# **Forensic Chemistry BS**

# Overview

The Bachelor of Science in Forensic Chemistry, offered by the Department of Chemistry, is an interdisciplinary program designed to prepare students for careers bridging chemistry and forensic science. By combining advanced coursework in analytical chemistry with studies in biology and criminal justice, the program addresses the increasing need for skilled chemists to support local government or independent forensic laboratories.

Campus Location: Main

Program Code: ST-FCHM-BS

# **Undergraduate Contact Information**

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These requirements are for students who matriculated in academic year 2025-2026. Students who matriculated prior to fall 2025 should refer to the Archives to view the requirements for their Bulletin year.

# **Bachelor of Science Requirements**

### Summary of Requirements for the Degree

- 1. University Requirements (123 total s.h.)
  - Students must complete all University requirements including those listed below.
  - All undergraduate students must complete at least two writing-intensive courses for a total of at least six credits at Temple as part of their major. The specific writing-intensive course options for this major are:
    Code
    Title
    Credit

		Hours
CHEM 2096	Communicating in Chemistry	2
CHEM 3398	Physical Chemistry Laboratory II	2
CHEM 4196	Instrumental Analysis	5

• Students must complete the General Education (GenEd) requirements.

- See the General Education section of the Undergraduate Bulletin for the GenEd curriculum.
- Students who complete CST majors receive a waiver for 2 Science & Technology (GS) and 1 Quantitative Literacy (GQ) GenEd courses.
- · Students must satisfy general Temple University residency requirements.
- 2. College Requirements
  - A minimum of 90 total credits within the College of Science & Technology (CST), the College of Liberal Arts (CLA), and/or the College of Engineering (ENG).
    - A minimum of 45 of these credits must be upper-level (courses numbered 2000 and above).
    - A minimum of 6 of these credits must be upper-level (courses numbered 2000 and above) CLA credits.
  - · Successful completion or waiver from the second level of a foreign language.
  - Complete a one-credit first-year or transfer seminar.
    - SCTC 1001 CST First-Year Seminar for every entering first-year CST student.
    - SCTC 2001 CST Transfer Seminar for every entering transfer CST student.
- 3. Major Requirements for Bachelor of Science (70-73 s.h.)
  - At least 7 courses required for the major must be completed at Temple. At least 5 Chemistry courses must be completed at Temple.

Code	Title	Credit
		Hours

#### Chemistry

Select one of the following:		4
CHEM 1031 & CHEM 1033	General Chemistry I and General Chemistry Laboratory I	
CHEM 1951 & CHEM 1953	Honors General Chemical Science I and Honors Chemical Science Laboratory I (F)	
Select one of the following:		4
CHEM 1032 & CHEM 1034	General Chemistry II and General Chemistry Laboratory II	
CHEM 1952 & CHEM 1954	Honors General Chemical Science II and Honors Chemical Science Laboratory II (S)	
Select one of the following:		4
CHEM 2201 & CHEM 2203	Organic Chemistry I and Organic Chemistry Laboratory I	
CHEM 2211 & CHEM 2213	Organic Chemistry for Majors I and Organic Majors Laboratory I (F)	
CHEM 2921 & CHEM 2923	Organic Chemistry for Honors I and Organic Honors Laboratory I (F)	
Select one of the following:		4
CHEM 2202 & CHEM 2204	Organic Chemistry II and Organic Chemistry Laboratory II	
CHEM 2212 & CHEM 2214	Organic Chemistry for Majors II and Organic Majors Laboratory II (S)	
CHEM 2922 & CHEM 2924	Organic Chemistry for Honors II and Organic Honors Laboratory II (S)	
CHEM 3102	Data Analysis and Evidence	2

CHEM 3103 & CHEM 3105	Analytical Chemistry and Analytical Chemistry Lab <sup>1</sup>	4
Select one of the following:		3-4
CHEM 3881	Cooperative Research	
CHEM 3891	Undergraduate Research	
CHEM 4108	Investigative Chemistry (S)	3
CHEM 4196	Instrumental Analysis (WI)	5
CHEM 4401	Biochemistry I	3
One Advanced Chemistry course -	select from the following: <sup>2</sup>	2-4
CHEM 3001	Inorganic Chemistry	
CHEM 3301	Physical Chemistry Lecture I <sup>3,4</sup>	
CHEM 3302	Physical Chemistry Lecture II <sup>1,3,4</sup>	
CHEM 3303	Physical Chemistry Laboratory I	
CHEM 3405	Physical Chemistry of Biomolecules <sup>3</sup>	
All other Chemistry courses num	bered 4002 and above <sup>3</sup>	
Biology		
BIOL 1111	Introduction to Organismal Biology	4
or BIOL 1911	Honors Introduction to Organismal Biology	
Select one of the following:		4
BIOL 1112	Introduction to Biomolecules, Cells and Genomes	
or BIOL 1912	Honors Introduction to Biomolecules, Cells and Genomes	
BIOL 2112	Introduction to Cellular and Molecular Biology	
or BIOL 2912	Honors Introduction to Cellular and Molecular Biology	
Criminal Justice		
CJ 1001	Introduction to Criminal Justice	3
or CJ 1901	Honors Introduction to Criminal Justice	
CJ 2501	Introduction to Criminal Law	3
Mathematics		
MATH 1041	Calculus I	4
or MATH 1941	Honors Calculus I	
MATH 1044	Introduction to Probability and Statistics for the Life Sciences	4
Physics		
Select one of the following: 4		4
PHYS 1021	Introduction to General Physics I	
PHYS 1061	Elementary Classical Physics I	
or PHYS 1961	Honors Elementary Classical Physics I	
PHYS 2021	General Physics I (F)	
or PHYS 2921	Honors General Physics I	
Select one of the following: 4		4
PHYS 1022	Introduction to General Physics II	
PHYS 1062	Elementary Classical Physics II	
or PHYS 1962	Honors Elementary Classical Physics II	
PHYS 2022	General Physics II (S)	
or PHYS 2922	Honors General Physics II	
Writing Intensive (Additional)		
Select one of the following:		2
CHEM 2096	Communicating in Chemistry	
CHEM 3398	Physical Chemistry Laboratory II (WI) <sup>1,4</sup>	
Total Credit Hours		70-73

Total Credit Hours

Code	Title	Credit Hours
(F) - Fall only course		
(S) - Spring only course		

- <sup>1</sup> CHEM 3103, CHEM 3105, and CHEM 3302 are prerequisites for CHEM 3398.
- <sup>2</sup> CHEM 4881 and CHEM 4891 will not fulfill an Advanced Chemistry elective for the Forensic Chemistry BS degree.
- <sup>3</sup> CHEM 3301, CHEM 3302, CHEM 3405, and some advanced chemistry courses numbered 4002 and above have additional math prerequisites and co-requisites.
- <sup>4</sup> If interested in taking CHEM 3301, CHEM 3302, or CHEM 3398, you should plan on taking a calculus-based physics sequence (PHYS 1061 or PHYS 1961 or PHYS 2021 or PHYS 2921 and PHYS 1062 or PHYS 1962 or PHYS 2022 or PHYS 2922).

# **Suggested Academic Plan**

All prospective majors should schedule an appointment with one of the departmental advisors (names of current faculty advisors are available in the Overview section) to plan a program of study. The recommended order of courses for the major is listed below; a different order is acceptable as long as the student adheres to prerequisite requirements.

# **Bachelor of Science in Forensic Chemistry**

#### Suggested Plan for New Students Starting in the 2025-2026 Academic Year

Year 1		
Fall		Credit Hours
Select one of the following:		4
CHEM 1031 & CHEM 1033	General Chemistry I and General Chemistry Laboratory I	
CHEM 1951 & CHEM 1953	Honors General Chemical Science I and Honors Chemical Science Laboratory I (F)	
MATH 1041 or MATH 1941	Calculus I or Honors Calculus I	4
SCTC 1001	CST First-Year Seminar	1
ENG 0802 or ENG 0812 or ENG 0902	Analytical Reading and Writing [GW] or Analytical Reading and Writing: ESL [GW] or Honors Analytical Reading and Writing [GW]	4
Elective		3
	Credit Hours	16
Spring		
BIOL 1111 or BIOL 1911	Introduction to Organismal Biology or Honors Introduction to Organismal Biology	4
Select one of the following:		4
CHEM 1032 & CHEM 1034	General Chemistry II and General Chemistry Laboratory II	
CHEM 1952 & CHEM 1954	Honors General Chemical Science II and Honors Chemical Science Laboratory II (S)	
MATH 1044	Introduction to Probability and Statistics for the Life Sciences	4
IH 0851 or IH 0951	Intellectual Heritage I: The Good Life [GY] or Honors Intellectual Heritage I: The Good Life [GY]	3
	Credit Hours	15
Year 2 Fall Select one of the following:		4
BIOL 1112 or BIOL 1912	Introduction to Biomolecules, Cells and Genomes or Honors Introduction to Biomolecules, Cells and Genomes	
BIOL 2112 or BIOL 2912	Introduction to Cellular and Molecular Biology or Honors Introduction to Cellular and Molecular Biology	
Select one of the following:		4

CHEM 2201	Organic Chemistry I	
CHEM 2211	Organic Chemistry Laboratory	
& CHEM 2213	and Organic Majors Laboratory I (F)	
CHEM 2921	Organic Chemistry for Honors I	
& CHEM 2923	and Organic Honors Laboratory I (F)	
Select one of the following: '		4
PHYS 1021	Introduction to General Physics I	
PHYS 1061	Elementary Classical Physics I	
PHYS 1961	Honors Elementary Classical Physics I (F)	
PHYS 2021	General Physics I (F)	
PHYS 2921	Honors General Physics I (F)	
IH 0852 or IH 0952	Intellectual Heritage II: The Common Good [GZ] or Honors Intellectual Heritage II: The Common Good [GZ]	3
	Credit Hours	15
Spring		
Select one of the following:		4
CHFM 2202	Organic Chemistry II	
& CHEM 2204	and Organic Chemistry Laboratory II	
CHEM 2212	Organic Chemistry for Majors II	
& CHEM 2214	and Organic Majors Laboratory II (S)	
CHEM 2922	Organic Chemistry for Honors II	
& CHEM 2924	and Organic Honors Laboratory II (S)	
Select one of the following: <sup>1</sup>		4
PHYS 1022	Introduction to General Physics II	
PHYS 1062	Elementary Classical Physics II	
PHYS 1962	Honors Elementary Classical Physics II (S)	
PHYS 2022	General Physics II (S)	
PHYS 2922	Honors General Physics II (S)	
CJ 1001 or CJ 1901	Introduction to Criminal Justice or Honors Introduction to Criminal Justice	3
GenEd Breadth Course		3
Elective		2
	Credit Hours	16
Year 3		
Fall		
CHEM 3102	Data Analysis and Evidence	2
CHEM 3103	Analytical Chemistry <sup>2</sup>	3
CHEM 3105	Analytical Chemistry Lab <sup>2</sup>	1
CJ 2501	Introduction to Criminal Law	3
GenEd Breadth Course		3
Elective		3
	Credit Hours	15
Spring		
CHEM 4401	Biochemistry I	3
Select one of the following:		2
CHEM 2096	Communicating in Chemistry [WI]	
CHEM 3398	Physical Chemistry Laboratory II [WI] <sup>3</sup>	
GenEd Breadth Course		3-4
Elective		4
Elective		4-3
	Credit Hours	16

Year 4		
Fall		
CHEM 4196	Instrumental Analysis [WI]	5
Advanced Chemistry	Course <sup>4</sup>	2-4
GenEd Breadth Cours	Se	3
Elective		3
Elective		2-0
	Credit Hours	15
Spring		
CHEM 4108	Investigative Chemistry (S)	3
Select one of the follo	wing:	3-4
CHEM 3881	Cooperative Research	
CHEM 3891	Undergraduate Research	
GenEd Breadth Cours	Se	3
Elective		3
Elective		3-2
	Credit Hours	15
	Total Credit Hours	123

<sup>1</sup> If interested in taking CHEM 3301, CHEM 3302, or CHEM 3398, you should plan on taking a calculus-based physics sequence (PHYS 1061 or PHYS 1961 or PHYS 2021 or PHYS 2921 and PHYS 1062 or PHYS 1962 or PHYS 2022 or PHYS 2922).

<sup>2</sup> It is strongly encouraged that CHEM 3103/CHEM 3105 be taken prior to any laboratory courses numbered above CHEM 3105.

<sup>3</sup> CHEM 3103, CHEM 3105, and CHEM 3302 are prerequisites to CHEM 3398.

Title

<sup>4</sup> Advanced Chemistry Courses for BS students consist of CHEM 3001, CHEM 3301, CHEM 3302, CHEM 3303, CHEM 3398, CHEM 3405, and all courses in Chemistry having a number of 4002 or above (except CHEM 4881 and CHEM 4891). If the student has successfully completed the appropriate prerequisite course, a graduate course in Chemistry may be included in this category.

Code

Credit Hours

(F) - Fall only course

(S) - Spring only course