

CHEMISTRY/BIOCHEMISTRY MAJOR WITH FORENSIC SCIENCE OPTION, BACHELOR OF SCIENCE (BS)

The forensic science option prepares students for entry-level positions in state and federal forensic science labs as well as for graduate and professional schools. Competitive internships at regional forensic labs are integrated into the curriculum along with research and independent study. Students must complete 45 hours of specified core courses (see footnote1) with a combined minimum GPA ≥ 3.0 before being eligible to declare the forensic major. **For all internships with law enforcement agencies, students will be required to pass a thorough background check.** It is assumed that the student will enter the program ready to take MATH 161. To finish in four years, students must take an average load of more than 15 credits per quarter.

Note: the above option will require more than 12 terms (or 4 years) to complete at an average of 15 credits per term.

Required Chemistry Courses

CHEM 140	CRIMINALISTICS AND FORENSIC CHEMISTRY ¹	5
CHEM 151	GENERAL CHEMISTRY ¹	5
CHEM 152	GENERAL CHEMISTRY ¹	5
CHEM 153	GENERAL CHEMISTRY ¹	5
CHEM 304	QUANTITATIVE ANALYSIS ¹	6
CHEM 319	MODERN INORGANIC CHEMISTRY	4
CHEM 351	ORGANIC CHEMISTRY	4
CHEM 352	ORGANIC CHEMISTRY	4
CHEM 353	ORGANIC CHEMISTRY	3
CHEM 372	ORGANIC CHEM LABORATORY I	3
CHEM 373	ORGANIC CHEM LABORATORY II	3
CHEM 420	INSTRUMENTAL ANALYSIS	5
CHEM 421	PHYSICAL CHEMISTRY	4
CHEM 422	PHYSICAL CHEMISTRY	3
CHEM 431	PHYSICAL CHEMISTRY LABORATORY	1
CHEM 445	TOPICS IN FORENSIC CHEMISTRY	5
CHEM 450	ADVANCED FORENSIC CHEMISTRY	5
CHEM 480	BIOCHEMISTRY	5
CHEM 491	SENIOR THESIS ²	5
CHEM 495	INTERNSHIP	5
or CHEM 399	DIRECTED STUDY	
or CHEM 499	DIRECTED STUDY	

Required Supporting Courses

BIOL 171	BIOLOGY I ¹	5
BIOL 172	BIOLOGY II ¹	5
BIOL 173	BIOLOGY III	5
BIOL 310	FUNDAMENTALS OF GENETICS	5
BIOL 438	MOLECULAR BIOLOGY	5
CRIM 300	INTRODUCTION TO THE CRIMINAL JUSTICE SYSTEM	5
MATH 161	CALCULUS I	5

MATH 162	CALCULUS II	5
MATH 163	CALCULUS III	5
MATH 380	ELEMENTARY PROBABILITY AND STATISTICS	5
PHYS 151	GENERAL PHYSICS I ¹	4
PHYS 152	GENERAL PHYSICS II	4
PHYS 153	GENERAL PHYSICS III	4
PHYS 161	MECHANICS LABORATORY	1
PHYS 162	HEAT AND OPTICS LABORATORY	1
PHYS 163	INSTRUMENTATION LAB I	1
Total Credits		150

Footnotes

- ¹ Note: Core courses are to be completed before formal acceptance into the forensics major and enrollment in the forensics science internship course.
- ² Note: Students are required to do research on a forensic project and to take it for 5 credits (catalog description states 4-6 credits). Projects must be approved by the forensic science program advisor.

Suggested Supporting Courses

BIOL 301	MICROBIOLOGY	5
CMST 201	PUBLIC SPEAKING	5
CRIM 304	FORENSIC INQUIRY	5
POLI 306	BASIC CONCEPTS OF CRIMINAL LAW	5
TCOM 205	INTRODUCTION TO TECHNICAL COMMUNICATION	5

For information on General Education, see Undergraduate Degree (<http://catalog.ewu.edu/archives/2016-2017/undergraduate-degree>).

Student Learning Outcomes—students will

- demonstrate a broad-based knowledge of major concepts in the areas of inorganic, organic, analytical and physical chemistry;
- demonstrate sufficient preparation in chemistry to successfully compete in a graduate or professional program or to realize employment in a chemistry- or biochemistry-related career;
- demonstrate a capacity to use modern instrumentation and classical techniques for the analysis and/or separation of chemicals and an ability to interpret data;
- demonstrate effective oral and written communication skills and critical thinking skills as related to the field of chemistry;
- demonstrate knowledge of safe practices in the handling, usage and disposal of chemicals.