**GENERAL REQUIREMENTS FOR STUDENTS MATRICULATING IN ACADEMIC YEAR: 2017-2018**

**DEGREE:** BACHELOR OF SCIENCE  
**MAJOR:** PHYSICS  
**TOTAL CREDITS:** 120  
**MINIMUM CUMULATIVE GRADE POINT AVERAGE:** 2.0  
**MINIMUM MAJOR GRADE POINT AVERAGE:** 2.5

### Core Curriculum Requirements

<table>
<thead>
<tr>
<th>Area</th>
<th>Credits</th>
<th>To Be Selected From</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Year Writing</td>
<td>4</td>
<td>ENGL 1010 or Equivalent</td>
</tr>
<tr>
<td>TIDES – 1 course in fall semester</td>
<td>1-1.5</td>
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<tr>
<td>Foreign Language – Competence at 1020-Level (1-2 courses depending on placement and language)</td>
<td>3-8</td>
<td>Arabic, Chinese, French, German, Greek, Hebrew, Italian, Japanese, Latin, Portuguese, Russian, or Spanish</td>
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<tr>
<td>Cultural Knowledge – 1 Humanities</td>
<td>6</td>
<td>Courses from departments designated Humanities and Fine Arts</td>
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<tr>
<td>Cultural Knowledge – Social Science</td>
<td>6</td>
<td>Courses from departments designated Social Science</td>
</tr>
<tr>
<td>Quantitative Reasoning 2 Math courses</td>
<td>8</td>
<td>MATH 1210 and 1220 or equivalent</td>
</tr>
<tr>
<td>Scientific Inquiry – 1 Lab Science</td>
<td>7-8</td>
<td>Courses from departments designated Science and Math</td>
</tr>
<tr>
<td>Writing Intensive</td>
<td>4</td>
<td>Consult Major</td>
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<tr>
<td>Public Service – 1st Tier</td>
<td>1000-3000-Level</td>
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<tr>
<td>2nd Tier</td>
<td>3000-Level or above</td>
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<tr>
<td>Western Traditions</td>
<td>3</td>
<td>Refer to Undergraduate Core Curriculum Guide</td>
</tr>
<tr>
<td>Outside Western Traditions Or Comparative Cultures Intl. Perspectives</td>
<td>3</td>
<td>Refer to Undergraduate Core Curriculum Guide</td>
</tr>
</tbody>
</table>

**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.

### Major Requirements

- **Minimum Requirements:** Nine courses in PHYS, four in MATH, five approved electives in MATH/PHYS/CHEM or Engineering, and PHYS 3800 seminar (1 credit).
- **Five Required Physics Courses**
  - PHYS 1310  
  - PHYS 1320  
  - PHYS 2350  
  - PHYS 2360  
  - PHYS 3530
- **Two Upper Level Courses from below:**
  - PHYS 3740  
  - PHYS 3630  
  - PHYS 4230  
  - PHYS 4470  
  - PHYS 3010
- **Math Electives** – at least 13 credits of math (4 courses)
- **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.
- **Recommended Course to be taken in freshman or sophomore year** – CMPS 1500
- **NDA**

### 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)

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

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

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

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