SCIENCE, B.S. (BEHREND)

Begin Campus: Any Penn State Campus

End Campus: Erie

Suggested Academic Plan

The suggested academic plan(s) listed on this page are the plan(s) that are in effect during the 2023-24 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 (*Note: the archive only contains suggested academic plans beginning with the 2018-19 edition of the Undergraduate Bulletin*).

Environmental Studies Option: Science, B.S. at Erie Campus

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First Year

Fall	Credits	Spring	Credits
CHEM 110*#†	3	CHEM 112*†	3
CHEM 111*#†	1	CHEM 113*†	1
MATH 140*#†	4	MATH 141*†	4
ENGL 15 or 30H‡	3	BIOL 110S*#†	4
PSU 7	1	General Education Course	3
General Education Course	3		
	15		**15**

Second Year

Fall	Credits	Spring	Credits
PHYS 211 or 250	4	CAS 100‡	3
BIOL 220W (or BIOL 230W or BIOL 240W)	4	CMPSC 121*	3
GEOG, GEOSC, MATSC, or MATSE Course (any level)	3	PHYS 212 or 251*	4
World Language Level 1	4	General Education Course (GHW)	1.5
GEOG 160	3	World Language Level 2	4
GEOG 161	1		
	19		**15.5**

Third Year

Fall	Credits	Spring	Credits
PHYS 213 (or PHYS 214 (if following PHYS 211/212 track))	2	Science Course Supporting List*	3
World Language Level 1	4	Environmental Course Program List*	3
ENGL 202A (or ENGL 202B, or ENGL 202C, or ENGL 202D)	3	General Education Course	3
Environmental Course (Program List)	3	General Education Course	3
General Education Course	3	CHEM 202 or 227*	3-4
BIOL 220W (or BIOL 230W or BIOL 240W)	4		
	19		**15-16**

Fourth Year

Fall	Credits	Spring	Credits
STAT 200 or 250 (or MATH 230 or CMPSC 122)	3-4	Environmental Course Program List*	3
GEOG, GEOSC, MATSC, OR MATSE Course (any level)*	3	General Education Course	3
400-level Environmental Course Program List*	3	400-level Environmental Course Program List*	3
Research, Internship, Field School or Study Abroad	3	General Education Course (GHW)	1.5
		BIOL 402*	3
	12-13		**13.5**

Total Credits 124-126

* 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

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.

Program Notes

1.) Students who have not met the admission requirement of two units of a high school world language must complete a college level-one world language within their first 60 credits.
2.) Scheduling patterns for courses not taught each semester - some major requirements will be offered only once every other year.
- **Fall only courses include**: CMPSC 455, MATH 455, PHYS 402, PHYS 414
- **Spring only courses include**: CMPSC 456, ME 428, MATH 456, PHYS 410, PHYS 420, PHYS 421W, PHYS 458
3.) All first-year baccalaureate degree candidates are required to complete, during the first academic year, a seminar course
4.) Students must earn at least a grade of C in each 300- and 400-level prescribed, additional, and supporting course.
5.) For Science Supporting Courses, students must select 18 credits, with at least 9 credits at the 400-level, in one of the areas: computer sciences, life sciences, mathematical sciences, or physical sciences.
6.) Students must select 18-22 credits, with at least 6 credits at the 400-level, from the program list.

7.) Students must complete at least 3 credits of a writing across the curriculum credits. Note that only one credit of each of the BIOL 220W, BIOL 230W, and BIOL 240W courses can be used to meet this requirement.

Advising Notes

Program List Courses

Students may select courses from nearly the entire range of the University's course offerings, **excluding the following**:
BIOL 11, BIOL 12
BISC 1, BISC 2, BISC 3, BISC 4
BMB 1
CAS 126
CHEM 1, CHEM 3, CHEM 101, CHEM 108
CMPSC 1, CMPSC 100, CMPSC 110
ENGL 4, ENGL 5, ESL 4
LLED 5, LLED 10
MATH 1, MATH 2, MATH 3, MATH 4, MATH 21, MATH 26, MATH 30, MATH 35, MATH 36, MATH 37, MATH 38, MATH 40, MATH 81, MATH 82, MATH 83, MATH 110, MATH 111, MATH 200
MICRB 106, MICRB 107, MICRB 120, MICRB 121A, MICRB 121B, MICRB 150, and MICRB 151x
PHYS 1, PHYS 150, PHYS 151, PHYS 126
STAT 100

Science Supporting Courses List

Computer Science include CENBD and CMPSC courses
Geosciences include GEOG, GEOSC, MATSC, and MATSE courses
Life Sciences include BIOL, BMB, and MICRB courses
Mathematical Sciences include MATH and STAT courses
Physical Sciences include ASTRO, CHEM, and PHYS courses

General Science Option: Science, B.S. at Erie 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
ENGL 15 or 30H‡	3	BIOL 110S#*†	4
PSU 7	1	General Education Course	3
General Education Course	3		
	15		**15**

Second Year

Fall	Credits	Spring	Credits
CAS 100‡	3	CMPSC 121*	3
PHYS 211 or 250	4	PHYS 212 or 251*	4
BIOL 220W (or BIOL 230W or BIOL 240W)	4	General Education Course	3
GEOG, GEOSC, MATSC, or MATSE Course (any level)	3	General Education Course	3
General Education Course (GHW)	1.5	Science Course Supporting List	3
	15.5		**16**

Third Year

Fall	Credits	Spring	Credits
PHYS 213 (or PHYS 214 (if following PHYS 211/212 track))	2	Science Course Supporting List*	3
World Language Level 1	4	400-level Science Course Supporting List*	3
ENGL 202A (or ENGL 202B, or ENGL 202C, or ENGL 202D)	3	General Education Course	3
Science Course Supporting List	3	General Education Course (GHW)	1.5
General Education Course	3	World Language Level 2	4
	15		**14.5**

Fourth Year

Fall	Credits	Spring	Credits
STAT 200 or 250 (or MATH 230 or CMPSC 122)*	3-4	Course Program List*	3
Science 400-level Course Supporting List*	3	Course Program List*	3
Course Program List*	3	400-level Course Program List*	3
Course Program List*	3	400-level Course Program List*	3
Course Program List	3	Science 400-level Course Supporting List*	3
	15-16		**15**

Total Credits 121-122

* Course requires a grade of C or better for the major
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# Course is an Entrance to Major requirement
† Course satisfies General Education and degree requirement

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.

Program Notes

1.) Students who have not met the admission requirement of two units of a high school world language must complete a college level-one world language within their first 60 credits.
2.) Scheduling patterns for courses not taught each semester - some major requirements will be offered only once every other year.
- **Fall only courses include**: CMPSC 455, MATH 455, PHYS 402, PHYS 414
- **Spring only courses include**: CMPSC 456, ME 428, MATH 456, PHYS 410, PHYS 420, PHYS 421W, PHYS 458
3.) All first-year baccalaureate degree candidates are required to complete, during the first academic year, a seminar course
4.) Students must earn at least a grade of C in each 300- and 400-level prescribed, additional, and supporting course.
5.) For Science Supporting Courses, students must select 18 credits, with at least 9 credits at the 400-level, in one of the areas: computer sciences, life sciences, mathematical sciences, or physical sciences.
6.) Students must select 18-22 credits, with at least 6 credits at the 400-level, from the program list.
7.) Students must complete at least 3 credits of a writing across the curriculum credits. Note that only one credit of each of the BIOL 220W, BIOL 230W, and BIOL 240W courses can be used to meet this requirement.

Advising Notes

Program List Courses

Students may select courses from nearly the entire range of the University's course offerings, **excluding the following**:
BIOL 11, BIOL 12
BISC 1, BISC 2, BISC 3, BISC 4
BMB 1
CAS 126
CHEM 1, CHEM 3, CHEM 101, CHEM 108
CMPSC 1, CMPSC 100, CMPSC 110
ENGL 4, ENGL 5, ESL 4
LLED 5, LLED 10

MATH 1,MATH 2, MATH 3, MATH 4, MATH 21, MATH 26, MATH 30, MATH 35, MATH 36, MATH 37, MATH 38, MATH 40, MATH 81, MATH 82, MATH 83, MATH 110, MATH 111, MATH 200
MICRB 106, MICRB 107, MICRB 120, MICRB 121A, MICRB 121B, MICRB 150, and MICRB 151x
PHYS 1, PHYS 150, PHYS 151, PHYS 126
STAT 100

Science Supporting Courses List

Computer Science include CENBD and CMPSC courses
Geosciences include GEOG, GEOSC, MATSC, and MATSE courses
Life Sciences include BIOL, BMB, and MICRB courses
Mathematical Sciences include MATH and STAT courses
Physical Sciences include ASTRO, CHEM, and PHYS courses

General Science Pre-Certification Teaching Option: Science, B.S. at Erie Campus

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First Year

Fall	Credits	Spring	Credits
CHEM 110*#†	3	CHEM 112*#†	3
CHEM 111#†	1	CHEM 113*†	1
MATH 140*#†	4	MATH 141*†	4
ENGL 15 or 30H‡	3	BIOL 110S*#†	4
PSU 7	1	General Education Course	3
General Education Course	3		
	15		**15**

Second Year

Fall	Credits	Spring	Credits
CAS 100‡	3	GEOSC 2	3
BIOL 220W or 230W (or BIOL 240W)	4	CMPSC 121*	3
PHYS 250 or 211*	4	ASTRO 10	2
GEOSC 20	3	ASTRO 11	1
General Education Course (GHW)	1.5	PHYS 251 or 212*	4
		General Education Course	3
	15.5		**16**

Third Year

Fall	Credits	Spring	Credits
PHYS 213 or PHYS 214 or Elective (if following PHYS 250/251 track)†	2-3	World Language Level 2	4
General Education Course	3	General Education Course (GHW)	1.5
ENGL 202A or 202B (or ENGL 202C or ENGL 202D)‡†	3	GEOSC 40	3
ASTRO 291 or GEOG 10	3	ASTRO 292	3
World Language Level 1	4	GEOSC 10	3
		400-Level Course Science Supporting List*	3
	15-16		**17.5**

Fourth Year

Fall	Credits	Spring	Credits
STAT 250 or 200 (or MATH 230 or CMPSC 122)	3-4	400-Level Course Program List*	3
400-Level Course Program List*	3	400-Level Course Program List*	3
METEO 3†	3	GEOSC Course*	3
400-Level Course Science Supporting List*	3	General Education Course†	3
General Education Course	3	GEOG, GEOSC, MATSC, MATSE Course (any level)	3
	15-16		**15**

Total Credits 124-126

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Program Notes

1.) Students who have not met the admission requirement of two units of a high school world language must complete a college level-one world language within their first 60 credits.
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Advising Notes

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CAS 126
CHEM 1 ,CHEM 3, CHEM 101, CHEM 108
CMPSC 1,CMPSC 100, CMPSC 110
ENGL 4, ENGL 5, ESL 4
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MATH 1, MATH 2, MATH 3, MATH 4, MATH 21, MATH 26, MATH 30, MATH 35 ,MATH 36, MATH 37, MATH 38, MATH 40 ,MATH 81, MATH 82, MATH 83, MATH 110, MATH 111, MATH 200
MICRB 106, MICRB 107, MICRB 120, MICRB 121A, MICRB 121B, MICRB 150, and MICRB 151x
PHYS 1, PHYS 150, PHYS 151, PHYS 126
STAT 100

Science Supporting Courses List

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Earth and Space Pre-Certification Teaching Option: Science, B.S. at Erie Campus

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CHEM 111#†	1	CHEM 113*†	1
MATH 140*#†	4	MATH 141*†	4
ENGL 15 or 30H‡	3	BIOL 110S*#†	4
PSU 7	1	General Education Course†	3
General Education Course†	3		
	15		**15**

Second Year

Fall	Credits	Spring	Credits
CAS 100‡	3	GEOSC 2	3
BIOL 220W or 230W (or BIOL 240W)	4	CMPSC 121*	3
PHYS 250 or 211*	4	ASTRO 10	2
GEOSC 20	3	ASTRO 11	1
General Education Course (GHW)†	1.5	PHYS 251 or 212*	4
		General Education Course*†	3
	15.5		**16**

Third Year

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PHYS 213 or PHYS 214 or Elective (if following PHYS 250/251 track)†	2-3	World Language Level 2	4
General Education Course†	3	General Education Course (GHW)*†	1.5
ENGL 202A or 202B (or ENGL 202C or ENGL 202D)‡†	3	GEOSC 40	3
ASTRO 291 or GEOG 10	3	ASTRO 292	3
World Language Level 1	4	GEOSC 10	3
		400-Level Course (Science Supporting List)*	3
	15-16		**17.5**

Fourth Year

Fall	Credits	Spring	Credits
STAT 250 or 200 (or MATH 230 or CMPSC 122)	3-4	400-Level Course (Program List)*	3
400-Level Course (Program List)*	3	400-Level Course (Program List)*	3
METEO 3†	3	GEOSC Course*	3
400-Level Course (Science Supporting List)*	3	General Education Course†	3
General Education Course†	3	GEOG, GEOSC, MATSC, MATSE Course (any level)	3
	15-16		**15**

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Advising Notes

Program List Courses

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CAS 126
CHEM 1, CHEM 3, CHEM 101, CHEM 108
CMPSC 1, CMPSC 100, CMPSC 110
ENGL 4, ENGL 5, ESL 4
LLED 5, LLED 10

MATH 1, MATH 2, MATH 3, MATH 4, MATH 21, MATH 26, MATH 30, MATH 35, MATH 36, MATH 37, MATH 38, MATH 40, MATH 81, MATH 82, MATH 83, MATH 110, MATH 111, MATH 200
MICRB 106, MICRB 107, MICRB 120, MICRB 121A, MICRB 121B, MICRB 150, and MICRB 151x
PHYS 1, PHYS 150, PHYS 151, PHYS 126
STAT 100

Science Supporting Courses List

Computer Science include CENBD and CMPSC courses
Geosciences include GEOG, GEOSC, MATSC, and MATSE courses
Life Sciences include BIOL, BMB, and MICRB courses
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