

## Undergraduate Major Map

Catalog Year: 2023  
College / School: Arts, Sciences & Education  
Major: Physics - BA  
Track / Concentration: Physics Education Major  
Career Path: Four Year Freshman

<b>Fall Term 2023</b> The major map should be used as a general guide. Please make sure to meet regularly with your academic advisor and use your Panther Degree Audit to track your requirements. Also make sure to refer to the Major Map Endnotes for more specific information.  Math placement is based on your Math Placement Score and classes are to be selected in consultation with an advisor. If student cannot be placed into MAC 2311, student should be placed into MAC 1147 if possible and entire physics course sequence is moved back one year.					<b>Term GPA:</b> 2.5 <b>Term Hours:</b> 14 <b>Cum GPA:</b> 2.5
Course Group	Course Required	Course Description	Credit Hours	Course Notes	
UCC First Year Experience	SLS 1501	First Year Exper	1	Satisfies UCC First Year Experience course. (1) See endnotes	
UCC Communication	ENC 1101	Writing and Rhetoric I	3	Satisfies UCC Communication course 1. (1) See endnotes	
Physics Common Prerequisites - Science and Math	MAC 2311	Calculus I	4	Also satisfies UCC Mathematics Group 1 course. (1) See endnote	
Physics Common Prerequisites - Science and Math	PHY 2048	Physics W/Calculus I	4	Also satisfies UCC Natural Science Group 1 course. (1) See endnotes	
Physics Common Prerequisites - Science and Math	PHY 2048L	General Phys Lab I	1	Also satisfies UCC Natural Science Group 1 course. (1) See endnotes	
Additional Lower Division Cour	SMT 2661	STEP 1 Teach Math and Sci	1		

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<b>Spring Term 2024</b>				<b>Term GPA:</b> 2.5
				<b>Term Hours:</b> 14
				<b>Cum GPA:</b> 2.5
<b>Course Group</b>	<b>Course Required</b>	<b>Course Description</b>	<b>Credit Hours</b>	<b>Course Notes</b>
UCC Communication	ENC 1102	Writing and Rhetoric II	3	Satisfies UCC Communication course 2. (1) See endnotes
Physics Common Prerequisites - Science and Math	MAC 2312	Calculus II	4	Also satisfies UCC Mathematics Group 2 course. (1) See endnote
Physics Common Prerequisites - Science and Math	PHY 2049	Physics W/Calc II	4	Also satisfies UCC Natural Science Group 2 course. (1) See endnotes
Physics Common Prerequisites - Science and Math	PHY 2049L	General Phys Lab II	1	Also satisfies UCC Natural Science Group 2 course. (1) See endnotes
First-Year Physics Seminar	PHY 1033	Physics Pathways	1	Should be taken first year
Additional Lower Division Cour	SMT 2662	STEP 2 Lesson Math and Sci	1	

<b>Summer Term 2024</b>				<b>Term GPA:</b> 2.5
Students are required to select 2 Gordon Rule With Writing (GRW) courses from the UCC.				<b>Term Hours:</b> 7
Use this Semester to catch up on coursework and/or to meet your Summer Hours Requirement if necessary.				<b>Cum GPA:</b> 2.5
<b>Course Group</b>	<b>Course Required</b>	<b>Course Description</b>	<b>Credit Hours</b>	<b>Course Notes</b>
UCC Humanities Group One			3	May satisfy Gordon Rule with Writing (GRW) and/or Global Learning (GL) requirement. Please speak with your advisor.
Physics Education Concentration - Additional Lower Division	BSC 2010	General Biology I	3	Also satisfies UCC Natural Science Group 1 course. (1) See endnotes
Physics Education Concentration - Additional Lower Division	BSC 2010L	Gen Biology Lab I	1	Also satisfies UCC Natural Science Group 1 course. (1) See endnotes

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<b>Fall Term 2024</b> Minimum cumulative FIU GPA of 2.5 required for admission into and graduation from Secondary Education Teacher Preparation Programs. Students in the major must pass all four parts (English Language Skills, Essay, Reading Comprehension, & Mathematics) of the FTCE General Knowledge Test by the end of the semester that the student earns 72 credits. Please see Secondary Education Advisors - 305-348-2978. Students are required to select 2 Gordon Rule With Writing (GRW) courses from the UCC.  Students in the major must pass all four parts (English Language Skills, Essay, Reading Comprehension, & Mathematics) of the FTCE General Knowledge Test prior to admission into the degree program. Please see Secondary Education Advisor - 305-348-2768.  Students are required to select 2 Gordon Rule With Writing (GRW) courses from the UCC.					Term GPA:	2.5
					Term Hours:	14
					Cum GPA:	2.5
Course Group	Course Required	Course Description	Credit Hours	Course Notes		
UCC Social Science Group One			3	May satisfy Gordon Rule with Writing (GRW) and/or Global Learning (GL) requirement. (8) POS 2041 or AMH 2020 recommended if Civic Literacy requirement is not met. Please speak with your advisor		
Physics Common Prerequisites - Science and Math	CHM 1045	Gen Chemistry I	3	Also satisfies UCC Natural Science Group 1 course. (1) See endnotes		
Physics Common Prerequisites - Science and Math	CHM 1045L	Gen Chem Lab I	1	Also satisfies UCC Natural Science Group 1 course. (1) See endnotes		
Physics Common Prerequisites - Science and Math	MAC 2313	Multivariable Calc	4	Also satisfies UCC Mathematics Group 2 course. (1) See endnote		
Physics Education Concentration - Physics Education	SMT 3100	Know and Learn Math and Sci	3			

<b>Spring Term 2025</b> Students are required to select 2 Gordon Rule With Writing (GRW) courses from the UCC.					Term GPA:	2.5
					Term Hours:	13
					Cum GPA:	2.5
Course Group	Course Required	Course Description	Credit Hours	Course Notes		
UCC Humanities - Group Two			3	May satisfy Gordon Rule with Writing (GRW) and/or Global Learning (GL) requirement. Please speak with your advisor.		
Physics Common Prerequisites - Science and Math	CHM 1046	Gen Chemistry II	3	Also satisfies UCC Natural Science Group 2 course. (1) See endnotes		
Physics Common Prerequisites - Science and Math	CHM 1046L	Gen Chem Lab II	1	Also satisfies UCC Natural Science Group 2 course. (1) See endnotes		
Physics Education Concentration - Physics Education	SCE 4194	Pers in Sci and Math Ed	3			
Differential Equations	MAP 2302	Differential Equat	3			

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<p><b>Summer Term 2025</b> Students are required to select 2 Gordon Rule With Writing (GRW) courses from the UCC.  Use this Semester to catch up on coursework and/or to meet your Summer Hours Requirement if necessary.</p>				<p><b>Term GPA:</b> 2.5 <b>Term Hours:</b> 7 <b>Cum GPA:</b> 2.5</p>
Course Group	Course Required	Course Description	Credit Hours	Course Notes
General Electives			4	Upper Division Physics Electives
UCC Arts			3	

<p><b>Fall Term 2025</b> Students must pass all sections of the FTCE: General Knowledge (GK) Exam by the end of the semester that they complete 72 credits.  After passing this exam, they must apply for Program Admission with their assigned advisor located in ZEB 210.  In addition, students should complete Milestone #1 electronically, using their Taskstream account: <a href="https://w.taskstream.com/ts/chang28/ProgramMilestones">https://w.taskstream.com/ts/chang28/ProgramMilestones</a> .  They must also maintain an average cumulative GPA of a 2.5, with a minimum of a 2.0 in all Education coursework.</p>				<p><b>Term GPA:</b> 2.5 <b>Term Hours:</b> 16 <b>Cum GPA:</b> 2.5</p>
Course Group	Course Required	Course Description	Credit Hours	Course Notes
Physics Education Concentration - Physics Upper Division	PHY 3513	Thermodynamics	3	
Physics Electives	PHY 3018	Physics Research Methods	3	
Physics Electives	PHY 3106	Modern Physics	3	
Physics Electives	PHY 3802L	Intermed Phys Lab	3	
General Electives			4	Upper Division Physics Electives

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<b>Spring Term 2026</b> Students should begin preparing for the FTCE: Professional Education Test and/or Subject Area Exam- Elem-Ed K-6 as planned with their assigned advisor.  They must also maintain an average cumulative GPA of a 2.5, with a minimum of a 2.0 in all Education coursework.					<b>Term GPA:</b> 2.5 <b>Term Hours:</b> 14 <b>Cum GPA:</b> 2.5
Course Group	Course Required	Course Description	Credit Hours	Course Notes	
Physics Education Concentration - Physics Education	SMT 4301	Class Interact Math and Sci	3	Field Hours. Fingerprint clearance required.	
Physics Education Concentration - Physics Education	RED 4325	Subj Area Reading	3	Field Hours. Fingerprint clearance required.	
UCC Social Science Group Two			3	May satisfy Gordon Rule with Writing (GRW) and/or Global Learning (GL) requirement. Please speak with your advisor.	
General Electives			1	See Advisor.	
Physics Electives	PHY 3107	Adv Modern Physics	3		
General Electives			1	See Advisor.	

<b>Summer Term 2026</b> Summer enrollment is encouraged, but not applicable for all students. This may be determined after meeting with their assigned advisor.  Students should apply for Student Teaching through the Office of Clinical Experiences by June 1st, or when specified by the Clinical Experience Office and/or their assigned advisor.  In addition, they should have passed the FTCE: Professional Education Test and/or Subject Area Exam- Elem-Ed K-6 as planned with their assigned advisor.  Students must continue to maintain an average cumulative GPA of a 2.5, with a minimum of a 2.0 in all Education coursework.					<b>Term GPA:</b> 2.5 <b>Term Hours:</b> 3 <b>Cum GPA:</b> 2.5
Course Group	Course Required	Course Description	Credit Hours	Course Notes	
Physics Education Concentration - Physics Education	TSL 4324	ESOL Content Areas	3	Field hours. Fingerprint clearance required. Program admission required	

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<b>Fall Term 2026</b> Students MUST have ALL required coursework completed and ALL FTCE Education Exams passed prior to placement in Student Teaching.  Students must continue to maintain an average cumulative GPA of a 2.5, with a minimum of a C in all Education coursework.					<b>Term GPA:</b> 2.5 <b>Term Hours:</b> 12 <b>Cum GPA:</b> 2.5
Course Group	Course Required	Course Description	Credit Hours	Course Notes	
Physics Education Concentration - Physics Upper Division	PHY 4221	Intro Classical Mechanics	3		
Physics Education Concentration - Physics Upper Division	PHY 4821L	Adv Phys Lab	3		
Physics Education Concentration - Physics Education	SMT 4664	Prob Based Instr Math-Sci	3	Field Hours. Fingerprint clearance required.	
Physics Electives			3		

<b>Spring Term 2027</b> Student teaching is a full-time teaching experience and requires commitment during school hours along with preparation and grading time.  Students should apply for Graduation by the first week of classes, or as communicated by their advisor.  Students must continue to maintain an average cumulative GPA of a 2.5, with a minimum of a C in all Education coursework.					<b>Term GPA:</b> 2.5 <b>Term Hours:</b> 6 <b>Cum GPA:</b> 2.5
Course Group	Course Required	Course Description	Credit Hours	Course Notes	
Physics Education Concentration - Physics Education	SCE 4944	Student Teaching	6		

### General Requirements

\*Critical Indicator is the minimum grade indicated in specific courses to demonstrate proficiency and progress in major. Earning less than the minimum grade is a trigger for a conversation with advisor\*

#### GENERAL UNIVERSITY REQUIREMENTS

See your Panther Degree Audit (PDA) for a real-time update on your academic career progress and additional information on University and major requirements at <http://my.fiu.edu>.

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(1) UCC: Students must meet the University Core Curriculum (UCC) requirements. For a full list of UCC courses, see <http://undergrad.fiu.edu/advising/curriculum.html> or speak with your advisor. UCC courses must be taken for a letter grade and may not be taken at other institutions without permission from the Dean of Undergraduate Education.

(2) Global Learning: Freshmen entering FIU Summer B 2010 or later must take at least two Global Learning (GL) designated courses at FIU. See <http://goglobal.fiu.edu>. Courses must be:

- 1 GL foundation course (from the University Core Curriculum), which must be taken within the first 60 credits.
- 1 GL discipline-specific course (3000/4000 level)

(3) Summer Hours Requirement: All students entering FIU or any university within the State University System (SUS) of Florida with fewer than 60 credit hours are required to earn at least nine credit hours prior to graduation by attending one or more summer terms at a university in the SUS.

(4) Gordon Rule: All Gordon Rule courses (i.e., English Composition, Humanities with Writing, and Quantitative Reasoning) must be completed with a minimum grade of "C". This requirement must be fulfilled within the first 60 credits.

(5) Foreign Language Requirement for Graduation (FLENT/FLEX): A student who did not complete two years of the same foreign language in high school or at a post-secondary institution must successfully complete 8-10 credit hours of instruction in one foreign language prior to graduation. Exceptions include appropriate CLEP, AP, IB, TOEFL, or transfer credit. Contact your advisor for more information.

(8) Postsecondary Civic Literacy (CL): Students must demonstrate understanding of American Civics via completed course work or test credit. Consult with an advisor to determine the best option for satisfying this requirement.

### College of Arts and Sciences: Selected Requirements

Grades: Students must earn a grade of "C" or higher in all courses required for the major. A grade of "C-" or lower is not acceptable in any required course.

This document only lists SELECTED requirements. See your Panther Degree Audit for a full list of CAS and major requirements at <http://my.fiu.edu>.

### College of Arts and Sciences: BA in Physics (Physics Education Major) specific requirements

#### Admission Requirement:

1. GPA 2.5 minimum
2. Pass all four sections of the General Knowledge Test (Reading Comprehension, English Language Skills, Mathematics and Essay).

#### Graduation Requirement:

1. Have an overall GPA of 2.5 or higher
2. Successfully demonstrate all the Florida Educator Accomplish Practices at the pre-professional level. This is

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done throughout your coursework in the College of Education.

3. Pass the FTCE General Knowledge, Professional Educator and Subject Area exams prior to graduation. Note: At FIU, the Professional Educator and Subject Area exams must be passed prior to Student Teaching.

Testing Requirement:

1. General Knowledge Exam - English Language
2. General Knowledge Exam - Reading
3. General Knowledge Exam - Essay
4. General Knowledge Exam - Math
5. Professional Education Exam (required for graduation)
6. Subject Area Exam in Physics Education (required for graduation)