B.S. in Physics: Physics Education Track (FIUteach)

Program Description

The Bachelor of Science in Physics with a Physics Education Major provides you with a robust foundation in physical science and problem solving skills on which you can build a variety of careers. The program prepares you for graduate study in physics, engineering, or material science. Upon completion of this program, you will be eligible for a Physics (grades 6-12) Professional Teaching Certificate and be considered a highly qualified teacher. You can choose to teach, pursue graduate school or work in the various industries requiring a strong background in Physics

Admission Requirements & Application

- A minimum lower-division GPA of 2.5 or better on a 4.0 scale
- Successful completion of 60 credit hours of lower-division coursework or an AA degree from an accredited institution
- A passing score on all sections of the FTCE: General Knowledge Exam (GK)
- University Core Curriculum/General Education must be completed
- Major Pre-requisites (listed below) must be taken and passed with a minimum grade of C

FIU Course(s):		Credit Hours:	✓
CHM 1045	General Chemistry I	3	
CHM 1045L	General Chemistry I Lab	1	
CHM 1046	General Chemistry II	3	
CHM 1046L	General Chemistry II Lab	1	
PHY 2048	Physics with Calculus I	3	
PHY 2048L	General Physics Lab I	1	
PHY 2049	Physics with Calculus II	3	
PHY 2049L	General Physics Lab II	1	
MAC 2311	Calculus I	4	
MAC 2312	Calculus II	4	
MAC 2313	Multivariable Calculus	4	
BSC 2010	General Biology I	3	
BSC 2010L	General Biology I Lab		
SMT 2661* **AND** SMT 2662*	Step 1: Inquiry Approaches to Teaching Mathematics and Science (Prerequisite: Freshman/Sophomore standing)	1	
	Step 2: Inquiry-Based Lesson Design in Mathematics and Science (Prerequisite: SMT 2661)	1	
OR SMT 2044*	1 & 2 Combined: Inquiry-Based Approaches and Lesson Design for Teaching Mathematics and Science (Prerequisite: Junior/Senior standing)	2	

Program of Study

The program of studies is as follows:

- Total credits: 120
  - The balance of the 120 credit hour requirement for graduation should be chosen in consultation with the student's departmental and/or advisor(s)
- All courses and FTCE tests must be taken prior to student teaching
- All program courses must be completed with a minimum grade of "C"

Course:		Credit Hours:	✓
Physics Coursework (25 credits)			
PHY 3106	Modern Physics (pre requisite: PHY 2049, MAC 2312) (F,S)	3	
PHY 3802L	Intermediate Physics Lab (Prerequisite/Corequisite: PHY 3106) (F,S)	3	
PHY 4821L	Advanced Physics Lab (Prerequisites: MAC 2313, PHY 3802L) (F,S)	3	
PHZ 3113	Methods in Theoretical Physics (Pre requisite: MAC 2313) (S)	3	
PHY 3513	Thermodynamics (Prerequisites: PHY 2049, MAC 2313) (F,S)	3	
PHY 4221	Introduction to Classical Mechanics (Pre requisites: MAC 2313, PHY 2049) (F)	4	
PHY 4323	Intermediate Electromagnetism I (Prerequisite: PHY 2049, MAC 2313) (Co/Prerequisite: MAP 2302) (F)	3	
PHY 4604	Quantum Mechanics I (Prerequisite PHY 3107 or permission of instructor and MAP 2302, MAC 2313, PHY 2049) (F)	3	
Physics Electives or Required Courses (8 Credits)			
Physics Electives	Students are encouraged to take PHY 4324 Intermediate Electromagnetism II and PHY 4605 Quantum Mechanics II if continuing onto graduate school. (S)	8	
Education Coursework (27 credits)			
SMT 3100	Knowing & Learning (Prerequisites or Corequisites SMT 2661 or SMT 2044) (F,S,)	3	
SCE 4194	Perspectives in Science and Mathematics Education (GL) (S)	3	
SMT 4301*	Classroom Interactions (Prerequisites: SMT 3100) (F,S)	3	
RED 4325*	Subject Area Reading (F,S,SS)	3	
TSL 4324*	ESOL Issues and Strategies for Content Teachers (GL) (F,S,SS)	3	
SMT 4664*	Project-Based Instruction (Prerequisites: SMT 3100 and SMT 4301)	3	
PHY 3018	Research Methods in Physics (F,S) (Prerequisite: SMT 2662)	3	
SCE 4944*	Student Teaching (F,S)	6	

***Course require field experience hours. Other courses may also have field requirements.**

Student Teaching

All courses must be completed prior the start of student teaching and both the FTCE: Professional Exam and FTCE: Subject Area Exam must be taken, passed, and official scores received by FIU three weeks prior to student teaching. Students must be FULLY admitted to their program in order to apply for student teaching. Student may apply for student teaching in the Office of Field Experiences ZEB 130 by February 1st for the Fall semester student teaching and June 1st for Spring semester student teaching.

Graduation Requirements

1. FIU cumulative GPA of 2.5 or better on a 4.0 scale
2. University Foreign Language Requirement (FLENT/FLEX) must be met
3. University Summer Enrollment Requirement must be met
4. Global Learning Requirement must be met
5. 48 semester hours must be in upper division courses
6. All program and University requirements must be met

For more information on our programs visit our websites: Secondaryed.fiu.edu or FIUteach.fiu.edu