

INTEGRATIVE SCIENCE, B.S. (CAPITAL)

Begin Campus: Any Penn State Campus

End Campus: Harrisburg

Suggested Academic Plan

The suggested academic plan(s) listed on this page are the plan(s) that are in effect during the 2024-25 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.

General Option: Integrative Science, B.S. at Harrisburg 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
ENGL 15, 15S, 30T, or ESL 15 [‡]	3 BIOL 220W, 230W, or 240W	4
MATH 140 ^{*†##†}	4 CHEM 112 [†]	3
BIOL 110 ^{*##†}	4 CHEM 113	1
CHEM 110 ^{*##†}	3 MATH 141 ^{††}	4
CHEM 111 [†]	1 General Education Course	3
	15	15

Second Year

Fall	Credits Spring	Credits
CAS 100A or 100S [‡]	3 PHYS 251 (consult with academic adviser for options) [†]	4
PHYS 250 (or consult with academic adviser for options) [†]	4 General Education Course	3
General Education Course	3 Life, Mathematical, or Physical Science Course ¹	3-4
Life, Mathematical, or Physical Science Course ¹	3-4 Earth and Mineral Science Course ²	3
Supporting/Elective Course	3 Global, Social and Personal Awareness Course	3
	16-17	16-17

Third Year

Fall	Credits Spring	Credits
STAT 200 [†]	4 ENGL 202A, 202B, 202C, or 202D [‡]	3
General Education Course	3 General Education Course	3
Teamwork and Interpersonal Communications Course	3 400 Level Life, Mathematical, or Physical Science course ^{*3}	3

Supporting/Elective Course	3 Supporting/Elective Course	3
Supporting/Elective Course	3 Supporting/Elective Course	3
	16	15

Fourth Year

Fall	Credits Spring	Credits
400 Level Life, Mathematical, or Physical Science Course ^{*3}	3 400-Level Life, Mathematical, or Physical Science Course ^{*3}	3
400 Level Supporting/Elective Course	3 400-Level Supporting/Elective Course	3
General Education Course	3 General Education Course	3
Supporting/Elective Course	3 Supporting/Elective Course	3
Supporting/Elective Course	3 Supporting Elective Course	3
	15	15

Total Credits 123-125

- * 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 Life, Mathematical, or Physical Science Courses

- Life Science: BMB, BIOL, BIOTC, MICRB
- Mathematical Science: CMPSC, MATH, STAT
- Physical Science: ASTRO, CHEM, PHYS

² Earth and Mineral Science Courses: METEO, MATSC, EMSC, EGEE, EARTH, GEOG, GEOSC (see <https://www.ems.psu.edu>)

³ 400-Level Life, Mathematical, or Physical Science Courses

- Life Science: BMB, BIOL, BIOTC, MICRB
- Mathematical Science: CMPSC, MATH, STAT
- Physical Science: ASTRO CHEM, PHYS

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:

- This outline is only a suggested academic plan. There is considerable room for adjusting the necessary courses to fit your individual needs and goals. For example, a student may take CHEM 110 along with CHEM 111 during semester 1, in which case the student may then take CHEM 112 along with CHEM 113 during semester 2. Another example, a student could choose to take a world language course during other/earlier semesters, such as semester 1 and 2. Remember,

most students only have to average about 16 credits per semester to graduate in four academic years (or eight semesters). The Science major requires a total of 124 credits.

- Do not overlook the opportunity for Independent Study/Research credit, Cooperative Education, or Study Abroad Opportunities.
- For the various supporting/elective courses each student is required to complete the major, one should consider completing a sequence of courses from the same department/program as opposed to completing all introductory courses from many different departments/programs. Students can even consider completing a minor in another academic discipline with the various supporting/elective courses and any 400 level course work needed.
- See academic adviser for list of courses for: Teamwork and Interpersonal Communications, and Global, Social, and Personal Awareness.
- Course required with a C or better to enter the Science major are: MATH 140; and two out of three of BIOL 110, CHEM 110, and either PHYS 250 or PHYS 211. Consult with an academic adviser for options to satisfy the Writing Across the Curriculum requirement. If using BIOL 220W, BIOL 230W and BIOL 240W for the requirement, all 3 courses must be taken.

Life Science Option: Integrative Science, B.S. at Harrisburg 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
BIOL 110 ^{**†}	4 BIOL 220W, 230W, or 240W	4
CHEM 110 ^{**†}	3 CHEM 112 [†]	3
CHEM 111 [†]	1 CHEM 113 [†]	1
ENGL 15, 15S, 30T, or ESL 15	3 MATH 141 ^{††}	4
MATH 140 ^{**††}	4 General Education Course	3
	15	15

Second Year

Fall	Credits Spring	Credits
CAS 100A or 100S [‡]	3 CHEM 212	3
CHEM 210	3 CHEM 213	2
PHYS 250 or 211 [*]	4 PHYS 251 or 212	4
General Education Course	3 Teamwork and Interpersonal Communications Course	3
Supporting Course	3-4 General Education Course	3
	16-17	15

Third Year

Fall	Credits Spring	Credits
BMB 251 or MICRB 201	3 Select 3 credits from 400 level Science courses [*]	3
Supporting Course or PHYS 213 and PHYS 214	3-4 General Education Course	3
ENGL 202A, 202B, 202C, or 202D [‡]	3 General Education Course	3
STAT 200, 250, MATH 250, or CMPSC 101	3-4 General Education Course	3
Global, Social and Personal Awareness Course	3 Supporting Course	3
	15-17	15

Fourth Year

Fall	Credits Spring	Credits
400-level Course Selection	3 400-level Course Selection	3
Select 3 credits from 400-level Science courses [*]	3 Select 3 credits from 400-level Science courses [*]	3
General Education Course	3 Supporting Courses	6
Supporting Course	3 General Education Course	3
Supporting Course	3	
	15	15

Total Credits 121-124

* 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:

- See academic adviser for list of courses for: Teamwork and Interpersonal Communications, and Global, Social, and Personal Awareness.
- Scheduling patterns for courses not taught each semester:
 - Fall only: MICRB 201.
 - Spring only: CHEM 212, CHEM 213.
- 9 credits of 400 level Science courses include: BMB, BIOL, BIOTC or MICRB courses. Must be a grade of C or better for the major.
- Course required with a C or better to enter the Science major are: MATH 140; and two out of the three of BIOL 110, CHEM 110, and either PHYS 250 or PHYS 211. Consult with an academic Adviser for options to satisfy the Writing Across the Curriculum requirement. If using BIOL 220W, BIOL 230W and BIOL 240W for the requirement, all 3 courses must be taken.