B.A. in Chemistry: Chemical Education Major (FIUteach)

Program Description

The Bachelor of Arts in Chemistry with a Chemical Education Major provides you with a robust foundation of physical science, life science and mathematics courses and labs. Upon completion of this program, you will be eligible for a Chemistry (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 Chemistry.

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) *(All students must pass the General Knowledge Exam (GK) by the time they reach 72 credits in their program of study)*
- 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	
CHM 2210	Organic Chemistry I	4	
CHM 2210L	Organic Chemistry I Lab	1	
CHM 2211	Organic Chemistry II	3	
CHM 2211L	Organic Chemistry II Lab	1	
PHY 2048 **or** PHY 2053	Physics with Calculus I or Physics without Calculus I	4	
PHY 2048L	General Physics Lab I	1	
PHY 2049 **or** PHY 2054	Physics with Calculus II or Physics without Calculus II	4	
PHY 2049L	General Physics Lab II	1	
MAC 2311	Calculus I	4	
MAC 2312	Calculus II	4	
BSC 2010	General Biology I	3	
BSC 2010L	General Biology I Lab	1	
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:	✓
Upper Division Program (13 credits)			
CHM 3120	Intro to Analytical Chemistry (Prerequisite: CHM 1046 & CHM 1046L)	3	
CHM 3120L	Intro to Analytical Chemistry Lab (Prerequisite: CHM 1046 & CHM 1046L)	1	

CHM 3400	Fundamentals of Physical Chemistry (Prerequisites: MAC 2312; PHY2048, PHY 20148L PHY 2049, PHY 2049L, or PHY 2053, PHY 2048L, and PHY 2054, PHY 2049L, CHM 3120, CHM 3120L)	3	
CHM 3400L	Fundamentals of Physical Chemistry Lab (Prerequisites: MAC 2311, MAC 2312; PHY2048, PHY 20148L PHY 2049, PHY 2049L, or PHY 2053, PHY 2048L, and PHY 2054, PHY 2049L, CHM 3120, CHM 3120L)	1	
CHM 4304	Biological Chemistry I (prerequisite: CHM 2211, CHM 3120, BSC 2011)	3	
CHM 4304L	Biological Chemistry I Lab	1	
CHM 4930	Senior Seminar (Prerequisite: CHM 3400 or CHM 3411)	1	
Chemical Education Major (List 1— Elective) (4 credits)			
BSC 2011	General Biology II	3	
BSC 2011L	General Biology II Lab	1	
List 2— Restricted Electives (Select any two courses. One must be with corresponding lab. (7 hrs. min)			
CHM 4220	Advanced Organic Chemistry (Prerequisite: CHM 2211, CHM 2211L) (F)	3	
CHM 4300	Bio-organic Chemistry (Prerequisite: CHM 2211, CHM 2211L) (S)	3	
CHM 4230L	Structure Determination Lab (Prerequisite: CHM 2211, CHM 2211L) Corresponds to: CHM 4220 or CHM 4300 (F,S)	1	
CHM 4130	Instrumental Analysis (Prerequisite: CHM 3120 CHM 3120L, CHM 2211, CHM 2211L, CHM 3410 or CHM 3400, PHY 2048, PHY 2048L, PHY 2049, PHY 2049L) (F,S)	3	
CHM 4130L	Instrumental Analysis Lab (Prerequisite or Corequisite: CHM4130) (F,S)	1	
CHM 4307	Biological Chemistry II (Prerequisite: CHM 4304) (F,S,SS)	3	
CHM 3610	Fundamentals of Inorganic Chemistry (Prerequisite: CHM 2211, CHM 2211L) (Spring)	3	
CHM 4611L	Advanced Inorganic Chemistry Lab (Prerequisite: CHM 3411 Corequisite CHM 4611)	1	X
CHM 3411L	Physical Chemistry II Lab (Prerequisite: CHM 3410, CHM 3410L) (F,S)	2	X
CHM 3411	Physical Chemistry II (Prerequisite: CHM 3410, CHM 3410L) (F,S)	4	X
Education Coursework (27 credits)			
SMT 3100	Knowing & Learning (Prerequisites or Corequisites SMT 2661 or SMT 2044) (Fall/Spring/Summer)	3	
SCE 4194	Perspectives in Science and Mathematics Education **(GL)** (Spring)	3	
SMT 4301*	Classroom Interactions (Prerequisites: SMT 3100) (Fall/Spring)	3	
RED 4325*	Subject Area Reading (Fall/Spring/Summer)	3	
TSL 4324*	ESOL Issues and Strategies for Content Teachers **(GL)** (F,S, SS))	3	
CHM 3910	Research Methods in Chemistry (Prerequisite: SMT 2662 or SMT 2044) (Fall)	3	
SMT 4664*	Project-Based Instruction (Prerequisites: SMT 3100 and SMT 4301) (Fall/Spring)	3	
SCE 4944*	Student Teaching (Spring/Fall)	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 in 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

Updated

06/2020