

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 2020-21 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 contain suggested academic plans beginning with the 2018-19 edition of the Undergraduate Bulletin*).

General Option: 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 [‡]	3 General Education Course	3
MATH 140 ^{**†}	4 MATH 141 [†]	4
BIOL 110 ^{**†}	4 Life Sciences Approved Courses ¹	4
CHEM 110 ^{**†}	3 CHEM 112 [†]	3
Supporting Elective Course or General Education Course (GHW)	1-1.5 CHEM 111 [†]	1
	Supporting/Elective Course or General Education Course (GHW)	1-1.5
	15-15.5	16-16.5

Second Year

Fall	Credits Spring	Credits
CHEM 113 [†]	1 Life, Mathematical, or Physical Science course ²	3-4
Life, Mathematical, or Physical Science course ²	3-4 PHYS 250 or 211 ^{**†}	4
Life, Mathematical, or Physical Science course ²	3-4 General Education Course	3
General Education Course	3 Earth and Mineral Science course ³	3
CAS 100 [‡]	3 Global, Social and Personal Awareness course (from approved List 2)	3
Supporting/Elective Course	3	
	16-18	16-17

Third Year

Fall	Credits Spring	Credits
PHYS 251 or 212 [†]	4 PHYS 213 or 214 ^{†4}	2

STAT 200, 250, 201, or STAT 401 [†]	4 400 Level Life, Mathematical, or Physical Science course [*]	3-4
General Education Course	3 ENGL 202A, 202B, 202C, or 202D [†]	3
Teamwork and Interpersonal Communications course (from approved List 1)	3 General Education Course	3
Supporting/Elective Course	3 Supporting/Elective Course	3
	17	14-15

Fourth Year

Fall	Credits Spring	Credits
400 Level Life, Mathematical, or Physical Science Course [*]	3-4 400-Level Life, Mathematical, or Physical Science Course [*]	3-4
400 Level Supporting/Elective Course	3 400-Level Supporting/Elective Course	3
General Education Course	3 Supporting/Elective Course or General Education Course (GHW)	3
Supporting/Elective Course or General Education Course (GHW)	1-1.5 Supporting/Elective Course	3
Supporting/Elective Course	3 Supporting Elective Course	3
Supporting/Elective Course	3	
	16-17.5	15-16

Total Credits 125-132.5

- * 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 Sciences Approved Courses
- BIOL 220W - Biology: Populations and Communities (4)
 - BIOL 230W - Biology: Molecules and Cells (4)
 - BIOL 240W - Biology: Function and Development of Organism (4)
 - BIOL 129 - Mammalian Anatomy (4)
 - BIOL 141 - Introductory Physiology (3)
 - BIOL 142 - Physiology Laboratory (1)

- ² Life, Mathematical, or Physical Science Courses
- Life Science
- BMB
 - BIOL
 - BIOTC
 - MICRB

- Mathematical Science
- CMPSC, MATH, STAT

- Physical Science: ASTRO, CHEM, PHYS

2 Science, B.S. (Capital)

3 Earth and Mineral Science courses

- METEO
- MATSC
- EMSC
- EGEE
- EARTH
- GEOG
- GEOSC
- See <http://www.ems.psu.edu/>

Program List and other FAQs please visit the following Web site
www.science.psu.edu/sciencesbs.

4 PHYS 214 - General Physics: Wave Motion and Quantum Physics
(only for PHYS 211 and PHYS 212 series) or supporting/Elective
Course

400-Level Life, Mathematical, or Physical Science course

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 University 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.

GWS, GQ, GHW, GN, GA, GH, and GS are abbreviations used to identify General Education program courses. General Education includes Foundations (GWS and GQ) and Knowledge Domains (GHW, GN, GA, GH, GS, and Integrative Studies). Foundations courses (GWS and GQ) require a grade of 'C' or better.

Integrative Studies courses are required for the General Education program. N is the suffix at the end of a course number used to designate an Inter-Domain course and Z is the suffix at the end of a course number used to designate a Linked course.

Program Notes:

- This outline is only a suggested recommended 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.
- For additional information such as the Teamwork and Interpersonal Communications approved course list (List 1), Global, Social, and Personal Awareness approved course list (List 2), Supporting/elective

Life Science Option: Science, B.S. at Harrisburg Campus

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First Year

Fall	Credits Spring	Credits
BIOL 110 ^{**}	4 BIOL 220W, 230W, or 240W	4
CHEM 110 ^{**†}	3 CAS 100 [‡]	3
CHEM 111 [†]	1 CHEM 112 or 113 [†]	3
ENGL 15 [‡]	3 MATH 141 [†]	4
MATH 140 ^{**†}	4 General Education Course (GHW)	1.5
	15	15.5

Second Year

Fall	Credits Spring	Credits
BIOL 220W, 230W, or 240W [†]	4 BIOL 220W, 230W, or 240W	4
CHEM 202 or 210	3 CHEM 203, 212, or 213	4
Teamwork and Interpersonal Communications Course (from Approved List 1) or Supporting Course	3 BMB 211, 251, or MICRB 201	3
Select from the following	4 Global, Social and Personal Awareness Course (from Approved List 2) or Supporting Course	3
General Education Course (GHW)	1.5	
	15.5	14

Third Year

Fall	Credits Spring	Credits
ENGL 202C [‡]	3 PHYS 251 or 212	4
PHYS 250 or 211 [*]	4 Select 3 credits from 400-level Science courses [*]	3
Supporting Course	3 General Education Course	3
General Education Course	3 General Education Course	3
General Education Course	3 Supporting Course	3
	16	16

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
PHYS 213 or 214	2 Supporting Course(s)	3-6
Supporting Course	3 General Education Course	3
General Education Course	3	
	14	12-15

Total Credits 118-121

* 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 220W - Biology: Populations and Communities
For BIOL 220W, BIOL 230W or BIOL 240W to count as a Writing Across the Curriculum requirement, this course must be completed.
BIOL 230W - Biology: Molecules and Cells
For BIOL 220W, BIOL 230W or BIOL 240W to count as a Writing Across the Curriculum requirement this course must be completed.
BIOL 240W - Biology: Function and Development of Organisms
For BIOL 220W, BIOL 230W or BIOL 240W to count as a Writing Across the Curriculum requirement this course must be completed.

2 Select from the Following:

- CMPSC 121 - Introduction to Programming Techniques
- MATH 230 - Calculus and Vector Analysis
- MATH 250 - Ordinary Differential Equations
- STAT 200 - Elementary Statistics
- BMB 211 - Elementary Biochemistry
- BMB 251 - Molecular and Cell Biology
- MICRB 201 - Introductory Microbiology, Students are strongly recommended to schedule MICRB 202 with MICRB 201
- PHYS 250 - Introductory Physics, select from either PHYS 250 and 251 or PHYS 211, 212, 213 and 214
- PHYS 211 - General Physics: Mechanics, select from either PHYS 250 and 251 or PHYS 211, 212, 213 and 214
- PHYS 212 - General Physics: Electricity and Magnetism, select from either PHYS 250 and 251 or PHYS 211, 212, 213 and 214
- PHYS 251 - Introductory Physics II, select from either PHYS 250 and 251 or PHYS 211, 212, 213 and 214
- Select 3 credits from 400-level Science courses, select from BMB, BIOL, BIOTC, MICRB
- PHYS 213 - General Physics: Fluids and Thermal Physics, select from either PHYS 250 and 251 or PHYS 211, 212, 213 and 214
- PHYS 214 - General Physics: Wave Motion and Quantum Physics, select from either PHYS 250 and 251 or PHYS 211, 212, 213 and 214

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