B.S. Forensic Science

Chemistry Option

Forensic Science at EKU

The mission of the forensic science program at Eastern Kentucky University is to provide a rigorous science-based undergraduate education that will prepare students for careers in forensic science or other careers requiring scientific backgrounds. The goals of the program are to provide students with (1) a knowledge base in chemistry, biology, physics, and mathematics needed to understand and perform work typically done in forensic science, chemical, or other science laboratories; (2) the technical and intellectual skills needed to work successfully as a-professional forensic scientist, chemist, or other related professions; and (3) to instill in students attitudes and values appropriate for a professional forensic scientist, chemist, or other science professional. The EKU forensic science program, founded in 1974, is one of only 18 B.S. programs in the U.S. accredited by the Forensic Science Education Programs Accreditation Commission (FEPAC)

Forensic Science, Chemistry Option

The Chemistry option of the Forensic Science degree is for people interested in working in areas of a forensic laboratory requiring a knowledge of analytical chemistry. These would include areas such as trace, toxicology, drug identification, or firearms. Forensic analytical work requires patience and diligence, with attention to detail and high quality standards. The forensic chemist applies scientific knowledge and skill to solve complex real-life problems in analytical chemistry in support of investigative work. A forensic chemist must be able to communicate effectively, both orally and in writing, have personal integrity and high ethical standards, and have no history of drug abuse or criminal activity. Because our program provides a strong knowledge base and skill set in analytical chemistry, graduates can also pursue careers as a chemist in a variety of chemical laboratories in industry, environmental work, or pharmaceutical science.

Accelerated Dual Degree (3+2)

Undergraduate students majoring in chemistry or forensic science have the option of combining their bachelor's degree with an M.S. Chemistry degree with one additional year of study. For more information visit http://www.chemistry.eku.edu/chemistry-graduate-studies.

What To Expect

Students majoring in Forensic Science begin their studies taking courses in chemistry, biology, mathematics, physics, and general education designed to provide a strong base of understanding about the world in which we live. As students progress in their studies, forensic science courses become more prevalent in their schedules, and students will master the skills needed to perform successfully as a forensic scientist.

Department Facilities & Student Organizations

Forensic Science majors have access to modern instructional laboratories and instrumentation in the New Science Building which was occupied beginning in Spring, 2012. Students receive direct instruction from faculty and have opportunities to work independently on research projects. Students are also encouraged to take advantage of internship and cooperative education opportunities. The department has two student organizations 1) Crime & Chemistry Club (Chemistry & Forensic Majors) and 2) Caduceus Club (pre-medical/pre-dental/pre-pharmacy majors).

For More Information:

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CURRICULUM GUIDE
Forensic Science, B.S. (Forensic Chemistry Option)
2012-2013
Website: www.forensicscience.eku.edu
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521 Lancaster Ave.
4126 New Science Building
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*The schedule below is an **EXAMPLE** of how you can arrange your class schedule.*
Please consult your advisor for specific changes that may need to be made.

	Fall Semester		Spring Semester	
Freshman Year	CHE 111	3	BIO 111 (*Fulfills Gen. Ed. 4A*)	4
	CHE 111L	1	CHE 112	3
	Gen. Ed. 1A (*ENG 101 or 105*)	3	CHE 112L	1
	§ MAT 124 (*Fulfills Gen. Ed. 2*)	4	Gen. Ed. 1B (*ENG 102*)	3
	Gen. Ed. 3A (*Arts*) ***or*** 3A/B (*Integrated*)	3	Gen. Ed. 1C (*CMS 100 or 210*)	3
	ASO 100	1		
	TOTAL	**15**	**TOTAL**	**14**
Sophomore Year	CHE 361	3	CHE 362	3
	CHE 361L	1	CHE 362L	1
	FOR 301	3	CHE 325	3
	PHY 131 ***or*** 201 (*Fulfills Gen. Ed. 4B*)	5	CHE 325L	2
			PHY 132 ***or*** 202	5
	Gen. Ed. 6 (*Diversity*)	3	Gen. Ed. 6 (*Diversity*)	3
	TOTAL	**15**	**TOTAL**	**17**
Junior Year	FOR 401	3	FOR 412	2
	FOR 411	3	FOR 412L	1
	FOR 411L	1	FOR 430	3
	FOR 440	3	FOR 442L	1
	FOR 451	2	FOR 465W	3
	FOR 451L	1	FOR 475	3
	STA 270	3		
	TOTAL	**16**	**TOTAL**	**13**
Senior Year	CHE 570	4	FOR 499 (*ACCT*)	3
	CHE 430 ***or*** CHE 431	3	Gen. Ed. 3B (*Humanities*) ***or*** 3A/B (*Integrated*)	3
	FOR 420	1		
	Gen. Ed. 5A (*History*)	3	Wellness	3
	Gen. Ed. 5B (*Soc. & Behav. Sci.*)	3	Free Elective	2
	Free Elective	3	Free Elective	2
	TOTAL	**17**	**TOTAL**	**13**

§ A preparatory course in mathematics (MAT 109) may be required before admission to MAT 124.

Upper division courses *(All students are required to have a minimum of 42 hrs. upper division courses distributed throughout Major/Supporting/Gen Ed/Free Electives categories).*

All baccalaureate degree seeking students who enter the University are required to successfully complete one writing intensive course following completion of the ENG 102, ENG 105, or HON 102/103. Writing intensive courses are designated with the suffix "W" following the course prefix and number (e.g. HUM 300W).

Applied Critical & Creative Thinking (ACCT) Requirement: Forensic Science majors will fulfill ACCT with FOR 499. *(Credit hours are incorporated into program requirements.)*

Course Number	Course Name
CORE COURSE REQUIREMENTS	
CHE 111	**General Chemistry I**
CHE 111L	**General Chemistry Lab I**
CHE 112	**General Chemistry II**
CHE 112L	**General Chemistry Lab II**
CHE 325	**Analytical Chemistry**
CHE 325L	**Analytical Chemistry Lab**
CHE 361	**Organic Chemistry I**
CHE 361L	**Organic Chemistry Lab I**
CHE 362	**Organic Chemistry II**
CHE 362L	**Organic Chemistry Lab II**
CHE 430	**Biochemistry of Macromolecules**
CHE 431	**Metabolic Biochemistry**
CHE 570	**Biophysical Chemistry**
FOR 301	**Intro. to Forensic Science**
FOR 401	**Forensic Professional Practice**
FOR 411	**Instrumental Analysis**
FOR 411L	**Forensic Instrumental Lab**
FOR 420	**Forensic DNA Analysis**
FOR 465W	**Expert Witness Testimony**
FOR 499	**Forensic Science Capstone**
Bracketed items must/should be taken concurrently.	
FORENSIC CHEMISTRY OPTION REQUIREMENTS	
FOR 412	**Forensic Trace Evidence**
FOR 412L	**Forensic Trace Evidence Lab**
FOR 430	**Forensic Analytical Toxicology**
FOR 440	**Drug Chemistry**
FOR 442L	**Drugs and Toxicology Lab**
FOR 451	**Forensic Microscopic Analysis**
FOR 451L	**Forensic Microscopy Lab**
FOR 475	**Mass Spectrometry**
SUPPORTING COURSE REQUIREMENTS	
BIO 111	**Cell and Molecular Biology**
MAT 124	**Calculus I**
PHY 131 *or*	**College Physics I**
PHY 201	**University Physics I**
PHY 132 *or*	**College Physics II**
PHY 202	**University Physics II**
STA 270	**Applied Statistics I**
ASO 100	**Student Success Seminar**

EXAMPLE