

BACHELOR OF SCIENCE IN FORENSIC CHEMISTRY

Forensic chemistry is the application of chemistry to forensic investigation. The objective of the program is to provide students with a strong background in both traditional chemistry areas and chemical and biochemical applications for analysis, detection, and characterization of forensic and controlled substances. This chemistry-centered forensic science program will prepare students with a systematic training in chemical science and chemical, biochemical, and instrumental analysis for forensic applications. Majors will gain technical skills to develop a career in forensic science, forensic medicine, forensic drug analysis, toxicology, DNA analysis, health care, or criminalistics.

Required Courses

Code	Title	Credit Hours
Forensic Chemistry Requirements		(51)
CHEM 100	Intro to the Profession	2
CHEM 124	Princ of Chemistry I with Lab	4
CHEM 125	Prin of Chemistry II w/Lab	4
CHEM 237	Organic Chemistry I	4
CHEM 239	Organic Chemistry II	3
CHEM 240	Organic Chemistry Lab	2
CHEM 247	Analytical Chemistry	3
CHEM 321	Instrumental Analysis	4
CHEM 343	Physical Chemistry I	3
CHEM 344	Physical Chemistry II	4
CHEM 415	Inorganic Chemistry	3
CHEM 434	Spec Methods in Id and Analys	4
CHEM 463	Analytical Method Develop Lab	3
CHEM 475	Forensic Chemistry	3
CHEM 476	Forensic Chemistry Laboratory	3
CHEM 485	Chemistry Colloquium	1
CHEM 495	Seminar in Special Topics	1
Forensic Chemistry Electives		(6)
Select two courses from the following:		6
CHEM 416	Advanced Chemistry Lab	3
CHEM 452	Cheminformatics	3
CHEM 460	Bioanalytical Chemistry	3
CHEM 461	Bioanalytical Chemistry Lab	3
CHEM 467	Medicinal Chemistry	3
CHEM 472	Environmental Chemistry	3
CHEM 473	Environmental Analytical Chem	3
CHEM 500	Advanced Analytical Chemistry	3
CHEM 513	Chemometrics & Statistics	3
CHEM 538	Physical Biochemistry	3
Biology Requirements		(6-7)
BIOL 107	General Biol Lecture	3
or BIOL 115	Human Biology	
BIOL 401	Introductory Biochemistry	3-4
or BIOL 403	Biochemistry	
Mathematics Requirements		(18)
MATH 151	Calculus I	5
MATH 152	Calculus II	5
MATH 251	Multivariate & Vector Calculus	4
MATH 252	Introduction to Diff Equations	4
Physics Requirements		(8)
PHYS 123	General Physics I: Mechanics	4

PHYS 221	Gen Physics II: Elect&Magntism	4
Computer Science Requirement		(2)
CS 105	Intro to Computer Programming	2
or CS 110	Computing Principles	
Humanities and Social Sciences Requirements		(21)
See Illinois Tech Core Curriculum, sections B and C		21
Interprofessional Projects (IPRO)		(6)
See Illinois Tech Core Curriculum, section E		6
Free Electives		(9)
Select nine credit hours ¹		9
Total Credit Hours		127-128

¹ Suggested electives include: BIOL 210, BIOL 214, BIOL 445, BIOL 514, BIOL 550, ITMD 521, ITMD 525, ITMD 527, and ITMS 538.

Bachelor of Science in Forensic Chemistry Curriculum

		Year 1	
Semester 1	Credit Hours	Semester 2	Credit Hours
CHEM 124	4	CHEM 100	2
CS 105 or 110	2	CHEM 125	4
MATH 151	5	MATH 152	5
Humanities 200-level Course	3	PHYS 123	4
		Social Sciences Elective	3
14		18	
		Year 2	
Semester 1	Credit Hours	Semester 2	Credit Hours
CHEM 237	4	CHEM 239	3
BIOL 107 or 115	3	CHEM 240	2
MATH 251	4	CHEM 247	3
PHYS 221	4	MATH 252	4
Humanities or Social Sciences Elective	3	Humanities Elective (300+)	3
18		15	
		Year 3	
Semester 1	Credit Hours	Semester 2	Credit Hours
CHEM 321	4	CHEM 344	4
CHEM 343	3	CHEM 434	4
I PRO Elective I	3	CHEM 475	3
Social Sciences Elective (300+)	3	CHEM 485	1
Free Elective ¹	3	Humanities Elective (300+)	3
16		15	
		Year 4	
Semester 1	Credit Hours	Semester 2	Credit Hours
BIOL 401 or 403	3-4	CHEM 495	1
CHEM 415	3	Forensic Chemistry Elective ²	3
CHEM 463	3	Forensic Chemistry Elective ²	3
CHEM 476	3	I PRO Elective II	3
Free Elective ¹	3	Social Sciences Elective (300+)	3
		Free Elective ¹	3
15-16		16	

Total Credit Hours: 127-128

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² Choose from the following courses: CHEM 416, CHEM 452, CHEM 460, CHEM 461, CHEM 467, CHEM 472, CHEM 473, CHEM 500, CHEM 513, or CHEM 538.