

Physics

2016-2017 Academic Year

School of Science and Engineering

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Web: tulane.edu/sse/pep/

GENERAL REQUIREMENTS FOR STUDENTS MATRICULATING IN ACADEMIC YEAR: 2016-2017

DEGREE: **BACHELOR OF SCIENCE**

TOTAL CREDITS: 120

MAJOR: **PHYSICS**

MINIMUM CUMULATIVE GRADE POINT AVERAGE: 2.0

MINIMUM MAJOR GRADE POINT AVERAGE: 2.5

CORE CURRICULUM REQUIREMENTS			MAJOR REQUIREMENTS	58 CREDITS
Area	Credits	To Be Selected From		
First Year Writing	4	ENGL 1010 or Equivalent	Minimum Requirements: Nine courses in PHYS, four in MATH, five approved electives in MATH/PHYS/CHEM or Engineering, and PHYS 3800 seminar (1 credit).	
TIDES – 1 course in fall semester	1-1.5		Five Required Physics Courses PHYS 1310 PHYS 1320 PHYS 2350 PHYS 2360 PHYS 3530	
Foreign Language – Competence at 1020-Level (1-2 courses depending on placement and language)	3-8	Arabic, Chinese, French, German, Greek, Hebrew, Italian, Japanese, Latin, Portuguese, Russian, or Spanish	Two Upper Level Courses from below: PHYS 3740 PHYS 3630 PHYS 4230 PHYS 4470 PHYS 3010	
Cultural Knowledge – 1 Humanities 1 Fine Arts	6	Courses from departments designated Humanities and Fine Arts	Two additional Physics courses (at least 3 credits each) selected from PEP course offerings.	
Cultural Knowledge – Social Science	6	Courses from departments designated Social Science	Physics Colloquium 3800 (1 credit, does not count as one of the nine Physics courses).	
Quantitative Reasoning 2 Math courses	8	MATH 1210 and 1220 or equivalent	Math Electives – at least 13 credits of math (4 courses) No more than 2 MATH courses may be at the 1000 level.	
Scientific Inquiry – 1 Lab Science 1 Science or Math	7-8	Courses from departments designated Science and Math	Math/Physics/Chemistry or Engineering Electives – 5 courses (at least three credits each) above the 1000 level in physics, engineering, chemistry, or mathematics with approval of the Major Advisor.	
Writing Intensive	4	Consult Major	Recommended Course to be taken in freshman or sophomore year – CMPS 1500	
Public Service – 1 st Tier 2 nd Tier		1000-3000-Level 3000-Level or above	NDA	
Western Traditions	3	Refer to Undergraduate Core Curriculum Guide		
Outside Western Traditions Or Comparative Cultures Intl. Perspectives	3	Refer to Undergraduate Core Curriculum Guide		

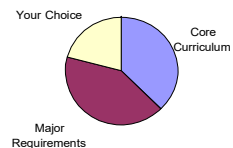
This information is for students pursuing a minor in PHYSICS – REQUIREMENTS:

- PHYS 1310 and PHYS 1320
- Three 2000-level or above physics courses (9 credits)
- One additional upper level (3 credit course) from classical topics in physics from: 3630, 3740, 4230, 4650

Note: Some of the upper-level physics courses have certain mathematics prerequisites.

To complete the required 120 hours, you may choose to take additional courses:

1. In your major
2. Of interest to you
3. To satisfy another major (32 hours)
4. To satisfy another minor (16 hours)



- The Degree Plan and other information provided in this booklet serve only as advising tools. Newcomb-Tulane College advisors will help advise you on the core-curriculum, decide on a major, and consult on any academic success issues.
- Your major advisors will advise you on major requirements.
- Students with multiple majors will have more than one advisor and will need to consult with the appropriate advisor.
- Minors are not assigned an advisor, but a faculty member in the department is designated to advise minors.
- Become familiar with your major! By declaring early, you have access to a major advisor, are able to enroll in "majors only" classes, and are included in list serves that allow you to receive information about events, internships, and other opportunities.
- Pre-med and Pre-law students should also consult with one of the Pre-Professional advisors.

What Can I Do with a Major in... Physics

Physics is a major branch of the physical sciences and involves the study of matter and energy. This ranges from the study of fundamental particles in nature through atoms and materials to the origins of the universe. It attempts to find out how and why physical matter and energy interact as well as to describe force, motion and gravity. It is considered the foundation of science and technology. Physics overlaps and is closely related to astronomy, engineering, chemistry, mathematics, ecology and biology.

RELATED ACTIVITIES

Taking a job with a research group on campus; Joining a photography club, the American Physical Society, the Society of Physics Students, or other physics clubs; participating in outdoor activities or sports, reading or subscribing to physics or science publications; computer programming; operating a ham radio or repairing radios, TVs or stereos; performing lab experiments; solving analytic and logic problems; reading about quantum information, cosmology, elementary particle physics; tinkering with devices.

SKILLS

- Ability to acquire, organize, analyze and interpret scientific data
- Aptitude for accurate details
- Ability to make critical observations and appropriate decisions
- Intellectual capacity to perform well in college
- Ability to conduct /explain scientific research
- Good vision and manual dexterity
- Ability to operate/use information derived from computers
- Strong background in mathematics
- Proficiency in questioning and problem solving
- Proficiency in reading, writing, memorization and speaking

OCCUPATIONS TO CONSIDER

Aerodynamist	Electronics Technician	Photogrammetrist
Aeronautical Engineer	Environmental Engineer	Physicist
Aerospace Engineer	Geophysicist	Physicist Technician
Air Traffic Controller	Industrial Engineer	Product Testing
Airplane Pilot	Laboratory Technician	Quantum Cryptologist
Astronomer	Mathematician	Radiographer
Automotive Engineer	Medical Physicist	Scientist
Biophysicist	Metallurgical Engineer	Seismologist
Computer Designer	Meteorological Technician	Teacher
Computer Programmer	Meteorologist	Technical Writer
Curator	Nuclear Medical Technologist	Wall Street Analyst
Editor of a scientific journal	Nuclear Engineer	
Educator	Optical Technician	

POSSIBLE EMPLOYERS

Atomic/Nuclear Labs
Educational Institutions
Engineering Firms
Government Agencies
Manufacturing/Processing Plants
Military
Nuclear Plants
Patent Law Firms
Petroleum Plants
Professional/Technical Journals
Research Firms
Technical Libraries

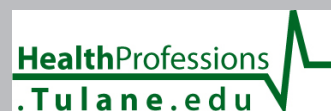
If you think you might be interested in this major, but you are not absolutely sure, an exploratory advisor can help you explore major and career options, please go to:



If you are interested in information about Law Professions, please go to:



If you are interested in information about Health Professions, please go to:



What Can I Do with a Major in...

Physics

PROFESSIONAL ORGANIZATIONS

American Association of Physics Teachers
One Physics Ellipse
College Park, MD 20740
301-209-3300
www.apt.org

American Association of Physicists in Medicine (AAP)
Medicine (AAP)
One Physics Ellipse
College Park, MD 20740
301-209-3350
www.aapm.org

American Institute of Physics
One Physics Ellipse
College Park, MD 20740
301-209-3000
www.aip.org

American Physical Society
One Physics Ellipse
College Park, MD 20740
301-209-3200
www.aps.org

Science & Technology Society (AVS)
120 Wall Street, 32nd Floor
New York, NY 10005
212-248-0200
www.avs.org

Society of Physics Students
American Institute of Physics
335 E. 45th Street
New York, NY 10017
www.aip.org

RELATED WEBSITES

American Astronomical Society
www.aas.org

American Association of Physics
Teachers
www.aapt.org

American Geophysical Union (AGU)
www.agu.org

Optical Society of America
www.osa.org

Nature Jobs, Making Science Work
www.nature.com

Science Magazine
www.sciencemag.org

Science Jobs
www.sciencejobs.com
Science, Math & Engineering Career Resource
www.phds.org

Society of Rheology
www.rheology.org

Space Jobs
www.aerojobs.com

*For Jobs, internships, resume assistance,
interviews, and self-assessments, please
go to:*



*Tulane University is committed to your academic success
and provide several services to assist.*