

**PHYSICS & SECONDARY EDUCATION DUAL MAJOR – (PHYS_BS_02)
BS DEGREE – 32 COURSE UNITS (APPLIES TO STUDENTS ENTERING IN/AFTER FALL 2017)**

MAJOR COURSE REQUIREMENTS

Core Courses in Physics (7.25 course units)	Major Options (10 units)	Required Courses for Secondary Education (7 additional units)	Correlates (2 units)
PHY 099 – Orientation Seminar (0 U.)	Physics options (5 Units) ^a	SED 099 – Orientation Seminar (0 U.)	MAT 127 – Calculus A
PHY 203 – Physics I for Physicists	1. PHY 390	CHE 201 – General Chemistry I	MAT 128 – Calculus B
	2. PHY 490 (unit 1 of 2)		
PHY 204 – Physics II for Physicists	3. PHY 490 (unit 2 of 2)	SED 224 – Adolescent Learning and Development	
	4. Lab Option: _____		
PHY 299 – Research Seminar (0.25 U.)	5. PHY Option: _____	SPE 103 – Social & Legal Foundations of Special Ed.	
PHY 306 – Mathematical Physics	Specialization Options (5 units) ^b	EFN 299 – Schools and Communities	
PHY 321 – Modern Physics	1. CHE 201	RAL 328 – Reading in Secondary Education (0.5 U.) ¹	
	2. RAL 328 (0.5 U.)		
PHY 356 – Thermal Physics	3. SED 399 (1.5 U.)	PHY 390 – Methods of Teaching Science ¹	
	4. Option: _____		
PHY 401 – Classical Mechanics	5. Option: _____	SED 399 – Pedagogy in Secondary Schools (1.5 U.) ¹	
PHY 421 – Electromagnetic Theory I		PHY 490 – Student Teaching (2.0 U.)	
<i>a) Can be any 200+ level PHY courses, incl. 1 lab unit (PHY390 and 2 units of PHY490 are pre-set from Sec. Ed. req.)</i>		SED 498 – Capstone for Professional Inquiry ²	
<i>b) Any science, engineering, or education course (max. of 3 100-level courses; CHE201, RAL 328, SED399 pre-set)</i>		<i>1) These 3 courses are co-requisites and are typically taken together in the spring of the 3rd year as Clinical Experience I</i>	
<i>Note: Many classes run only specific semesters; see planning grid: https://physics.tcnj.edu/academics/course-descriptions/</i>		<i>2) SED 498 is a required capstone for Dual Major, taken with student teaching, fall of 4th year only.</i>	

LIBERAL LEARNING REQUIREMENTS

Dual Major Breadth Distribution from Approved List (other options possible: liberallearning.tcnj.edu)

Arts & Humanities (any 2 courses, different prefixes required)	Social Science & History (fulfilled by Education Courses)	Natural Sciences & Quantitative Reasoning (Requirements fulfilled by major course)
Course 1: _____	Satisfied by SED224	Satisfied by Physics Major
Course 2: _____	Satisfied by EFN299	

CIVIC RESPONSIBILITIES, PROFICIENCIES & ELECTIVES

Civic Responsibilities	Intellectual & Scholarly Growth	Electives
Community Engaged Learning (0 U.) <i>Met through FSP or C.E.L day</i>	IDS 102 – Information Literacy online tutorial	Choose free electives to meet 32 course min. & satisfy all requirements
Gender: _____ <i>Met through a course</i>	Second Language <i>101 + 102, or through 103 level</i>	
Global Perspective: _____ <i>Met through a course</i>	Writing Intensive Courses <i>WRI 101 or WRI102, if required based on entry</i>	
Race & Ethnicity: Satisfied by EFN299	FSP First Seminar course	
	Mid-level writing course: Satisfied by PHY390	
	Capstone course: Satisfied by SED498	