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, a minimum of 124-126 credits is required:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Education</td>
<td>45</td>
</tr>
<tr>
<td>Requirements for the Major</td>
<td>97-99</td>
</tr>
</tbody>
</table>

18 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.

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 (http://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.)
- Quantification (GQ): 6 credits
- Writing and Speaking (GWS): 9 credits

Knowledge Domains
- Arts (GA): 6 credits
- Health and Wellness (GHW): 3 credits
- Humanities (GH): 6 credits
- Social and Behavioral Sciences (GS): 6 credits
- Natural Sciences (GN): 9 credits

Integrative Studies (may also complete a Knowledge Domain requirement)
- Inter-Domain or Approved Linked Courses: 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 (http://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.

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 (http://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)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 110</td>
<td>Chemical Principles I</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 111</td>
<td>Experimental Chemistry I</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 112</td>
<td>Chemical Principles II</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 113</td>
<td>Experimental Chemistry II</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 210</td>
<td>Organic Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 212</td>
<td>Organic Chemistry II</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 213</td>
<td>Laboratory in Organic Chemistry</td>
<td>2</td>
</tr>
<tr>
<td>FRNSC 100</td>
<td>Introduction to Forensic Science</td>
<td>3</td>
</tr>
<tr>
<td>FRNSC 210</td>
<td>Essential Practices of Forensic Science</td>
<td>3</td>
</tr>
<tr>
<td>FRNSC 400</td>
<td>Courtroom Proceedings and Testimony</td>
<td>1</td>
</tr>
<tr>
<td>FRNSC 410</td>
<td>A Scientific Approach to Crime Scene Investigation</td>
<td>2</td>
</tr>
<tr>
<td>FRNSC 411</td>
<td>Criminalistics: Trace and Impression Evidence</td>
<td>3</td>
</tr>
<tr>
<td>FRNSC 413</td>
<td>Criminalistics: Biology</td>
<td>3</td>
</tr>
<tr>
<td>FRNSC 415W</td>
<td>Laboratory in Crime Scene Investigation</td>
<td>2</td>
</tr>
<tr>
<td>FRNSC 475</td>
<td>Forensic Science Seminar</td>
<td>1</td>
</tr>
</tbody>
</table>
FRNSC 485W  Coalescence of Forensic Science Concepts  4
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  34-36

Requirements for the Option

Forensic Biology Option (36 credits)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Prescribed Courses: Require a grade of C or better</td>
<td></td>
</tr>
<tr>
<td>BMB 251</td>
<td>Molecular and Cell Biology I</td>
<td>3</td>
</tr>
<tr>
<td>BMB 400</td>
<td>Molecular Biology of the Gene</td>
<td>3</td>
</tr>
<tr>
<td>BMB 401</td>
<td>General Biochemistry</td>
<td>3</td>
</tr>
<tr>
<td>BMB 442</td>
<td>Laboratory in Proteins, Nucleic Acids, and Molecular Cloning</td>
<td>3</td>
</tr>
<tr>
<td>FRNSC 421W</td>
<td>Forensic Molecular Biology</td>
<td>4</td>
</tr>
<tr>
<td>MICRB 201</td>
<td>Introductory Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>MICRB 202</td>
<td>Introductory Microbiology Laboratory</td>
<td>2</td>
</tr>
</tbody>
</table>

Additional Courses

Additional Courses: Require a grade of C or better
BIOL 222  Genetics  3
or BIOL 322  Genetic Analysis

Select two of the following:  6

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

Supporting Courses and Related Areas

Select 6 credits in consultation with adviser  6

Forensic Chemistry Option (34 credits)

<table>
<thead>
<tr>
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<th>Credits</th>
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<td></td>
<td>Prescribed Courses: Require a grade of C or better</td>
<td></td>
</tr>
<tr>
<td>BIOL 110</td>
<td>Biology: Basic Concepts and Biodiversity</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 230W</td>
<td>Biology: Molecules and Cells</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 227</td>
<td>Analytical Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 425W</td>
<td>Chromatography and Electrochemistry</td>
<td>4</td>
</tr>
<tr>
<td>FRNSC 427W</td>
<td>Forensic Chemistry</td>
<td>4</td>
</tr>
</tbody>
</table>

Additional Courses

Additional Courses: Require a grade of C or better
Select three of the following:  9

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

Supporting Courses and Related Areas

Select 6 credits in consultation with adviser  6