

PHYSICS BS_02 (Physics & Sec. Ed.) DUAL DEGREE (entering 2019)

MAJOR COURSE REQUIREMENTS

NAME:		Minor:		
Date & Semester:		PHY Specialization (if additional):		
Core Courses	Major Options Courses	Correlate Courses	Secondary Ed. Courses	
<input type="checkbox"/> PHY 099 – Orientation Seminar	4 units required, 200+ level PHY. 1 must include a lab from below. 1 unit max may be from combined 290, 291, 393, 493.	<input type="checkbox"/> MAT 127 – Calculus A	<input type="checkbox"/> CHE 201 – Gen. Chem I	
<input type="checkbox"/> PHY 203 – Physics I		<input type="checkbox"/> MAT 128 – Calculus B	<input type="checkbox"/> SED 224 – Adolescent Learning and Development	
<input type="checkbox"/> PHY 204 – Physics II		STEM Option Courses	<input type="checkbox"/> EFN 299 – Schools & Communities	
<input type="checkbox"/> PHY 299 – Research Fund'ls	<input type="checkbox"/> PHY 220 (Lab) – Advanced Geology	5 units required from Schools of Science or Engineering. 200+ level (min of 3). 1 unit max may be from combined 290, 291, 393, 493. 2 units may be Sec. Ed. courses	<input type="checkbox"/> SPE103 – Special Ed., Language & Literacy	
<input type="checkbox"/> PHY 306* – Math Physics	<input type="checkbox"/> PHY 311 (Lab) – Electronics		<input type="checkbox"/> PHY390 – Methods of Teaching Science	Clinical I block, Spring Only
<input type="checkbox"/> PHY 321 – Modern Physics	<input type="checkbox"/> PHY 345 (Lab) – Clouds & Climate		<input type="checkbox"/> SED399 – Pedagogy (1.5 units)	
<input type="checkbox"/> PHY 356 – Thermal Physics	<input type="checkbox"/> PHY 411 (Lab) – EM Waves & Optics	List 5 courses below:	<input type="checkbox"/> RAL328 – Secondary Readings (0.5 unit)	Clinical II block, Fall only
<input type="checkbox"/> PHY 401 – Classical Mech.	<input type="checkbox"/> PHY 451 (Lab) – Advanced Lab		<input type="checkbox"/> CHE 201 – Gen. Chem I	
<input type="checkbox"/> PHY 421 – EM Theory I	List other PHY courses below:	<input type="checkbox"/> RAL328 – Secondary Readings (0.5 unit)	<input type="checkbox"/> SED498* – Sec. Ed. Capstone	
*BOTH of the following courses may be taken in place of PHY306: <input type="checkbox"/> MAT 205 – Linear Alg. <input type="checkbox"/> MAT 229 – Calculus C	<input type="checkbox"/> PHY490 (2 units) – Student Teaching in	<input type="checkbox"/> SED399 – Pedagogy (1.5 units)		
	<input type="checkbox"/> PHY390 – Methods of Teaching Science	<input type="checkbox"/> _____		
		<input type="checkbox"/> _____		
Graduation Requirements	Capstone Course	Further Information	Sec. Ed. Requirements	
<input type="checkbox"/> Completion of PHY reqs.	The Secondary Ed. capstone must be taken concurrently with Clinical II (student teaching, Fall only): <input type="checkbox"/> SED 498 – For Secondary Ed students	Upper level PHY courses are not offered every semester. Schedule is here: physics.tcnj.edu/physics-upper-level-course-timetable/ Specializations: physics.tcnj.edu/academics/programs/	<input type="checkbox"/> Basic skills test (or waiver based on SAT scores)	
<input type="checkbox"/> 2.0 PHY GPA <input type="checkbox"/> 2.0 Cum. GPA			<input type="checkbox"/> Fingerprints/sub-cert sophomore year	
<input type="checkbox"/> C or better in PHY203, 204, 321			<input type="checkbox"/> Student Teaching Application fall junior year	
<input type="checkbox"/> Complete 32 course units			<input type="checkbox"/> 3.0 Cum. GPA to apply for CEAS pre-cert.	

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)
<input type="checkbox"/> Course 1: _____	<input type="checkbox"/> Satisfied by SED224	Satisfied by Physics Major
<input type="checkbox"/> Course 2: _____	<input type="checkbox"/> Satisfied by EFN299	

CIVIC RESPONSIBILITIES, PROFICIENCIES & ELECTIVES

Civic Responsibilities	Intellectual & Scholarly Growth	
Community Engaged Learning (0 U) <i>Met through FSP or C.E.L day</i>	<input type="checkbox"/> IDS 102 – Information Literacy online tutorial	2nd Language: 101+102 or through 103: <input type="checkbox"/> Lang. 1 _____ <input type="checkbox"/> Lang. 2 _____ (if needed)
Gender: _____ <i>Met through a course</i>	Writing Intensive Courses a. FSP + (WRI101/WRI102 if required) b. Mid-Level: Satisfied by PHY390 c. Capstone: Satisfied by EFN299	
Global Perspective: _____ <i>Met through a course</i>		Choose free electives to meet 32 course min. & satisfy all requirements
Race & Ethnicity: Satisfied by EFN299		