http://www.phys.ksu.edu

GENERAL

KSU's Department of Physics offers programs of study leading to three different degrees in physics.

BS in Physics: This degree program is for students who plan to pursue an advanced degree in physics.

BS in General Physics: This degree program provides broad foundation in fundamental principles for students who wish to pursue careers in technical areas or continue professional or graduate studies in areas outside of physics.

BA in Physics: This degree program combines a foundation in physics with a broad general education for students who wish to pursue careers in non-technical areas or continue professional or graduate studies in areas of outside of physics.

Special Programs

• Secondary Physics Teaching License: In cooperation with the College of Education, we offer specialized course programs to students who wish to obtain an undergraduate degree in physics and become a physics school teacher.

• **Minor in Business or Masters in Business Administration:** The Physics Department works with the College of Business Administration to prepare students who have an interest in management careers in the technical industry.

• **Double Majors and Dual Degrees:** Many students pursue simultaneously two undergraduate degrees - one in physics and a second in engineering, mathematics, computer science or other related fields. We work to facilitate students in this path, including support and custom course scheduling.



For custom course scheduling, contact Debra Dandaneau at debrakd@k-state.edu

ELECTIVES

The physics degree allows you to have time for a wide range of electives. In addition to elective courses in physics, you will fulfill the course distribution requirements of the College of Arts & Science and the University General Education Program. Thus, you will receive a broad-based education which will help you adapt to the careers in your future.

PHYSICS CLUB

Undergraduate physics majors and others interested in physics are encouraged to join the Physics Club. This organization provides an important channel of communication between the department and undergraduate students. The Physics Club selects one student to serve on the department's curriculum committee.

The Department maintains the John Giese Undergraduate Center for exclusive use by our majors. This room (CW40) provides a place for study, social events, and meetings of the Physics Club.

Required Classes	BS in Physics	BS in General Physics	BA in Physics
PHYS 122 Physics Today I (1)	*	*	*
PHYS 123 Physics Today II (1)	*	*	*
PHYS 223 Physics I, Mechanics and Thermodynamics (5)	*	*	*
PHYS 224 Physics II, Electromagnetism and Sound (5)	*	*	*
PHYS 325 Physics III, Relativity and Quantum Physics (4)	*	*	*
PHYS 506 Advanced Physics Laboratory (4)	*	*	*
PHYS 522 Mechanics (4)	*	*	*
PHYS 532 Electromagnetic Fields I (4)	*	*	*
PHYS 633 Electromagnetic Fields II (3)	*		
PHYS 662 Introduction to Quantum Mechanics (4)	*	*	*
PHYS 636 Physical Measurements & Instrumentation (4)	*		
PHYS 664 Thermodynamics & Statistical Physics (3)	*	*	
PHYS xxx Advanced Physics Electives (see list below)	2 courses	1 course	1 course
PHYS 709 Applied Quantum Mechanics (3)	*		

Advanced Physics Course Number	Electives Course title	Credit	BS in Physics	BS in General Physics	BA in Physics
PHYS 620	Teaching University Physics	3	*	*	*
PHYS 633	Electromagnetic Fields II	3		*	*
PHYS 636	Physical Measurement & Instrumentation	4		*	*
PHYS 639	Computation in Physics	3	*	*	*
PHYS 642	Nuclear Physics	3	*	*	*
PHYS 651	Introduction to Optics	3	*	*	*
PHYS 652	Applied Optics & Optical Measurement	3	*	*	*
PHYS 655	Physics of Solids	3	*	*	*
PHYS 664	Thermodynamics & Statistical Physics	3			*
PHYS 691	Introduction to Astrophysics §	3	*	*	*
PHYS 692	Introduction to Cosmology §	3	*	*	*
PHYS 694	Particle Physics	3	*	*	*
PHYS 741	Physics of Lasers	3	*	*	*
PHYS 775	Biological Physics	3	*	*	*

§For the BS in Physics only one of these courses can be applied to the advanced physics electives.

Advanced Placement physics in high school or Engineering Physics 1 and 2 can substitute for Physics 1 and 2. Calculus 1, 2, and 3 and Elementary Differential Equations are required for all physics majors. High school courses may exempt students from one or more semesters of calculus. Chemistry 1 and 2 (CHM210 and 230) are highly recommended for all physics majors.

2013