

**PHYSICS – (PHYS BS 01) - Biomedical Physics Specialization**  
**BS DEGREE – 32 COURSE UNITS**  
**MAJOR COURSE REQUIREMENTS**

Fulfill via completion of course requirements in three categories

Core Courses (7.25)	Major Options or Specialization Courses (10 Course Units)	Correlate Courses (2)
PHY 099 – Orientation Seminar (0 cred)	5 Physics option courses	MAT 127 – Calculus A
PHY 203 – Physics I for Physicists	PHY 316 – Biomedical Physics	MAT 128 – Calculus B
PHY 204 – Physics II for Physicists	PHY 336 – Introduction to Biophysics	
PHY 306 – Mathematical Physics	2 lab courses from PHY 311, 345, 411, 451*	
PHY 321 – Modern Physics	1 course from PHY 393, 493, 416, 422, 426	
PHY 401 – Classical Mechanics		
PHY 356 – Thermal Physics	5 Specialization options	
PHY 421 – Electromagnetic Theory I	CHE 201 – General Chemistry I	
PHY 299 – Research Fundamentals Seminar (0.25 credits)	CHE 202 – General Chemistry II	Students should consider taking at least one of the following courses from their electives, depending on their interests and goals**: CHE 332, BIO 231, BIO 332 BME 251, BME 311 ENG 272, ELC 321
	CHE 331 – Organic Chemistry I	
	BIO 201 – Foundations of Biological Inquiry	
	BIO 211 – Biology of the Eukaryotic Cell	
	*1 Capstone course: PHY451 (may double count within Physics options)	**Students who are considering a career in medicine should note that medical school admissions typically require two semesters of biology with lab and two semesters of organic chemistry.

**LIBERAL LEARNING REQUIREMENTS**

Fulfill via completing course requirements in one of four options:

**Option 1 – Breadth Distribution from Approved List**

Arts & Humanities (2 or 3 courses)	Social Science & History (2 or 3 courses)	Natural Sciences & Quantitative Reasoning (Requirements fulfilled by major course)
Literary, Visual, or Performing Arts course	Behavioral, Social, or Cultural Perspectives course	Natural Science course (with lab)
World Views/Ways of Knowing course	Social Changes in Historical Perspective course	Quantitative Reasoning course
FYS or Literary, Visual, or Performing Arts course <i>or</i> World Views/Ways of Knowing course	FSP or Behavioral, Social, or Cultural Perspectives course <i>or</i> Social Changes in Historical Perspective course	Natural Science course <i>or</i> Quantitative Reasoning course

**Option 2 – Designated Interdisciplinary Concentration** (see <https://liberallearning.tcnj.edu/courses-information/interdisciplinary-concentrations/>)

**Option 3– Self-designed Interdisciplinary Concentration** (see <https://liberallearning.tcnj.edu/courses-information/interdisciplinary-concentrations/>)

**Option 4 – Second Major**

**CIVIC RESPONSIBILITIES, PROFICIENCIES & ELECTIVES**

Fulfill via completion of course requirements in three categories

Civic Responsibilities	Intellectual & Scholarly Growth	Electives
IDS 103 – Community Engaged Learning (zero-credit requirement)	IDS 102 – Information Literacy online tutorial (zero-credit requirement)	Elective course
	<b>(WRI 101 or 102 may be required freshmen year)</b>	
<b>Concepts</b> – (fulfilled through liberal learning, other courses, or sustained experience)	<b>Writing Intensive Courses</b>	Elective course
Gender	FSP First Seminar course (satisfies one liberal learning requirement)	
Global Perspective	Mid-level course (usually fulfilled by option or specialization course)	
Race & Ethnicity	Capstone course (usually fulfilled by option or specialization course)	
	<b>Second Language</b> (0-3 courses)	