UCF Degree Programs

Chemistry - Biochemistry Track (B.S.)

College of Sciences

Department of Chemistry,
Physical Sciences, Room: 255
http://www.cos.ucf.edu/chemistry
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Admission Requirements

■ None

Degree Requirements

■ Students who change degree programs and select this major must adopt the most current catalog.
■ Co-op or internship credit cannot be used in the major.
■ Students should consult with a departmental advisor before registering.
■ Departmental Residency Requirement consists of at least 30 semester hours of regularly scheduled 3000-4000 level courses taken from the UCF Department of Chemistry.
■ Chemistry majors are discouraged from taking courses as a transient student at a Florida College System institution, except in situations where one semester of a two semester sequence has already been taken at the Florida College System institution.
■ All prerequisites of courses taught within the College of Sciences will be enforced.
■ Courses designated in 2 (Common Program Prerequisites) are completed in the first 60 hours.
Courses designated in 1 (General Education Program) typically are spread throughout the 120 hours.
■ AA transfer students are expected to have completed all of the following courses before enrolling as a Chemistry major; these classes are prerequisites for advanced science classes and students entering without these classes will be unable to register for most of the advanced courses.
■ Students are encouraged to select additional courses from within the major that are above the 4000 level. Course selected with the aid of a departmental advisor and approved in advance.

Chemistry Majors are encouraged to take courses in the areas noted as the major.

Basic Core: Required, satisfies the CPP

Select either:

CHM 2045C Chemistry Fundamentals I

- or

CHM 2040 Chemistry Fundamentals IA

CHM 2041 Chemistry Fundamentals IB

- and

CHM 2046 Chemistry Fundamentals II

CHM 2046L Chemistry Fundamentals Laboratory

CHM 2210 Organic Chemistry I

CHM 2211 Organic Chemistry II

CHM 2211L Organic Laboratory Techniques I

MAC 2311C Calculus with Analytic Geometry I

MAC 2312 Calculus with Analytic Geometry II

MAC 2313 Calculus with Analytic Geometry III

STA 2023 Statistical Methods I

Basic Core: Additional Requirements

BSC 2010C Biology I

CHM 3120 Analytical Chemistry

CHM 3120L Analytical Chemistry Laboratory

CHM 3215L Organic Laboratory Techniques II

MAC 2311C Calculus with Analytic Geometry I and CPP

MAC 2312 Calculus with Analytic Geometry II and CPP

MAC 2313 Calculus with Analytic Geometry III and CPP

STA 2023 Statistical Methods I

4. Core Requirements: Advanced Level

Select from the following:

CHM 4053 Biochemistry I

CHM 4054 Biochemistry II

CHM 4081L Biochemical Methods

CHM 3410 Physical Chemistry I

CHM 3411 Physical Chemistry II

CHM 3411L Physical Chemistry Laboratory

CHM 4610 Inorganic Chemistry

CHM 4912 Directed Independent Research

CHM 4930 Chemistry Seminar I

CHM 4931 Chemistry Seminar II

MCS 3020C General Microbiology

PCB 3023 Molecular Cell Biology

PCB 3063 Genetics

5. Restricted Electives

Select from the following:

CHM 4130 Advanced Analytical Laboratory Technique

CHM 4220 Organic Chemistry III

CHM 4908 Directed Independent Study

CHM 5225 Advanced Organic Chemistry

PCB 3522 Molecular Biology I

CBM 3020C General Microbiology

PCB 3023 Molecular Cell Biology

PCB 3063 Genetics

6. Capstone Requirements

■ None

7. Foreign Language Requirements

Admissions

■ Two years high school, or one year college language (or equivalent proficiency exam) prior to graduation.

Graduation

■ None
8. Electives
- Select primarily from upper level courses after meeting with a departmental advisor. Courses may be outside the department.

9. Additional Requirements
- Complete a minimum of 30 Chemistry credits from the UCF Chemistry Department.
- Students must earn at least a “C” (2.0) or better in each UCF Chemistry course used to satisfy the major.
- Students must maintain a minimum cumulative GPA of 2.0 in all UCF Chemistry courses.
- Students must maintain a minimum cumulative GPA of 2.0 in all Chemistry courses.
- For both cumulative GPA calculations, all attempts of courses that could meet requirements are included, with the exception of CHM4912, CHM4930, and CHM4931. Additional courses that could meet requirements but are taken beyond the minimum required (e.g., additional restricted electives taken beyond the required 10 hours) and a “C” (2.0) or better is earned, are also included in the major GPA calculations.
- The last 30 credit hours of regularly scheduled courses that satisfy degree requirements must be taken in Residence at UCF.

10. Required Minors
- None

11. Departmental Exit Requirements
- Students are required to take a nationally normed test in chemistry and biochemistry during their last semester. The exam will be given in the Fall and Spring semesters. Students who plan to graduate in the Spring must take the exam in the Spring. The student must achieve a satisfactory score on the exam.
- Students are required to submit an undergraduate research report for evaluation no later than the date posted by the department in the semester they intend to graduate. The report must meet or exceed departmental requirements established for the report.

12. University Minimum Exit Requirements
- A 2.0 UCF GPA
- 60 semester hours earned after CLEP awarded
- 48 semester hours of upper division credit completed
- 30 of the last 39 hours of course work must be completed in residency at UCF.
- A maximum of 45 hours of extension, correspondence, CLEP, Credit by Exam, and Armed Forces credits permitted.
- Complete the General Education Program, the Gordon Rule, and nine hours of Summer credit.

Total Semester Hours Required
- 120

Honors In Major
- None

Related Programs
- Biology
- Chemistry
- Forensic Science - Analysis Track
- Forensic Science - Biochemistry Track
- Biomedical Sciences

Certificates
- None

Related Minors
- Chemistry
- Biology
- Biomedical Sciences

Advising Notes
- None

Transfer Notes
- Lower division courses do not substitute for upper division courses.
- Courses transferred from private and out-of-state schools must be evaluated for equivalency credit. The student must provide all supporting information.

Acceptable Substitutes for Transfer Courses
- The following Common Program Prerequisite courses may be satisfied by the following courses if taken prior to transferring to UCF:
  - CHM 2045C: May use CHM X040C plus CHM X041C.
  - Physics: Although the CPP allows substitution by other physics courses or Organic Chemistry, both the specified Physics and Organic Chemistry classes are required in the major and will still have to be taken.

Plan of Study
- This is one of numerous possible plans of study. See program description for all requirements. Consult a departmental advisor for alternate, new or more appropriate selections.
- Prior to enrolling in Chemistry, take Chemistry Placement Test ~ http://knightsource.sdes.ucf.edu/placement
- Prior to enrolling in Math, take Math Placement Test ~ http://knightsource.sdes.ucf.edu/placement
- Although all classes are listed as being taken during the academic year, you may be required to complete 9 hours of them during the Summer. Consult with an advisor to determine if you are exempt.

Freshman Year - Fall
- CHM 2045C Chemistry Fundamentals I 15 hrs
- MAC 2311C Calculus with Analytic Geometry I 4 hrs
- BSC 2010C Biology I 4 hrs
- ENC 1101 Composition I 3 hrs

Freshman Year - Spring
- CHM 2046 Chemistry Fundamentals II 17 hrs
- CHM 2046L Chemistry Fundamentals Laboratory I 1 hr
- MAC 2312 Calculus with Analytic Geometry II 4 hrs
- ENC 1102 Composition II 3 hrs
- GEP 3 hrs

Sophomore Year - Fall
- CHM 2210 Organic Chemistry I 14 hrs
- PHY 2048C General Physics Using Calculus I 4 hrs
- MAC 2313 Calculus with Analytic Geometry III 4 hrs
- Statistics 3 hrs

Sophomore Year - Spring
- CHM 2211 Organic Chemistry II 16 hrs
- CHM 2211L Organic Laboratory Techniques I 3 hrs
- Lab may be taken in a later term if seats are not available.
- CHM 3120 Organic Chemistry Laboratory I 1 hr
- MAC 2312 Calculus with Analytic Geometry II 4 hrs
- ENC 1102 Composition II 3 hrs
- GEP 3 hrs

Junior Year - Fall
- BCH 4935L Biochemistry I 14 hrs
- CHM 3215L Organic Laboratory Techniques II 3 hrs
- PCB 3023 Molecular Cell Biology 2 hrs
- GEP 3 hrs

Junior Year - Spring
- BCH 4054 Biochemistry II 13 hrs
- BCH 4010L Biochemical Methods 3 hrs
- MCB 3020C General Microbiology 2 hrs
- GEP 3 hrs

Senior Year - Fall
- CHM 3410 Physical Chemistry I 17 hrs
- CHM 4912 Directed Independent Research 4 hrs
- CHM 4930 Chemistry Seminar I 1 hr
- Restricted Elective 3 hrs

Senior Year - Spring
- CHM 3411 Physical Chemistry II 14 hrs
- CHM 4931L Physical Chemistry Laboratory 3 hrs
- CHM 4610 Inorganic Chemistry 2 hrs
- CHM 4912 Directed Independent Research 3 hrs
Program Academic Learning Compacts
- Program Academic Learning Compacts (student learning outcomes) for undergraduate programs are located at:
  http://www.oeas.ucf.edu/alc/academic_learning_compacts.htm

Equipment Fees
- Part-Time Student: $45 per term
- Full-Time Student: $90 per term