

FORENSIC SCIENCE, B.S.

Seven Penn State campuses are scheduled for closure after Spring 2027: DuBois, Fayette, New Kensington, Mont Alto, Shenango, Wilkes-Barre, and York. New students are not being admitted at these campuses.

Begin Campus: Any Penn State Campus

End Campus: University Park

Program Description

Forensic Science is the application of scientific principles and methods to assist criminal and civil investigations and litigation. This major is an inter-college collaboration among academic units and provides students with a strong foundation in the biological, physical, and mathematical sciences. It introduces them to relevant topics in criminalistics, forensic chemistry, forensic biology, crime scene investigation, and appropriate social sciences. Students are educated on the role of forensic scientists in the criminal justice system, the collection and analysis of scientific evidence, and the manner in which evidence is presented in court. Graduates of this major could pursue employment as a scientist in a federal, state, or private forensic laboratory or with insurance companies, homeland security agencies, or the judicial community. Graduates could also choose to pursue advanced degrees, for example, in forensic science, medicine, psychology, anthropology, pathology, odontology, entomology, toxicology, law, or in the general sciences.

What is Forensic Science?

Forensic Science is the application of science to matters of the law. A forensic scientist may develop a deep understanding of and hands-on lab experience in serology, biochemistry, and forensic molecular biology, with particular emphasis on forensic DNA analysis. A forensic scientist might also use analytical, physical, and inorganic chemistry for the forensic analysis of controlled substances, trace evidence, fire debris, ignitable liquids, and firearms and gunshot residue. In the United States, there are over 4,000 crime laboratories administered by federal, state, and local governments or private industry. Our Forensic Science program provides a strong scientific foundation and general criminalistics education that allows room for all students to individualize their educational experience towards specific degree and career goals.

You Might Like This Program If...

- You are interested in utilizing your scientific knowledge to help solve complex problems concerning civil, criminal, and homeland security issues.
- You like and want to further study several science disciplines.
- You want to understand how evidence is collected at the crime scene, analyzed in the laboratory, and presented in courts of law.
- You want to utilize state-of-the-art instrumentation to analyze materials as part of laboratory exercises.
- You want to pursue a career in forensic science casework, research, or education.

Entrance to Major

In order to be eligible for entrance to the Forensic Science major, a student must have:

1. attained at least a 2.00 cumulative grade point average
2. attained at least a 2.50 aggregate grade point average in the eight (8) entrance-to-major courses
3. completed and earned a grade of C or better in each of the following courses:
CHEM 110, CHEM 111, CHEM 112, CHEM 210, FRNSC 210, MATH 140, MATH 141, and PHYS 211 or PHYS 250.

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/students/policies-and-rules-for-undergraduate-students/82-00-and-83-00-degree-requirements/>).

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 & PHYS 212	General Physics: Mechanics and General Physics: Electricity and Magnetism	
PHYS 250 & PHYS 251	Introductory Physics I and Introductory Physics II	

Requirements for the Option

Select an option 19-22

Requirements for the Option**Forensic Molecular Biology Option (19 credits)**

Code	Title	Credits
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Prescribed Courses*Prescribed Courses: Require a grade of C or better*

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
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Prescribed Courses*Prescribed Courses: Require a grade of C or better*

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	Advanced Synthetic Methodologies	
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/students/policies-and-rules-for-undergraduate-students/82-00-and-83-00-degree-requirements/>)). For more information, check the Suggested Academic Plan for your intended program.

Academic Advising

The objectives of the university's academic advising program are to help advisees identify and achieve their academic goals, to promote their intellectual discovery, and to encourage students to take advantage of both in-and out-of class educational opportunities in order that they become self-directed learners and decision makers.

Both advisers and advisees share responsibility for making the advising relationship succeed. By encouraging their advisees to become engaged in their education, to meet their educational goals, and to develop the habit of learning, advisers assume a significant educational role. The advisee's unit of enrollment will provide each advisee with a primary academic adviser, the information needed to plan the chosen program of study, and referrals to other specialized resources.

READ SENATE POLICY 32-00: ADVISING POLICY (<https://senate.psu.edu/students/policies-and-rules-for-undergraduate-students/32-00-advising-policy/>)

University Park

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Suggested Academic Plan

The suggested academic plan(s) listed on this page are the plan(s) that are in effect during the 2026-27 academic year. To access previous years' suggested academic plans, please visit the archive (<https://bulletins.psu.edu/undergraduate/archive/>) to view the appropriate Undergraduate Bulletin edition.

Forensic Molecular Biology Option: Forensic Science, B.S. at University Park Campus

The course series listed below provides **only one** of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an **Academic Requirements** or **What If** report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

First Year

Fall	Credits Spring	Credits
CHEM 110 ^{*#†}	3 CHEM 112 ^{*#†}	3
CHEM 111 ^{*#}	1 CHEM 113 [*]	1
MATH 140 ^{*†#†}	4 MATH 141 ^{*†#†}	4
PSU 16	1 FRNSC 100 ^{**†}	3
CRIM 100 or 113 ^{*†}	3 General Education Course	3
ENGL 15, 30H, or ESL 15 [†]	3	
	15	14

Second Year

Fall	Credits Spring	Credits
BIOL 114 ^{*1}	3 BIOL 234 ^{*1}	3
BIOL 115 ^{*1}	1 BIOL 235W ^{*1}	1
CHEM 210 ^{*#}	3 CHEM 212 [*]	3
FRNSC 210 ^{*#}	3 CHEM 213 [*]	2
PHYS 211 or 250 ^{*#}	4 PHYS 212 or 251 [*]	4
General Education Course	3 STAT 250 ^{*2}	3
	17	16

Third Year

Fall	Credits Spring	Credits
BMB 401 [*]	3 BIOL 222 or 322 ^{*3}	3
FRNSC 410 [*]	2 ENGL 202C, 202A, 202B, or 202D [†]	3
FRNSC 413 [*]	3 FRNSC 411 [*]	3
CAS 100A, 100B, or 100C [†]	3 PHIL 132 ^{*†}	3
General Education Course	3 General Education Course	3
	14	15

Fourth Year

Fall	Credits Spring	Credits
BMB 442 [*]	3 FRNSC 421W [*]	4
FRNSC 400 [*]	1 FRNSC 475 [*]	1
FRNSC 415W [*]	2 FRNSC 485 [*]	2
FRNSC 420 [*]	3 Supporting Course (consult your adviser) ^{*4}	3
General Education Course	3 General Education Course	3
General Elective Course	3 General Elective Course	3
	15	16

Total Credits 122

* Course requires a grade of C or better for the major

‡ Course requires a grade of C or better for General Education

Course is an Entrance to Major requirement

† Course satisfies General Education and degree requirement

¹ BIOL 114 (3) & BIOL 115 (1) may be substituted with MICRB 201/MICRB 202 (5) and BIOL 234 (3) & BIOL 235W (1) may be substituted with BMB 251 (3) for students pursuing the BMB minor. Consult your adviser regarding the substitution.

² STAT 250 (3) may be substituted with STAT 200 (4). Consult your adviser regarding the substitution.

³ BIOL 222 may be taken, but it is only offered in the Fall semester.

⁴ Approved Supporting Courses:

- 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

If you wish to take a different 400-level science course as a supporting course, consult your adviser. Permission for the substitution will need to be granted by the Program Director.

University Requirements and General Education Notes:

US and IL are abbreviations used to designate courses that satisfy Cultural Diversity Requirements (United States and International Cultures).

W, M, X, and Y are the suffixes at the end of a course number used to designate courses that satisfy University Writing Across the Curriculum requirement.

General Education includes Foundations (GWS and GQ), Knowledge Domains (GHW, GN, GA, GH, GS) and Integrative Studies (Inter-domain) requirements. N or Q (Honors) is the suffix at the end of a course number used to help identify an Inter-domain course, but the inter-domain attribute is used to fill audit requirements. Foundations courses (GWS and GQ) require a grade of 'C' or better.

All incoming Schreyer Honors College first-year students at University Park will take ENGL 137H/CAS 137H in the fall semester and ENGL 138T/CAS 138T in the spring semester. These courses carry the GWS designation and satisfy a portion of that General Education requirement. If the student's program prescribes GWS these courses will replace both ENGL 15/ENGL 30H and CAS 100A/CAS 100B/CAS 100C. Each course is 3 credits.

Forensic Molecular Biology Option: Forensic Science, B.S. at Commonwealth Campuses

The course series listed below provides **only one** of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an **Academic Requirements** or **What If** report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

First Year

Fall	Credits Spring	Credits
CHEM 110 ^{*#†}	3 CHEM 112 ^{*#†}	3
CHEM 111 ^{*#}	1 CHEM 113 [*]	1
MATH 140 ^{*†#†}	4 MATH 141 ^{*†#†}	4
PSU 16	1 FRNSC 100 ^{*†}	3
CRIM 100 or 113 ^{*†}	3 General Education Course	3
ENGL 15, 30H, or ESL 15 [‡]	3	
	15	14

Second Year

Fall	Credits Spring	Credits
BIOL 110 or 114 <i>and</i> 115 ^{*1}	4 BIOL 230W or 234 <i>and</i> 235W ^{*1}	4
CHEM 210 ^{*#}	3 CHEM 212 [*]	3
FRNSC 210 ^{*#}	3 CHEM 213 [*]	2
PHYS 211 or 250 ^{*#}	4 PHYS 212 or 251 [*]	4
General Education Course	3 STAT 250 [*]	3
	17	16

Third Year

Fall	Credits Spring	Credits
BMB 401 [*]	3 BIOL 222 or 322 ^{*3}	3
FRNSC 410 [*]	2 ENGL 202C, 202A, 202B, or 202D [‡]	3
FRNSC 413 [*]	3 FRNSC 411 [*]	3
CAS 100A, 100B, or 100C [‡]	3 PHIL 132 ^{*†}	3
General Education Course	3 General Education Course	3
	14	15

Fourth Year

Fall	Credits Spring	Credits
BMB 442 [*]	3 FRNSC 421W [*]	4
FRNSC 400 [*]	1 FRNSC 475 [*]	1
FRNSC 415W [*]	2 FRNSC 485 [*]	2
FRNSC 420 [*]	3 Supporting Course (consult your adviser) ^{*4}	3
General Education Course	3 General Education Course	3
General Elective Course	3 General Elective Course	3
	15	16

Total Credits 122

* Course requires a grade of C or better for the major

‡ Course requires a grade of C or better for General Education

Course is an Entrance to Major requirement

† Course satisfies General Education and degree requirement

¹ BIOL 110 or BIOL 114 (3) & BIOL 115 (1) may be substituted with MICRB 201/MICRB 202 (5) and BIOL 230W or BIOL 234 (3) & BIOL 235W (1) may be substituted with BMB 251 (3) for students pursuing the BMB minor. Consult your adviser regarding the substitution.

² STAT 250 (3) may be substituted with STAT 200 (3). Consult your adviser regarding the substitution.

³ BIOL 222 may be taken, but it is only offered in the Fall semester.

⁴ Approved Supporting Courses:

- 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

If you wish to take a different 400-level science course as a supporting course, consult your adviser. Permission for the substitution will need to be granted by the Program Director.

University Requirements and General Education Notes:

US and IL are abbreviations used to designate courses that satisfy Cultural Diversity Requirements (United States and International Cultures).

W, M, X, and Y are the suffixes at the end of a course number used to designate courses that satisfy University Writing Across the Curriculum requirement.

General Education includes Foundations (GWS and GQ), Knowledge Domains (GHW, GN, GA, GH, GS) and Integrative Studies (Inter-domain) requirements. N or Q (Honors) is the suffix at the end of a course number used to help identify an Inter-domain course, but the inter-domain attribute is used to fill audit requirements. Foundations courses (GWS and GQ) require a grade of 'C' or better.

All incoming Schreyer Honors College first-year students at University Park will take ENGL 137H/CAS 137H in the fall semester and ENGL 138T/CAS 138T in the spring semester. These courses carry the GWS designation and satisfy a portion of that General Education requirement. If the student's program prescribes GWS these courses will replace both ENGL 15/ENGL 30H and CAS 100A/CAS 100B/CAS 100C. Each course is 3 credits.

Forensic Molecular Biology Option (MATH 22): Forensic Science, B.S. at University Park Campus

The course series listed below provides **only one** of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an **Academic Requirements** or **What If** report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

First Year

Fall	Credits Spring	Credits Summer	Credits
MATH 22	3 CHEM 110 ^{*#†}	3 CHEM 112 ^{*#†}	3
MATH 26	3 CHEM 111 ^{*#}	1 CHEM 113 [*]	1
PSU 16	1 MATH 140 ^{*†#†}	4 MATH 141 ^{*†#†}	4
CRIM 100 or 113 ^{*†}	3 FRNSC 100 ^{*†}	3	
ENGL 15, 30H, or ESL 15 [†]	3 General Education Course	3	
	13	14	8

Second Year

Fall	Credits Spring	Credits
BIOL 114 ^{*1}	3 BIOL 234 ^{*1}	3
BIOL 115 ^{*1}	1 BIOL 235W ^{*1}	1
CHEM 210 ^{*#}	3 CHEM 212 [*]	3
FRNSC 210 ^{*#}	3 CHEM 213W [*]	2
PHYS 211 or 250 ^{*#}	4 PHYS 212 or 251 [*]	4
General Education Course	3 STAT 250 ^{*2}	3
	17	16

Third Year

Fall	Credits Spring	Credits
BMB 401 [*]	3 BIOL 222 or 322 ^{*3}	3
FRNSC 410 [*]	2 ENGL 202C, 202A, 202B, or 202D [†]	3
FRNSC 413 [*]	3 FRNSC 411 [*]	3
CAS 100A, 100B, or 100C [†]	3 PHIL 132 ^{*†}	3
General Education Course	3 General Education Course	3
	14	15

Fourth Year

Fall	Credits Spring	Credits
BMB 442 [*]	3 FRNSC 421W [*]	4
FRNSC 400 [*]	1 FRNSC 475 [*]	1
FRNSC 415W [*]	2 FRNSC 485 [*]	2
FRNSC 420 [*]	3 Supporting Course (consult your adviser) ^{*4}	3

General Education Course	3 General Education Course	3
General Elective Course	3 General Elective Course	3
	15	16

Total Credits 128

* Course requires a grade of C or better for the major

‡ Course requires a grade of C or better for General Education

Course is an Entrance to Major requirement

† Course satisfies General Education and degree requirement

¹ BIOL 114 (3) & BIOL 115 (1) may be substituted with MICRB 201/MICRB 202 (5) and BIOL 234 (3) & BIOL 235W (1) may be substituted with BMB 251 (3) for students pursuing the BMB minor. Consult your adviser regarding the substitution.

² STAT 250 (3) may be substituted with STAT 200 (3). Consult your adviser regarding the substitution.

³ BIOL 222 may be taken instead, but it is only offered in the Fall semester.

⁴ Approved Supporting Courses:

- 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

If you wish to take a different 400-level science course as a supporting course, consult your adviser. Permission for the substitution will need to be granted by the Program Director.

University Requirements and General Education Notes:

US and IL are abbreviations used to designate courses that satisfy Cultural Diversity Requirements (United States and International Cultures).

W, M, X, and Y are the suffixes at the end of a course number used to designate courses that satisfy University Writing Across the Curriculum requirement.

General Education includes Foundations (GWS and GQ), Knowledge Domains (GHW, GN, GA, GH, GS) and Integrative Studies (Inter-domain) requirements. N or Q (Honors) is the suffix at the end of a course number used to help identify an Inter-domain course, but the inter-domain attribute is used to fill audit requirements. Foundations courses (GWS and GQ) require a grade of 'C' or better.

All incoming Schreyer Honors College first-year students at University Park will take ENGL 137H/CAS 137H in the fall semester and ENGL 138T/CAS 138T in the spring semester. These courses carry the GWS designation and satisfy a portion of that General Education requirement. If the student's program prescribes GWS these courses will replace both ENGL 15/ENGL 30H and CAS 100A/CAS 100B/CAS 100C. Each course is 3 credits.

Forensic Molecular Biology Option (MATH 22): Forensic Science, B.S. at Commonwealth Campuses

The course series listed below provides **only one** of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an **Academic Requirements** or **What If** report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

First Year

Fall	Credits Spring	Credits Summer	Credits
MATH 22	3 CHEM 110 ^{*#†}	3 CHEM 112 ^{*#†}	3
MATH 26	3 CHEM 111 ^{*#}	1 CHEM 113 [*]	1
PSU 16	1 MATH 140 ^{*†#†}	4 MATH 141 ^{*†#†}	4
CRIM 100 or 113 ^{*†}	3 FRNSC 100 ^{*†}	3	
ENGL 15, 30H, or ESL 15 [†]	3 General Education Course	3	
	13	14	8

Second Year

Fall	Credits Spring	Credits
BIOL 110 or 114 and 115 ^{*1}	4 BIOL 230W or 234 and 235W ^{*1}	4
CHEM 210 ^{*#}	3 CHEM 212 [*]	3
FRNSC 210 ^{*#}	3 CHEM 213 [*]	2
PHYS 211 or 250 ^{*#}	4 PHYS 212 or 251 [*]	4
General Education Course	3 STAT 250 ^{*2}	3
	17	16

Third Year

Fall	Credits Spring	Credits
BMB 401 [*]	3 BIOL 222 or 322 ^{*3}	3
FRNSC 410 [*]	2 ENGL 202C, 202A, 202B, or 202D [†]	3
FRNSC 413 [*]	3 FRNSC 411 [*]	3
CAS 100A, 100B, or 100C [†]	3 PHIL 132 ^{*†}	3
General Education Course	3 General Education Course	3
	14	15

Fourth Year

Fall	Credits Spring	Credits
BMB 442 [*]	3 FRNSC 421W [*]	4
FRNSC 400 [*]	1 FRNSC 475 [*]	1
FRNSC 415W [*]	2 FRNSC 485 [*]	2
FRNSC 420 [*]	3 Supporting Course (consult your adviser) ^{*4}	3

General Education Course	3 General Education Course	3
General Elective Course	3 General Elective Course	3
	15	16

Total Credits 128

* Course requires a grade of C or better for the major

‡ Course requires a grade of C or better for General Education

Course is an Entrance to Major requirement

† Course satisfies General Education and degree requirement

¹ BIOL 114 (3) & BIOL 115 (1) may be substituted with MICRB 201/MICRB 202 (5) and BIOL 234 (3) & BIOL 235W (1) may be substituted with BMB 251 (3) for students pursuing the BMB minor. Consult your adviser regarding the substitution.

² STAT 250 (3) may be substituted with STAT 200 (3). Consult your adviser regarding the substitution.

³ BIOL 222 may be taken instead, but it is only offered in the Fall semester.

⁴ Approved Supporting Courses:

- 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

If you wish to take a different 400-level science course as a supporting course, consult your adviser. Permission for the substitution will need to be granted by the Program Director.

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General Education includes Foundations (GWS and GQ), Knowledge Domains (GHW, GN, GA, GH, GS) and Integrative Studies (Inter-domain) requirements. N or Q (Honors) is the suffix at the end of a course number used to help identify an Inter-domain course, but the inter-domain attribute is used to fill audit requirements. Foundations courses (GWS and GQ) require a grade of 'C' or better.

All incoming Schreyer Honors College first-year students at University Park will take ENGL 137H/CAS 137H in the fall semester and ENGL 138T/CAS 138T in the spring semester. These courses carry the GWS designation and satisfy a portion of that General Education requirement. If the student's program prescribes GWS these courses will replace both ENGL 15/ENGL 30H and CAS 100A/CAS 100B/CAS 100C. Each course is 3 credits.

Forensic Chemistry Option: Forensic Science, B.S. at University Park Campus

The course series listed below provides **only one** of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an **Academic Requirements** or **What If** report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

First Year

Fall	Credits Spring	Credits
CHEM 110 ^{*#†}	3 CHEM 112 ^{*#†}	3
CHEM 111 ^{*#}	1 CHEM 113 [*]	1
MATH 140 ^{*†#†}	4 MATH 141 ^{*†#†}	4
PSU 16	1 FRNSC 100 ^{*†}	3
CRIM 100 or 113 ^{*†}	3 General Education Course	3
ENGL 15, 30H, or ESL 15 [†]	3	
	15	14

Second Year

Fall	Credits Spring	Credits
BIOL 114 ^{*1}	3 BIOL 234 ^{*1}	3
BIOL 115 ^{*1}	1 BIOL 235W ^{*1}	1
CHEM 210 ^{*#}	3 CHEM 212 [*]	3
FRNSC 210 ^{*#}	3 CHEM 213W [*]	2
PHYS 211 or 250 ^{*#}	4 PHYS 212 or 251 [*]	4
General Education Course	3 STAT 250 ^{*2}	3
	17	16

Third Year

Fall	Credits Spring	Credits
CAS 100A, 100B, or 100C [†]	3 ENGL 202C, 202A, 202B, or 202D [†]	3
CHEM 227 [*]	4 FRNSC 413 [*]	3
FRNSC 410 [*]	2 FRNSC 415W [*]	2
FRNSC 411 [*]	3 PHIL 132 ^{*†}	3
General Elective Course [*]	3 Supporting Course (consult your adviser) ^{*3}	3
	General Education Course	3
	15	17

Fourth Year

Fall	Credits Spring	Credits
FRNSC 400 [*]	1 FRNSC 427W [*]	4
FRNSC 425 [*]	3 FRNSC 485 [*]	2
FRNSC 475 [*]	1 Supporting Course (consult your adviser) ^{*3}	3
Supporting Course (consult your adviser) ^{*3}	3 General Education Course	3
General Education Course	3 General Elective Course	3
General Elective Course	3	
	14	15

Total Credits 123

Course is an Entrance to Major requirement

† Course satisfies General Education and degree requirement

¹ BIOL 114 (3) & BIOL 115 (1) may be substituted with MICRB 201/MICRB 202 (5) and BIOL 234 (3) & BIOL 235W (1) may be substituted with BMB 251 (3) for students pursuing the BMB minor. Consult your adviser regarding the substitution.

² STAT 250 (3) may be substituted with STAT 200 (3). Consult your adviser regarding the substitution.

³ Approved Supporting Courses:

- 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

If you wish to take a different 400-level science course as a supporting course, consult your adviser. Permission for the substitution will need to be granted by the Program Director.

University Requirements and General Education Notes:

US and IL are abbreviations used to designate courses that satisfy Cultural Diversity Requirements (United States and International Cultures).

W, M, X, and Y are the suffixes at the end of a course number used to designate courses that satisfy University Writing Across the Curriculum requirement.

General Education includes Foundations (GWS and GQ), Knowledge Domains (GHW, GN, GA, GH, GS) and Integrative Studies (Inter-domain) requirements. N or Q (Honors) is the suffix at the end of a course number used to help identify an Inter-domain course, but the inter-domain attribute is used to fill audit requirements. Foundations courses (GWS and GQ) require a grade of 'C' or better.

All incoming Schreyer Honors College first-year students at University Park will take ENGL 137H/CAS 137H in the fall semester and ENGL 138T/CAS 138T in the spring semester. These courses carry the GWS designation and satisfy a portion of that General Education requirement. If the student's program prescribes GWS these courses will replace both ENGL 15/ENGL 30H and CAS 100A/CAS 100B/CAS 100C. Each course is 3 credits.

* Course requires a grade of C or better for the major

‡ Course requires a grade of C or better for General Education

Forensic Chemistry Option: Forensic Science, B.S. at Commonwealth Campuses

The course series listed below provides **only one** of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an **Academic Requirements** or **What If** report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

First Year

Fall	Credits Spring	Credits
CHEM 110 ^{*#†}	3 CHEM 112 ^{*#†}	3
CHEM 111 ^{*#}	1 CHEM 113 [*]	1
MATH 140 ^{*†#†}	4 MATH 141 ^{*†#†}	4
PSU 16	1 FRNSC 100 ^{*†}	3
CRIM 100 or 113 ^{*†}	3 General Education Course	3
ENGL 15, 30H, or ESL 15 [‡]	3	
	15	14

Second Year

Fall	Credits Spring	Credits
BIOL 110 or 114 <i>and</i> 115 ^{*1}	4 BIOL 230W or 234 <i>and</i> 235W ^{*1}	4
CHEM 210 ^{*#}	3 CHEM 212 [*]	3
FRNSC 210 ^{*#}	3 CHEM 213 [*]	2
PHYS 211 or 250 ^{*#}	4 PHYS 212 or 251 [*]	4
General Education Course	3 STAT 250 ^{*2}	3
	17	16

Third Year

Fall	Credits Spring	Credits
CAS 100A, 100B, or 100C [‡]	3 ENGL 202C, 202A, 202B, or 202D [‡]	3
CHEM 227 [*]	4 FRNSC 413 [*]	3
FRNSC 410 [*]	2 FRNSC 415W [*]	2
FRNSC 411 [*]	3 PHIL 132 ^{*†}	3
General Elective Course	3 Supporting Course (consult your adviser) ^{*3}	3
	General Education Course	3
	15	17

Fourth Year

Fall	Credits Spring	Credits
FRNSC 400 [*]	1 FRNSC 427W [*]	4
FRNSC 425 [*]	3 FRNSC 485 [*]	2
FRNSC 475 [*]	1 Supporting Course (consult your adviser) ^{*3}	3
Supporting Course (consult your adviser) ^{*3}	3 General Education Course	3
General Education Course	3 General Elective Course	3
General Elective Course	3	
	14	15

Total Credits 123

* Course requires a grade of C or better for the major

‡ Course requires a grade of C or better for General Education

Course is an Entrance to Major requirement

† Course satisfies General Education and degree requirement

¹ BIOL 114 (3) & BIOL 115 (1) may be substituted with MICRB 201/MICRB 202 (5) and BIOL 234 (3) & BIOL 235W (1) may be substituted with BMB 251 (3) for students pursuing the BMB minor. Consult your adviser regarding the substitution.

² STAT 250 (3) may be substituted with STAT 200 (3). Consult your adviser regarding the substitution.

³ Approved Supporting Courses:

- 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

If you wish to take a different 400-level science course as a supporting course, consult your adviser. Permission for the substitution will need to be granted by the Program Director.

University Requirements and General Education Notes:

US and IL are abbreviations used to designate courses that satisfy Cultural Diversity Requirements (United States and International Cultures).

W, M, X, and Y are the suffixes at the end of a course number used to designate courses that satisfy University Writing Across the Curriculum requirement.

General Education includes Foundations (GWS and GQ), Knowledge Domains (GHW, GN, GA, GH, GS) and Integrative Studies (Inter-domain) requirements. N or Q (Honors) is the suffix at the end of a course number used to help identify an Inter-domain course, but the inter-domain attribute is used to fill audit requirements. Foundations courses (GWS and GQ) require a grade of 'C' or better.

All incoming Schreyer Honors College first-year students at University Park will take ENGL 137H/CAS 137H in the fall semester and ENGL 138T/CAS 138T in the spring semester. These courses carry the GWS designation and satisfy a portion of that General Education requirement. If the student's program prescribes GWS these courses will replace both ENGL 15/ENGL 30H and CAS 100A/CAS 100B/CAS 100C. Each course is 3 credits.

Forensic Chemistry Option (MATH 22): Forensic Science, B.S. at University Park Campus

The course series listed below provides **only one** of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an **Academic Requirements** or **What If** report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

First Year

Fall	Credits Spring	Credits Summer	Credits
MATH 22	3 CHEM 110 ^{*#†}	3 CHEM 112 ^{*#†}	3
MATH 26	3 CHEM 111 ^{*#}	1 CHEM 113 [*]	1
PSU 16	1 MATH 140 ^{*†#†}	4 MATH 141 ^{*†#†}	4
CRIM 100 or 113 ^{*†}	3 FRNSC 100 ^{*†}	3	
ENGL 15, 30H, or ESL 15 [†]	3 General Education Course	3	
	13	14	8

Second Year

Fall	Credits Spring	Credits
BIOL 114 ^{*1}	3 BIOL 234 ^{*1}	3
BIOL 115 ^{*1}	1 BIOL 235W ^{*1}	1
CHEM 210 ^{*#}	3 CHEM 212 [*]	3
FRNSC 210 ^{*#}	3 CHEM 213W [*]	2
PHYS 211 or 250 ^{*#}	4 PHYS 212 or 251 [*]	4
General Education Course	3 STAT 250 ^{*2}	3
	17	16

Third Year

Fall	Credits Spring	Credits
CAS 100A, 100B, or 100C [‡]	3 ENGL 202C, 202A, 202B, or 202D [†]	3
CHEM 227 [*]	4 FRNSC 413 [*]	3
FRNSC 410 [*]	2 FRNSC 415W [*]	2
FRNSC 411 [*]	3 PHIL 132 ^{*†}	3
General Education Course	3 Supporting Course (consult your adviser) ^{*3}	3
	General Education Course	3
	15	17

Fourth Year

Fall	Credits Spring	Credits
FRNSC 400 [*]	1 FRNSC 427W [*]	4
FRNSC 425 [*]	3 FRNSC 485 [*]	2
FRNSC 475 [*]	1 Supporting Course (consult your adviser) ^{*3}	3

Supporting Course (consult your adviser) ^{*3}	3 General Education Course	3
General Education Course	3 General Elective Course	3
General Elective Course	3	
	14	15

Total Credits 129

* Course requires a grade of C or better for the major

‡ Course requires a grade of C or better for General Education

Course is an Entrance to Major requirement

† Course satisfies General Education and degree requirement

¹ BIOL 114 (3) & BIOL 115 (1) may be substituted with MICRB 201/MICRB 202 (5) and BIOL 234 (3) & BIOL 235W (1) may be substituted with BMB 251 (3) for students pursuing the BMB minor. Consult your adviser regarding the substitution.

² STAT 250 (3) may be substituted with STAT 200 (3). Consult your adviser regarding the substitution.

³ Approved Supporting Courses:

- 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

If you wish to take a different 400-level science course as a supporting course, consult your adviser. Permission for the substitution will need to be granted by the Program Director.

University Requirements and General Education Notes:

US and IL are abbreviations used to designate courses that satisfy Cultural Diversity Requirements (United States and International Cultures).

W, M, X, and Y are the suffixes at the end of a course number used to designate courses that satisfy University Writing Across the Curriculum requirement.

General Education includes Foundations (GWS and GQ), Knowledge Domains (GHW, GN, GA, GH, GS) and Integrative Studies (Inter-domain) requirements. N or Q (Honors) is the suffix at the end of a course number used to help identify an Inter-domain course, but the inter-domain attribute is used to fill audit requirements. Foundations courses (GWS and GQ) require a grade of 'C' or better.

All incoming Schreyer Honors College first-year students at University Park will take ENGL 137H/CAS 137H in the fall semester and ENGL 138T/CAS 138T in the spring semester. These courses carry the GWS designation and satisfy a portion of that General Education requirement. If the student's program prescribes GWS these courses will

replace both ENGL 15/ENGL 30H and CAS 100A/CAS 100B/CAS 100C.
Each course is 3 credits.

Forensic Chemistry Option (MATH 22): Forensic Science, B.S. at Commonwealth Campuses

The course series listed below provides **only one** of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an **Academic Requirements** or **What If** report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

First Year

Fall	Credits Spring	Credits Summer	Credits
MATH 22	3 CHEM 110 ^{*#†}	3 CHEM 112 ^{*#†}	3
MATH 26	3 CHEM 111 ^{*#}	1 CHEM 113 [*]	1
PSU 16	1 MATH 140 ^{*†#†}	4 MATH 141 ^{*†#†}	4
CRIM 100 or 113 ^{*†}	3 FRNSC 100 ^{*†}	3	
ENGL 15, 30H, or ESL 15 [†]	3 General Education Course	3	
	13	14	8

Second Year

Fall	Credits Spring	Credits
BIOL 110 or 114 and 115 ^{*1}	4 BIOL 230W or 234 and 235W ^{*1}	4
CHEM 210 ^{*#}	3 CHEM 212 [*]	3
FRNSC 210 ^{*#}	3 CHEM 213 [*]	2
PHYS 211 or 250 ^{*#}	4 PHYS 212 or 251 [*]	4
General Education Course	3 STAT 250 ^{*2}	3
	17	16

Third Year

Fall	Credits Spring	Credits
CAS 100A, 100B, or 100C [†]	3 ENGL 202C, 202A, 202B, or 202D [†]	3
CHEM 227 [*]	4 FRNSC 413 [*]	3
FRNSC 410 [*]	2 FRNSC 415W [*]	2
FRNSC 411 [*]	3 PHIL 132 ^{*†}	3
General Education Course	3 Supporting Course (consult your adviser) ^{*3}	3
	General Education Course	3
	15	17

Fourth Year

Fall	Credits Spring	Credits
FRNSC 400 [*]	1 FRNSC 427W [*]	4
FRNSC 425 [*]	3 FRNSC 485 [*]	2
FRNSC 475 [*]	1 Supporting Course (consult your adviser) ^{*3}	3

Supporting Course (consult your adviser) ^{*3}	3 General Education Course	3
General Education Course	3 General Elective Course	3
General Elective Course	3	
	14	15

Total Credits 129

* Course requires a grade of C or better for the major

† Course requires a grade of C or better for General Education

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- CHEM 450 – Physical Chemistry: Thermodynamics
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replace both ENGL 15/ENGL 30H and CAS 100A/CAS 100B/CAS 100C.
Each course is 3 credits.

Career Paths

The Forensic Science program provides students with a strong foundation in the natural sciences. In addition, students will be introduced to the criminalistics philosophy through intensive scientific and laboratory problem-solving skills that are necessary for their success in forensic laboratory careers or graduate-level academic settings.

MORE INFORMATION ABOUT POTENTIAL CAREER OPTIONS FOR GRADUATES OF THE FORENSIC SCIENCE PROGRAM (<https://www.aafs.org/careers-forensic-science>)

MORE INFORMATION ABOUT OPPORTUNITIES FOR GRADUATE STUDIES (<https://science.psu.edu/bmb/forensics/careerpaths>)

Professional Resources

- Northeastern Association of Forensic Scientists (<https://www.neafs.org>)
- National Institute of Standards and Technology (NIST) (<https://www.nist.gov>)
- Organization of Scientific Area Committees (<https://www.nist.gov/adlp/spo/organization-scientific-area-committees-forensic-science>)
- American Academy of Forensic Sciences (<https://www.aafs.org>)
- American Board of Criminalists (<https://www.criminalistics.com>)
- International Association for Identification (<https://www.theiai.org>)
- California Association of Criminalists (<https://www.cacnews.org>)
- American Society of Trace Evidence Examiners (<https://www.astetrace.org>)
- New Jersey Association of Forensic Scientists (<https://www.njafs.org>)
- Mid-Atlantic Association of Forensic Scientists (<https://www.maafs.org>)

Accreditation

Our degree programs in Forensic Science are accredited by the Forensic Science Education Programs Accreditation Commission (FEPAC). FEPAC promotes academic quality through formal accreditation of forensic science programs. Meeting FEPAC guidelines assures the public that our programs are of the highest quality.

MORE INFORMATION ABOUT ACCREDITATION BY THE FORENSIC SCIENCE EDUCATION PROGRAMS ACCREDITATION COMMISSION (<https://www.aafs.org/FEPAC>)

Contact

University Park

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