/04-12/21	MTWR	03:20 PM - 04:10 PM	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**

#4841	Section 01C	[units: 3]	Gen Ed Math/Natural Sciences (GM)				
	09/04-12/21	TR	08:00 AM - 09:15 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.

#5120	Section 01	[units: 1-3]					Dept. Consent
	09/04-12/21	Arranged	Arranged		Robert Benjamin		
#5121	Section 02	[units: 1-3]					Dept. Consent
	09/04-12/21	Arranged	Arranged		Juliana T Constantinescu		
#5122	Section 03	[units: 1-3]					Dept. Consent
	09/04-12/21	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 WAIVER**

#4849	Section 01	[units: 5]	Gen Ed Laboratory (GL)				
	09/04-12/21	M	11:00 AM - 12:55 PM	UH0058	Shirley L Stekel		
	09/04-12/21	MTWF	02:15 PM - 03:05 PM	UH0141	Shirley L Stekel		
#4850	Section 02	[units: 5]	Gen Ed Laboratory (GL)				
	09/04-12/21	M	03:20 PM - 05:15 PM	UH0058	Shirley L Stekel		
	09/04-12/21	MTWF	02:15 PM - 03:05 PM	UH0141	Shirley L Stekel		

**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**

#4836	Section 01	[units: 5]	Gen Ed Laboratory (GL)				
	09/04-12/21	W	07:45 AM - 10:45 AM	UH0050	Abdelkrim Boukahil		
	09/04-12/21	W	11:00 AM - 11:50 AM	UH0141	Abdelkrim Boukahil		
	09/04-12/21	TR	11:00 AM - 12:15 PM	UH0141	Abdelkrim Boukahil		
#4854	Section 02	[units: 5]	Gen Ed Laboratory (GL)				
	09/04-12/21	W	01:10 PM - 04:10 PM	UH0050	Abdelkrim Boukahil		
	09/04-12/21	W	11:00 AM - 11:50 AM	UH0141	Abdelkrim Boukahil		
	09/04-12/21	TR	11:00 AM - 12:15 PM	UH0141	Abdelkrim Boukahil		

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**PHYSICS 174 INTRODUCTORY PHYSICS III ...** A course in introductory physics including a mathematically rigorous analysis of electricity and magnetism, light and optics, and modern physics. For majors and minors in physics, chemistry, and mathematics. Three one-hour lectures and one three-hour lab per week.

**PREREQ: PHYSICS 172 AND COREQ: MATH 254**

#4932	Section 01	[units: 4]	Gen Ed Laboratory (GL)			
	09/04-12/21	W	11:00 AM - 02:00 PM	UH0058	Adam L Tregre	
	09/04-12/21	MWF	08:50 AM - 09:40 AM	UH0141	Adam L Tregre	
#4934	Section 02	[units: 4]	Gen Ed Laboratory (GL)			
	09/04-12/21	W	03:20 PM - 06:20 PM	UH0058	Adam L Tregre	
	09/04-12/21	MWF	08:50 AM - 09:40 AM	UH0141	Adam L Tregre	

**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**

#4827	Section 01	[units: 5]	Gen Ed Laboratory (GL)			
	09/04-12/21	T	08:50 AM - 11:50 AM	UH0058	Robert Benjamin	
	09/04-12/21	MTWF	01:10 PM - 02:00 PM	UH0141	Robert Benjamin	
#4829	Section 02	[units: 5]	Gen Ed Laboratory (GL)			
	09/04-12/21	T	03:45 PM - 06:45 PM	UH0058	Robert Benjamin	
	09/04-12/21	MTWF	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.

#4834	Section 01	[units: 1]				
	09/04-12/21	F	12:05 PM - 12:55 PM	UH0141	Juliana T Constantinescu	

**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**

#4844	Section 01	[units: 4]	Gen Ed Laboratory (GL)			
	09/04-12/21	MW	12:05 PM - 02:25 PM	UH0166	Steven C Sahyun	
#4845	Section 02	[units: 4]	Gen Ed Laboratory (GL)			
	09/04-12/21	MW	03:20 PM - 05:40 PM	UH0166	Steven C Sahyun	

**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 170 AND COREQ: MATH 253**

#4835	Section 01C	[units: 3]				
	09/04-12/21	TR	12:30 PM - 01:45 PM	UH0238	Juliana T Constantinescu	

**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**

#4833	Section 01C	[units: 3]				
	09/04-12/21	TR	02:15 PM - 03:30 PM	UH0238	Abdelkrim Boukahil	

**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**

#4847	Section 01	[units: 4]				
	09/04-12/21	R	09:30 AM - 12:30 PM	UH0061	Steven C Sahyun	
	09/04-12/21	MWF	09:55 AM - 10:45 AM	UH0166	Steven C Sahyun	

**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**

#5115	Section 01	[units: 1-3]				Dept. Consent
	09/04-12/21	Arranged	Arranged		Robert Benjamin	
#5116	Section 02	[units: 1-3]				Dept. Consent
	09/04-12/21	Arranged	Arranged		Abdelkrim Boukahil	
#5117	Section 03	[units: 1-3]				Dept. Consent
	09/04-12/21	Arranged	Arranged		Juliana T Constantinescu	

<u>Class#</u>	<u>Section</u>	<u>(Units)</u>	<u>General Education Designation (if any)</u>	<u>Location</u>	<u>Instructor</u>	<u>Course Topic (if applicable)</u>	<u>Consent</u>
#5118	Section 04	[units: 1-3]					
	09/04-12/21	Arranged	Arranged		Paul M Rybski		Dept. Consent
#5119	Section 05	[units: 1-3]					
	09/04-12/21	Arranged	Arranged		Steven C Sahyun		Dept. Consent