

FORENSIC SCIENCE, B.S.

Begin Campus: Any Penn State Campus

End Campus: University Park

Degree Requirements

For the Bachelor of Science degree in Forensic Science with an option in Forensic Molecular Biology, a minimum of 122 credits is required; with an option in Forensic Chemistry, a minimum of 123 credits is required:

Requirement	Credits
General Education	45
Electives	5-10
Requirements for the Major	88-91

18-21 of the 45 credits for General Education are included in the Requirements for the Major. This includes: 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GH courses; 0-3 credits of GS courses.

Requirements for the Major

To graduate, a student enrolled in the major must earn a grade of C or better in each course designated by the major as a C-required course, as specified by Senate Policy 82-44 (<https://senate.psu.edu/policies-and-rules-for-undergraduate-students/82-00-and-83-00-degree-requirements/#82-44>).

Common Requirements for the Major (All Options)

Code	Title	Credits
Prescribed Courses		
<i>Prescribed Courses: Require a grade of C or better</i>		
BIOL 110	Biology: Basic Concepts and Biodiversity	4
BIOL 230W	Biology: Molecules and Cells	4
CHEM 110	Chemical Principles I	3
CHEM 111	Experimental Chemistry I	1
CHEM 112	Chemical Principles II	3
CHEM 113	Experimental Chemistry II	1
CHEM 210	Organic Chemistry I	3
CHEM 212	Organic Chemistry II	3
CHEM 213	Laboratory in Organic Chemistry	2
FRNSC 100	Introduction to Forensic Science	3
FRNSC 210	Essential Practices of Forensic Science	3
FRNSC 400	Courtroom Proceedings and Testimony	1
FRNSC 410	A Scientific Approach to Crime Scene Investigation	2
FRNSC 411	Criminalistics: Trace and Impression Evidence	3
FRNSC 413	Criminalistics: Biology	3
FRNSC 415W	Laboratory in Crime Scene Investigation	2
FRNSC 475	Forensic Science Seminar	1
FRNSC 485	The Profession of Forensic Science	2
MATH 140	Calculus With Analytic Geometry I	4
MATH 141	Calculus with Analytic Geometry II	4
PHIL 132	Bioethics	3
STAT 250	Introduction to Biostatistics	3

Additional Courses

Additional Courses: Require a grade of C or better

CRIM 100	Introduction to Criminal Justice	3
or CRIM 113	Introduction to Law	
Select one of the following sequences:		8
PHYS 211	General Physics: Mechanics	
& PHYS 212	and General Physics: Electricity and Magnetism	
PHYS 250	Introductory Physics I	
& PHYS 251	and Introductory Physics II	

Requirements for the Option

Select an option	19-22
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Requirements for the Option

Forensic Molecular Biology Option (19 credits)

Code	Title	Credits
Prescribed Courses		
<i>Prescribed Courses: Require a grade of C or better</i>		
BMB 401	General Biochemistry	3
BMB 442	Laboratory in Proteins, Nucleic Acids, and Molecular Cloning	3
FRNSC 420	Advanced Molecular Biology for Forensic Scientists	3
FRNSC 421W	Forensic Molecular Biology	4

Additional Courses

Additional Courses: Require a grade of C or better

BIOL 222	Genetics	3
or BIOL 322	Genetic Analysis	
Select one of the following:		3
BIOL 405	Molecular Evolution	
BIOL 422	Advanced Genetics	
BIOL 460	Human Genetics	
BMB 402	General Biochemistry	
BMB 428	Physical Chemistry with Biological Applications	
BMB 433	Molecular and Cellular Toxicology	

Forensic Chemistry Option (20-22 credits)

Code	Title	Credits
Prescribed Courses		
<i>Prescribed Courses: Require a grade of C or better</i>		
CHEM 227	Analytical Chemistry	4
FRNSC 425	Chromatography and Spectroscopy in Forensic Science	3
FRNSC 427W	Forensic Chemistry	4

Additional Courses

Additional Courses: Require a grade of C or better

Select three of the following:		9-11
BMB 428	Physical Chemistry with Biological Applications	
CHEM 410	Inorganic Chemistry	
CHEM 412	Transition Metal Chemistry	
CHEM 423W	Chemical Spectroscopy	
CHEM 430	Structural Analysis of Organic Compounds	
CHEM 431W	Organic and Inorganic Preparations	
CHEM 450	Physical Chemistry - Thermodynamics	
CHEM 452	Physical Chemistry - Quantum Chemistry	

General Education

Connecting career and curiosity, the General Education curriculum provides the opportunity for students to acquire transferable skills necessary to be successful in the future and to thrive while living in interconnected contexts. General Education aids students in developing intellectual curiosity, a strengthened ability to think, and a deeper sense of aesthetic appreciation. These are requirements for all baccalaureate students and are often partially incorporated into the requirements of a program. For additional information, see the General Education Requirements (<https://bulletins.psu.edu/undergraduate/general-education/baccalaureate-degree-general-education-program/>) section of the Bulletin and consult your academic adviser.

The keystone symbol appears next to the title of any course that is designated as a General Education course. Program requirements may also satisfy General Education requirements and vary for each program.

Foundations (grade of C or better is required and Inter-Domain courses do not meet this requirement.)

- **Quantification (GQ):** 6 credits
- **Writing and Speaking (GWS):** 9 credits

Breadth in the Knowledge Domains (Inter-Domain courses do not meet this requirement.)

- **Arts (GA):** 3 credits
- **Health and Wellness (GHW):** 3 credits
- **Humanities (GH):** 3 credits
- **Social and Behavioral Sciences (GS):** 3 credits
- **Natural Sciences (GN):** 3 credits

Integrative Studies

- **Inter-Domain Courses (Inter-Domain):** 6 credits

Exploration

- **GN,** may be completed with Inter-Domain courses: 3 credits
- **GA, GH, GN, GS, Inter-Domain courses.** This may include 3 credits of World Language course work beyond the 12th credit level or the requirements for the student's degree program, whichever is higher: 6 credits

University Degree Requirements

First Year Engagement

All students enrolled in a college or the Division of Undergraduate Studies at University Park, and the World Campus are required to take 1 to 3 credits of the First-Year Seminar, as specified by their college First-Year Engagement Plan.

Other Penn State colleges and campuses may require the First-Year Seminar; colleges and campuses that do not require a First-Year Seminar provide students with a first-year engagement experience.

First-year baccalaureate students entering Penn State should consult their academic adviser for these requirements.

Cultures Requirement

6 credits are required and may satisfy other requirements

- **United States Cultures:** 3 credits
- **International Cultures:** 3 credits

Writing Across the Curriculum

3 credits required from the college of graduation and likely prescribed as part of major requirements.

Total Minimum Credits

A minimum of 120 degree credits must be earned for a baccalaureate degree. The requirements for some programs may exceed 120 credits. Students should consult with their college or department adviser for information on specific credit requirements.

Quality of Work

Candidates must complete the degree requirements for their major and earn at least a 2.00 grade-point average for all courses completed within their degree program.

Limitations on Source and Time for Credit Acquisition

The college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. Credit used toward degree programs may need to be earned from a particular source or within time constraints (see Senate Policy 83-80 (<https://senate.psu.edu/policies-and-rules-for-undergraduate-students/82-00-and-83-00-degree-requirements/#83-80>)). For more information, check the Suggested Academic Plan for your intended program.