

UCF Degree Programs

Forensic Science - Biochemistry Track (B.S.)

College of Sciences

Department of Chemistry,

Physical Sciences Building, Room: 255

<http://chemistry.cos.ucf.edu/>

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Students completing the Forensic Science - Biochemistry Track B.S. degree will also meet the requirements for ACS certification. This track is designed to align students with specific courses necessary for the examination of DNA and other biochemical evidence.

Admission Requirements

- None

Degree Requirements

- Students who change degree programs and select this major must adopt the most current catalog.
- Departmental Residency Requirement consists of at least 30 semester hours of regularly scheduled 3000-4000 level courses taken from the UCF Department of Chemistry.
- Co-op credit cannot be used in this major.
- Students should consult with a departmental advisor.
- Students must earn a "C" (2.0) or higher in each course and have a minimum 2.5 cumulative GPA in all courses in categories 2 (Common Program Prerequisites), 3 (Core Requirements: Basic Level), 4 (Core Requirements: Advanced Level), and 5 (Restricted Electives).

Individual course prerequisites for enrollment in courses within the College of Sciences will be enforced.

Courses designated in 2 (Common Program Prerequisites) are usually completed in the first 60 hours.

1. UCF General Education Program (GEP) (39 hrs)

- Certain courses must be selected in the GEP for this major, which brings the GEP hours above 36.

A: Communication Foundations (9 hrs)

Prefer	SPC 1603C	Fundamentals of Technical Presentations	3 hrs
Required	ENC 1101	Composition I	3 hrs
Required	ENC 1102	Composition II	3 hrs

B: Cultural & Historical Foundations (9 hrs)

C: Mathematical Foundations (7 hrs)

Required	MAC 2311C	Calculus with Analytic Geometry I	4 hrs
Required	STA 2023	Statistical Methods I	3 hrs

D: Social Foundations (6 hrs)

E: Science Foundations (8 hrs)

Required	BSC 2010C	Biology I	4 hrs
Required	PHY 2048C	General Physics Using Calculus I	4 hrs

2. Common Program Prerequisites (CPP) (16 hrs)

- See "Common Prerequisites" in the Transfer and Transitions Services section for more information.
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| BSC 2010C | Biology I | GEP |
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Select one of the following sequences of courses:

CHM 2045C	Chemistry Fundamentals I	4 hrs
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or

CHM 2040	Chemistry Fundamentals IA and	3 hrs
CHM 2041	Chemistry Fundamentals IB	3 hrs

Take all of the following:

CHM 2046	Chemistry Fundamentals II	3 hrs
CHM 2046L	Chemistry Fundamentals Laboratory	1 hr
MAC 2311C	Calculus with Analytic Geometry I	GEP
MAC 2312	Calculus with Analytic Geometry II	4 hrs
PHY 2048C	General Physics Using Calculus I	GEP
PHY 2049C	General Physics Using Calculus II	4 hrs

3. Core Requirements: Basic Level (16 hrs)

- All courses specifically identified in the preceding Common Program Prerequisites section of this catalog are also required in the Basic Core, and must be taken.

Basic Core: Required, satisfies the CPP

CHM 2045C	Chemistry Fundamentals I	CPP
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- or

CHM 2040	Chemistry Fundamentals IA and	CPP
CHM 2041	Chemistry Fundamentals IB	CPP

- and

CHM 2046	Chemistry Fundamentals II and	CPP
CHM 2046L	Chemistry Fundamentals Laboratory and	CPP
BSC 2010C	Biology I and	GEP/ CPP
MAC 2311C	Calculus with Analytic Geometry I and	GEP/ CPP
MAC 2312	Calculus with Analytic Geometry II and	CPP
PHY 2048C	General Physics Using Calculus I and	CPP
PHY 2049C	General Physics Using Calculus II	CPP

Basic Core: Additional Requirements

CHM 2210	Organic Chemistry I and	3 hrs
CHM 2211	Organic Chemistry II and	3 hrs
CHM 2211L	Organic Laboratory Techniques I and	2 hrs
CHM 3120	Analytical Chemistry and	3 hrs
CHM 3120L	Analytical Chemistry Laboratory and	1 hr
STA 2023	Statistical Methods I and	GEP
PCB 3063	Genetics and	3 hrs
PCB 3063L	Genetics Laboratory	1 hr

4. Core Requirements: Advanced Level (48 hrs)

A. Forensic Science Core

CHS 3501	Introduction to Forensic Science	3 hrs
CHS 3505C	Forensic Microscopy	4 hrs
CHS 3511C	Trace Evidence	4 hrs
CHS 3530C	Forensic Analysis of Controlled Substances	4 hrs
CHS 3533	Forensic Biochemistry I	2 hrs
CHS 3595	Forensic Science in the Courtroom	3 hrs
CHS 4537	Forensic Laboratory Quality Assurance	2 hrs
CHS 4591	Forensic Science Internship	4 hrs
CHM 3422	Applied Physical Chemistry	3 hrs
BCH 4053	Biochemistry I	3 hrs

B. Forensic Biochemistry Track:

BSC 3403C	Quantitative Biological Methods	4 hrs
CHS 3533L	Forensic Biochemistry I Laboratory	1 hr
CHS 4534C	Forensic Biochemistry II	3 hrs
MCB 3020C	General Microbiology	5 hrs
PCB 3522	Molecular Biology I	3 hrs

5. Restricted Electives

(4 hrs)
Note: Substitutions require prior approval by the Forensic Science Program Advisor

ANT 4521	Forensic Anthropology	3 hrs
BCH 4054	Biochemistry II	3 hrs
CHM 3215L	Organic Laboratory Techniques II	2 hrs
CHM 4130	Advanced Analytical Laboratory Technique	3 hrs
CHM 4130L	Advanced Analytical Chemistry Laboratory	2 hrs
CHM 4912	Directed Independent Research	3 hrs
CHS 5504	Topics in Forensic Science	3 hrs
PCB 3233	Immunology	3 hrs
PCB 3233L	Immunology Laboratory	1 hr
PCB 4524	Molecular Biology II	3 hrs
STA 4163	Statistical Methods II	3 hrs
ZOO 3733C	Human Anatomy	4 hrs

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 consulting with a departmental advisor. Courses may be outside the department.

9. Additional Requirements

- None

UCF Degree Programs

10. Required Minors

- None

11. Departmental Exit Requirements

- Earn a grade of "C" (2.0) or better in each course used to satisfy categories 2, 3, 4, and 5 of the degree requirements.
 - Students must maintain a cumulative GPA of 2.5 in all courses taken to meet Common Program Prerequisites and Core Requirements: Basic Level, Core Requirements: Advanced Level and Restricted Electives.
 - All attempts of courses taken that could meet major requirements are included in the GPA calculation. Additional courses that could meet requirements but are taken beyond the minimum required (e.g., additional restricted electives) and a "C" (2.0) or better is earned are also included in both GPA calculations.
 - The last 30 credit hours of regularly scheduled courses that satisfy degree requirements must be taken in Residence at UCF.
- ### 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

- 124

Honors In Major

- None

Related Programs

- Forensic Science - Chemistry Track
- Chemistry
- Biomedical Sciences

Certificates

- None

Related Minors

- Chemistry
- 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
- CHM 2045C: may use CHM X040 plus CHM X041.
 - Calculus: Although other math classes satisfy the CPP, the specified courses are required in the major and still must be taken.
 - Physics: Although CPP requirements permit substitution by Organic Chemistry, all the specified courses are required for graduation and still must be taken.

Plan of Study

- One of numerous possible plans of study. See program description for all requirements. Consult a departmental advisor for alternate, new or more appropriate selections.
- Before registering for Chemistry, take Chemistry Placement Test ~
<http://knightsource.sdes.ucf.edu/placement>
- Before registering for Math, take Math Placement Test ~
<http://utc.sdes.ucf.edu>
- This plan assumes you need to begin with the three semester chemistry sequence and calculus. Having to start at a lower math class will increase the hours taken.

Freshman Year - Fall

CHM 2040	Chemistry Fundamentals IA	3 hrs
CHS 3501	Introduction to Forensic Science	3 hrs
MAC 2311C	Calculus with Analytic Geometry I	4 hrs
ENC 1101	Composition I	3 hrs

Freshman Year - Spring

CHM 2041	Chemistry Fundamentals IB	3 hrs
BSC 2010C	Biology I	4 hrs
MAC 2312	Calculus with Analytic Geometry II	4 hrs
ENC 1102	Composition II	3 hrs

Freshman Year - Summer

CHM 2046	Chemistry Fundamentals II	3 hrs
CHM 2046L	Chemistry Fundamentals Laboratory	1 hr
Lab may be taken in a later term if seats are not available.		
GEP		3 hrs

Sophomore Year - Fall

CHM 2210	Organic Chemistry I	14 hrs
PHY 2048C	General Physics Using Calculus I	4 hrs
PCB 3063	Genetics	3 hrs
PCB 3063L	Genetics Laboratory	1 hr
SPC 1603C	Fundamentals of Technical Presentations	3 hrs

Sophomore Year - Spring

CHM 2211	Organic Chemistry II	15 hrs
PHY 2049C	General Physics Using Calculus II	4 hrs
MCB 3020C	General Microbiology	5 hrs
STA 2023	Statistical Methods I	3 hrs

Sophomore Year - Summer

CHM 2211L	Organic Laboratory Techniques I	5 hrs
Lab may be taken in a later term if seats are not available.		
GEP		2 hrs
		3 hrs

Junior Year - Fall

CHS 3505C	Forensic Microscopy	14 hrs
CHS 3533	Forensic Biochemistry I	4 hrs
CHS 3533L	Forensic Biochemistry I Laboratory	2 hrs
BSC 3403C	Quantitative Biological Methods	1 hr
GEP		4 hrs
		3 hrs

Junior Year - Spring

CHS 3595	Forensic Science in the Courtroom	13 hrs
CHS 4534C	Forensic Biochemistry II	3 hrs
CHM 3120	Analytical Chemistry	3 hrs
CHM 3120L	Analytical Chemistry Laboratory	1 hr
GEP		3 hrs

Senior Year - Fall

CHS 3530C	Forensic Analysis of Controlled Substances	13 hrs
CHM 3422	Applied Physical Chemistry	4 hrs
PCB 3522	Molecular Biology I	3 hrs
GEP		3 hrs

Senior Year - Spring

CHS 3511C	Trace Evidence	12 hrs
CHS 4537	Forensic Laboratory Quality Assurance	4 hrs
BCH 4053	Biochemistry I	2 hrs
Restricted Elective		3 hrs
		3 hrs

Senior Year - Summer

CHS 4591	Forensic Science Internship	4 hrs
		4 hrs

Program Academic Learning Compacts

- Program Academic Learning Compacts (student learning outcomes) for undergraduate programs are located at:
http://www.oas.ucf.edu/alc/academic_learning_compacts.htm

Equipment Fees

- Part-Time Student: \$45 per term
- Full-Time Student: \$90 per term