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/

Email: chemstaff@ucf.edu
Dr. Tamra Legron-Rodriguez, tamra.legron-rodriguez@ucf.edu
Phone: 407-823-1167

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 (CoreRequirements: 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 2093C Fundamentals of Technical Presentations
Required ENC 1101 Composition I 3 hrs
Required ENC 1102 Composition II 3 hrs

B: Cultural & Historical Foundations (9 hrs)
Required MAC 2311C Calculus with Analytic Geometry I 4 hrs
Required STA 2023 Statistical Methods I 3 hrs

C: Mathematical Foundations (7 hrs)

D: Social Foundations (6 hrs)
Required BSC 2010C Biology I 4 hrs
Required PHY 2048C General Physics Using Calculus I 4 hrs

E: Science Foundations (8 hrs)

2. Common Program Prerequisites (CPP) (16 hrs)
■ See “Common Prerequisites” in the Transfer and Transitions Services section for more information.

BSC 2010C Biology I GEP

Select one of the following sequences of courses:
CHM 2045C Chemistry Fundamentals I 4 hrs
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
- or
CHM 2040 Chemistry Fundamentals IA and CPP
CHM 2341 Chemistry Fundamentals IB CPP
- and
CHM 2046 Chemistry Fundamentals II and CPP
CHM 2046L Chemistry Fundamentals Laboratory and CPP
BSC 2010C Biology I and CPP
MAC 2311C Calculus with Analytic Geometry I and 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 and CPP

Basic Core: Additional Requirements 16 hrs
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 1 hr
PCB 3063 Genetics and 3 hrs
PCB 3063L Genetics Laboratory 1 hr

4. Core Requirements: Advanced Level (48 hrs)
A. Forensic Science Core 32 hrs
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: 16 hrs
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
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 at http://knightsource.sdes.ucf.edu/placement
- Before registering for Math, take Math Placement Test at http://oec.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 3 hrs
- PHY 2049C 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 3 hrs
- PHY 2049C General Physics Using Calculus II 4 hrs
- PCB 3020C General Microbiology 5 hrs
- STA 2023 Statistical Methods I 3 hrs

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

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

Junior Year - Spring
- CHS 3595 Forensic Science in the Courtroom 3 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 4 hrs
- CHM 3422 Applied Physical Chemistry 3 hrs
- PCB 3522 Molecular Biology I 3 hrs
- GEP 3 hrs

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

Senior Year - Summer
- CHS 4591 Forensic Science Internship 4 hrs

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

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