

**University Requirements:**

- University Core Curriculum (UCC)\*
- Gordon Rule with Writing (GRW) (Two courses; 6 credits total)
- Foreign Language requirement (FLENT/FLEX)\*
- Summer Enrollment (9 credits)
- Global Learning (GL) requirement (For class options: [goglobal.fiu.edu/courses](http://goglobal.fiu.edu/courses))\*
- Civics Literacy requirement\*
- Minimum of a 2.0 GPA
- 120 credit hours required for graduation

**College of Arts, Sciences, and Education Requirements:**

- 45 credits of Upper Division hours (3000-4000 level)

**Chemistry BA Lower Division Prerequisite Coursework: Complete all of the following courses with a “C” or better:**

Course Availability: This is when courses are typically offered and is subject to change: F (Fall), S (Spring), SS (Summer)

General Chemistry		Credits
CHM 1045	General Chemistry I- Prerequisites: MAC1105 or MAC1114 or MAC1140 or MAC1147 or any calculus course; or CHM1025 or adequate placement test score Prerequisite or Corequisite: CHM1045L (F,S,SS)	3
CHM 1045L	General Chemistry Lab I- Prerequisite or Corequisite: CHM1045 (F,S,SS)	1
CHM 1046	General Chemistry II- Prerequisites: CHM1045, CHM1045L. (F,S,SS)	3
CHM 1046L	General Chemistry Lab II- Prerequisite or Corequisite: CHM1046. (F,S,SS)	1
<b>Organic Chemistry</b>		
CHM 2210	Organic Chemistry I- Prerequisites: CHM1046, CHM1046L. Prerequisite or Corequisite: CHM2210L. (F,S,SS)	4
CHM 2210L	Organic Chemistry Lab I- Prerequisite or Corequisite: CHM2210 (F,S,SS)	1
CHM 2211	Organic Chemistry II- Prerequisites: CHM2210, CHM2210L. Prerequisite or Corequisite: CHM2211L. (F,S,SS)	3
CHM 2211L	Organic Chemistry Lab II- Prerequisite or Corequisite: CHM2211 (F,S,SS)	1
<b>Chemistry Math</b>		
MAC 2311	Calculus I- Prerequisites: MAC1147 or MAC1140 and MAC1114 or appropriate score on placement exam (F,S,SS)	4
MAC 2312	Calculus II- Prerequisite: MAC2311 (F,S,SS)	4
<b>Physics</b>		
PHY 2048 or PHY 2053	Physics W/Calculus I or Physics Without Calculus I- Prerequisite or Corequisite: MAC2311 or equivalent (F,S,SS)	4
PHY 2048L	General Physics Lab I- Prerequisite or Corequisite: PHY2053 or PHY2048 (F,S,SS)	1
PHY 2049 or PHY 2054	Physics W/Calculus II or Physics Without Calculus II- Prerequisite: PHY2048 (for PHY2049) or PHY2053 (for PHY2054); Prerequisite or Corequisite: MAC2312 (F,S,SS)	4
PHY 2049L	General Physics Lab II- Prerequisite or Corequisite: PHY2054 or PHY2049 (F,S,SS)	1
<b>General Biology</b>		
BSC 2010	General Biology I- Prerequisite or Corequisite: BSC2010L (F,S,SS)	3
BSC 2010L	General Biology I Lab- Prerequisite or Corequisite: BSC2010 (F,S,SS)	1

**Chemistry BA Upper Division Core: Complete all of the following courses with a grade of “C” or bet**

Course	Description	Credits
CHM 3120	Intro Analytical Chemistry- Pre-Requisites: CHM1046 and CHM1046L (F,S,SS)	3
CHM 3120L	Intro Analytical Chemistry Lab- Prerequisite or Corequisite: CHM3120 (F,S,SS)	1
CHM 3400	Fundamentals of Physical Chemistry 1- CHM3120, CHM3120L, MAC2311, MAC2312, PHY2049 or PHY2054, PHY2049L. Co-requisite: CHM 3410L (F,S) (Students can also take CHM 3410: Physical Chemistry I instead; same pre-requisites)	3
CHM 3400L	Fundamentals of Physical Chemistry Lab- Prerequisite or Corequisite: CHM3400 (If student takes CHM 3410- they should take CHM 3410L) (F,S)	1
CHM 4304	Biological Chemistry I- Prerequisites: CHM 2211 and CHM 2211L (F,S,SS)	3
CHM 4304L	Biological Chemistry I Lab- Prerequisite or Corequisite: CHM4304 (F,S,SS)	1

**Chemistry BA Cognate Area: Choose 1 course from the following: (3 credits). Some concentrations may require a lab**

Course	Description	Credits
BSC 2011	General Biology II- Prerequisite or Corequisite: BSC2011L (F,S,SS)	3
BSC 2011L	General Biology II Lab- Prerequisite or Corequisite: BSC2011 (F,S,SS)	1
CCJ 2020	Intro Criminal Justice (F,S,SS)	3
EVR 3011	Environmental Resources and Pollution- Prerequisites: MAC1105 or equivalent and an introductory science course (S)	3
EVR 3013	Ecology of South Florida (F,S)	3
EVR 3013L	Ecology of South Florida Lab- Prerequisite or Corequisite: EVR3013 (F,S)	1
EVR 4211	Water Resources- Prerequisites: CHM1045, CHM1046, BSC2010 (F)	3
EVR 4211L	Water Resources Lab- Prerequisites or Corequisite: EVR 4211 (F)	1
EVR 4231	Air Resources	3
EVR 4310	Energy Resources- Prerequisites: EVR3010 or PHY2023 or equivalent	3
EVR 4592	Soils & Ecosystems- Prerequisites: BSC2010 & CHM1045 (S)	3
EVR 4592L	Soils & Ecosystems Lab- Prerequisites or Corequisite: EVR4592 (S)	1
GLY 3202	Earth Materials- Prerequisites: ESC1000 or GLY1010 or GLY3039 or permission of the instructor and CHM1045; Corequisite: GLY3202L (F)	3
GLY 3202L	Earth Materials Lab- Prerequisites or Corequisite: GLY3202 (F)	1
GLY 4822	Intro to Hydrogeology- Prerequisites: PHY2048 or PHY2053, CHM1045, MAC2311, or permission of the instructor (S)	3
OCE 3014	Oceanography- GL (F,S,SS)	3

**Chemistry Restricted Electives: Choose 2 lectures from the following: (6 credits) and 1 lab corresponding to the lectures selected (1 credit)**

Course	Description	Credits
CHM 4220	Advanced Organic Chemistry- Prerequisites: CHM2211 and CHM2211L. (F)	3
CHM 4230L	Structure Determination Lab- Prerequisite: CHM2211, CHM2211L. (F,S)	1
CHM 4300	Bio-Organic Chemistry- Prerequisites: CHM2211 and CHM2211L. (S)	3
CHM 4230L	Structure Determination Lab- Prerequisite: CHM2211, CHM2211L. (F,S)	1
CHM 4307	Biological Chemistry II- Prerequisites: CHM4304 (F,S,SS)	3
CHM 4307L	Biological Chemistry II Lab- Prerequisite or Corequisite: CHM4304 (F,S,SS)	1
CHM 4130	Instrumental Analysis- Prerequisites: CHM3120, CHM3120L, CHM2211, CHM2211L, CHM3410 or CHM3400, PHY2048, PHY2048L, PHY2049, PHY2049L or PHY2053, PHY2048L, PHY2054, PHY2049L (F,S)	3
CHM 4130L	Instrumental Analysis Lab- Prerequisite or corequisite: CHM4130 (F,S)	1
CHM 3411	Physical Chemistry II- Prerequisite: CHM3410, CHM3410L (F,S)	4
CHM 3411L	Physical Chemistry II Lab- Prerequisite or Corequisite: CHM3411 (F,S)	1
CHS 4430	Intro Chemical Toxicology- Prerequisites: CHM4304 or BCH3033 (F)	3

CHS 4600	Marine Chemistry- Prerequisites: CHM2210 and CHM2210L, or CHM 2200 and CHM 2200L; CHM3120, CHM3120L (S)	3
CHM 3610	Fundamentals of Inorganic Chemistry- Prerequisites: CHM2211 and CHM2211L (S)	3
CHM 3610L	Fundamentals of Inorganic Chemistry- Prerequisite: CHM 3610 (SS,F)	1

### Senior Chemistry Lecture Elective

Course	Description	Credits
CHM or CHS 4XXX	4000 level Chemistry Lecture (Refer to Panther Degree Audit for list of class options.) CHM 4910L or CHM 4911L may not be used to satisfy this requirement.	3

### Chemistry Senior Seminar

Course	Description	Credits
CHM 4930	Senior Seminar (Pre-Requisite: CHM 3400 OR CHM 3411 or permission from the Instructor and Senior standing in <b>last term of enrollment</b> .) Advisor permission required. Please message advisor or schedule an appointment requesting permission.) (F,S,SS)	1

### Chemistry Graduation Exam

Description
Students are required to take a nationally normed chemistry examination in their last semester before graduation. Please contact the Chemistry Department for more information: 305.348.2606, CP 304.

**\*Chemistry BA Concentrations:** Students may choose to follow the "Standard BA in Chemistry Concentration" or choose a specific area of emphasis:

- **Biochemistry concentration:**
  - Cognate Area Course: Choose BSC2011 & BSC 2011L
  - Restrictive Electives: Choose CHM 4300 & CHM 4230L or CHM 4307 & CHM 4307L and one other lecture course
  - Senior level chemistry elective (CHM4XXX/CHM5XXX)\* must be biomedically related
- **Forensic Chemistry Concentration**
  - Cognate Area Course: CCJ 2020
  - Restricted Electives: CHM 4130/4130L and one other lecture course
  - Senior Level chemistry elective (CHM4XXX/CHM5XXX)\* must have forensic emphasis
- **Environmental Chemistry Concentration**
  - Cognate Area Courses: An environmentally related course
  - Restricted Electives: CHM 4130/4130L and one other lecture course
  - Senior level chemistry elective (CHM4XXX/CHM5XXX)\* must be environmentally related.

**Pre-Health Interest:** Choose BSC 2011 and BSC 2011L from Cognate Area. Interested students should consult a Pre-Health Advisor (DM 337; 305-348-0515; preprofc@fiu.edu) for arranging a curriculum to enhance their potential to gain admission to these professional schools.

**Interested in Teaching?** Students interested in Secondary Teacher Certification should contact the College of Arts, Sciences & Education Center for Advising & Student Success at (305) 348-2978

### University Core Curriculum

Students transferring with an AA degree or General Education requirements met from a Florida public college or university, or a bachelor's degree from a regionally accredited institution, automatically satisfy the UCC. All others require course-by-course evaluations.

### Summer Enrollment

Students transferring to FIU with **less than 60 credits** are required to earn at least 9 credits during one or more summer terms at FIU or any other university in the State University System of Florida. Courses may be completed in person or online.

### **FLENT/FLEX: State-mandated foreign language requirement**

**Students Satisfy FLENT/FLEX as follows:**

- Two terms of the same language at the introductory level (levels 1 & 2) OR One term of an intermediate or advanced level course
- International evaluation or high school transcript noting studies were completed in a country where English is not an official language
- Passing scores on CLEP exam (Spanish, French, German)
- Passing scores on BYU FLATS (nearly 60 languages offered)
- Two years of the same foreign language in high school
- A previously earned bachelor's degree from a regionally accredited institution
- An AA degree earned at a Florida public college or university prior to 1989
- Passing TOEFL or IELTS scores required for FIU admission

### **Civics Literacy Requirement**

The Civic Literacy requirement is a statewide mandate that applies to undergraduate students *initially* entering a Florida State University System (SUS) and/or Florida College System (FCS) institution in the 2018-19 academic year and thereafter. Please see your academic advisor to learn about your options to complete this requirement.

### **Global Learning**

The Global Learning for Global Citizenship (GL) requirement is unique to FIU, and therefore, students may not use transfer credits to satisfy it. GL courses, activities, and programs enhance students' understanding of global issues and engagement as global citizens.

### **Transfer Students**

FIU accepts transfer credits from regionally accredited institutions and nationally accredited institutions that participate in Florida's Statewide Course Numbering System (SCNS).

60 = Maximum number of lower-division credits applied toward the bachelor's degree.

30 = Maximum number of upper-division credits applied toward the bachelor's degree.

### **Academic Advising**

You should see your advisor at least once a semester. To make an appointment with your advisor, log in to your MyFIU to use the Panther Success Network.

**Success Markers:** Department of Chemistry and Biochemistry has identified important courses in the major that indicate you are on track for successful degree completion. **In cases where students are not making good progress, a change of major may be required.**

- 30 credits- Complete MAC 1105 (or higher) with a C or better
- 30 credits- Complete CHM 1045/1045L with a C or better
- 45 credits- Complete BSC 2010/2010L or BSC 2011/2011L with a C or better
- 45 credits- Complete CHM 1046/1046L with a C or better
- 60 credits- Complete CHM 2210/2210L or PHY 2048 or PHY 2053 with a C or better
- 60 credits- Enroll in MAC 2311 by 60 credits with a C or better
- 75 credits- Complete CHM 2211/2211L and PHY 2049 or PHY 2054/PHY 2049L with a C or better
- 75 credits- Complete MAC 2311 with a C or better
- 90 credits- Complete MAC 2312 with a C or better
- 90 credits- Complete CHM 3120/L with a C or better