B.S. in SCIENCE

BIOLOGICAL SCIENCES AND HEALTH PROFESSIONS OPTION

MAJOR REQUIREMENTS

PRESCRIBED COURSES, 20 credits

☐ BIOL 110, 4 credits  
☐ CHEM 110, 3 credits  
☐ CHEM 111, 1 credit  
☐ CHEM 112, 3 credits  
☐ CHEM 113, 1 credit  
☐ MATH 140, 4 credits  
☐ MATH 141, 4 credits

OPTION REQUIREMENTS

PRESCRIBED COURSES, 3 credits

☐ HPA 101, 3 credits

ADDITIONAL COURSES, 24-31 credits

Biology, 4 credits:
Select one of the following lecture/lab combinations:

☐ BIOL 129, 4 cr.  
☐ BIOL 141 and 142, 4 cr.  
☐ CHEM 210W, 2 cr.

Statistics, 3-4 credits: Select one of the following courses:

☐ STAT 200, 4 cr.  
☐ STAT 250, 3 cr.  
☐ STAT 401, 3 cr.

Organic Chemistry, 6-8 credits:
Complete one of the following sequences in its entirety:

☐ CHEM 210, 3 cr.  
☐ CHEM 212, 3 cr.  
☐ CHEM 213W, 2 cr.

Life Science, 3 credits: Select one of the following courses:

☐ BMB 211, 3 cr.  
☐ BMB 251, 3 cr.  
☐ MICRB 201, 3 cr.

Physics, 8-12 credits:
Complete one of the following sequences in its entirety:

☐ PHYS 211, 4 cr.  
☐ PHYS 250, 4 cr.  
☐ PHYS 212, 4 cr.  
☐ PHYS 251, 4 cr.  
☐ PHYS 213, 2 cr.  
☐ PHYS 214, 2 cr.

SUPPORTING COURSES, 40-47 credits

Global, Social, and Personal Awareness, 3 credits:
Select one course from Department List.

Teamwork and Interpersonal Communication, 3 credits:
Select one course from Department List.

400-level Healthcare/Medicine/Ethical Competencies, 6 credits:
Select 6 credits of 4xx courses from Department List.

Any-level Healthcare/Medicine/Ethical Competencies, 9 credits:
Select 9 credits of courses from Department List.

400-level Life Sciences, 9 credits:  
Select 9 credits of 4xx courses from the following Departments: BMB, BIOL, BIOTC, MICRB (See Program List Exclusions.)

Electives (Program List): Select 10-17 credits in consultation with an adviser. (See Program List Exclusions.)

Must complete 124 total eligible credits for the degree.

Entrance-to-Major (ETM) course: Prior to entering the Science major, students must have third-semester standing (29.1 credits or more) and earn a C or better in all ETM courses: MATH 140, and at least two of BIOL 110, CHEM 110, and PHYS 211 or 250.
GENERAL EDUCATION REQUIREMENTS

KNOWLEDGE DOMAINS

Natural Sciences (GN), 9 credits
- BIOL 110, 4 credits
- CHEM 110 & 111, 4 credits
- CHEM 112 & 113, 4 credits

Arts (GA), 6 credits
(3 credits must NOT be inter-domain*)
- ________________________________
- ________________________________

Humanities (GH), 6 credits
(3 credits must NOT be inter-domain*)
- ________________________________
- ________________________________

Social and Behavioral Sciences (GS), 6 credits
(3 credits must NOT be inter-domain*)
- ________________________________
- ________________________________

Health and Wellness (GHW), 3 credits
(3 credits must NOT be inter-domain*)
- ________________________________
- ________________________________

Additional Knowledge Domain Courses, 0-6 credits*
- ________________________________
- ________________________________

FOUNDATIONS

Writing & Speaking (GWS), 9 credits  C or better required
- ENGL 15" or ENGL 30 or ESL 15, 3 credits
- CAS 100*, 3 credits
- ENGL 202 A, B, C, or D, 3 credits (Option A or C preferred)
  "For Schreyer Honors students, ENGL 15 and CAS 100 are replaced with ENGL/CAS 137 and ENGL/CAS 138

Quantification (GQ), 6 credits  C or better required
- MATH 140, 4 credits

(Home Req.: must be MATH 141, STAT 2xx, CMPSC 101, or higher.)

ADDITIONAL UNIVERSITY REQUIREMENTS

Requirements in this category only may be satisfied by courses being used elsewhere for the degree.

First-Year Seminar (FYS), 1 credit
- PSU 16, 1 credit

US Cultures (US), 3 credits
- ________________________________

International Cultures (IL), 3 credits
- ________________________________

Writing Across the Curriculum (WAC), 3 credits
- BIOL 110, 1 credit

Integrative Studies (IS), 6 credits
- Must be two (paired) Linked courses (Z-suffix), or two (distinct) Inter-domain* courses (N-suffix)

*Inter-domain courses span across two different Knowledge Domains. One inter-domain course may count as 3 credits toward each Domain, but 30 distinct credits of Knowledge Domain courses (GN/GA/GH/GS/GHW) are required in total.

*Move-3 Substitution: A student may choose to shift 3 credits of courses from the GN, GA, GH, or GS categories to either GN, GA, GH, GS, or GHW categories at the approval of an Academic Adviser.
**B.S. in Science, Biological Sciences, and Health Professions Option**

**List 1 Teamwork and Interpersonal Communications***
- CAS 203 (GS) Interpersonal Communication (3)
- CAS 252 Business and Professional Communication (3)
- CAS 253 Health Communication (3)
- CAS 271 (US;IL) Intercultural Communication (3)
- HD FS 216 Personal & Interpersonal Skills (3)
- PSYCH 140 Management of Interpersonal Relationships (3)
- PSYCH 221 (GS) Social Psychology (3)
- PSYCH 232 (GS;US;IL) Cross-Cultural Psychology (3)
- SOC 003 (GS) Intro to Social Psychology (3)
- SOC 404 Social Influence and Small Groups (3)

**List 2 Global, Social and Personal Awareness***
- AAA S 103 (US) (SOC 103, WMNST 103) Racism and Sexism (3)
- AAA S 302 (US) (BB H 302) Diversity and Health (3)
- ANTH 045 (GS; US; IL) Cultural Anthropology (3)
- HD FS 129 (GS) Introduction to Human Development and Family Studies (3)
- HD FS 229 (GS) Infant and Child Development (3)
- HD FS 239 (GS) Adolescent Development (3)
- HD FS 249 (GS) Adult Development and Aging (3)
- HD FS 315 (US) Family Development (3)
- PSYCH 212 (GS) Introduction to Developmental Psychology (3)
- PSYCH 231 (GS;US) Introduction to the Psychology of Gender (3)
- PSYCH 232 (GS;US;IL) Cross-Cultural Psychology (3)
- PSYCH 260 (BB H 203) Neurological Basis of Human Behavior (3)
- PSYCH 270 Introduction to Abnormal Psychology (3)
- PSYCH 370 (US) Psychology of the Differently-Abled (3)
- RL ST 001 (GH;US;IL) Introduction to World Religions (3)
- SOC 001 (GS) Introductory Sociology (3)
- SOC 005 (GS) Social Problems (3)
- SOC 119 (GS;US) Race and Ethnic Relations (4)

**List 3 Healthcare/Medicine/Ethical Competencies***

**A. Healthcare/Medicine Competencies**
- ANTH 021 (GN) Introductory Biological Anthropology (3)
- ANTH 022 (GN) Humans as Primates (3)
- BB H 101 (GHA) Introduction to Biobehavioral Health (3)
- BB H 143 (GHA) Drugs, Behavior, Health (3)
- BB H 302 (US) (AAA S 302) Diversity and Health (3)
- BB H 432 Biobehavioral Aspects of Stress (3)
- BB H 440 (US;IL) (H P A 440) Principles of Epidemiology (3)
- BB H 446 Human Sexuality as a Health Concern (3)
- BB H 451 Pharmacological Influences on Health (3)
- BB H 458 (WMNST 458) Critical Issues in Reproduction (3)
- BIOL 129 Mammalian Anatomy (4)
- CAS 453 Health Communication Theory and Research (3)
- CSD 146 (US;IL) Introduction to Communication Science and Disorders (3)
H P A 057 (GHA) Consumer Choices in Health Care (3)
H P A 310 Health Care and Medical Needs (3)
H P A 401 (IL) Comparative Health Systems (3)
H P A 420 Principles of Managed Care (3)
HIST 103 (GH;IL) The History of Madness, Mental, and Psychiatry (3)
HIST 124 (GH;US;IL) (S T S 124) History of Western Medicine (3)
KINES 060 Principles and Practices of Healthy Living (3)
KINES 082 (GHA) Action methods for Stress Management (3)
KINES 202 Functional Human Anatomy (4)
KINES 203 Medical Terminology (3)
KINES 303 (GHA) Emergency Care – First Aid/Safety/AED (3)
KINES 403 Emergency Medical Technology (4)
NURS 452 (US) (BB H 452, WMNST 452) Woman's Health Issues (3)
NURS 464 (US;IL) Dying and Death (3)
NURS 497E Men's Health Issues (3)
PSYCH 422 Human Sexuality (3)
PSYCH 441 Health Psychology (3)
PSYCH 470 Abnormal Psychology (3)
PSYCH 479 (WMNST 471) Psychology of Gender (3)
PSYCH 481 Introduction to Clinical Psychology (3)
RHS 403 Medical Aspects of Disability (3)
SC 201 Medical Professions (1)
SC 401 Basic Science and Disease (1)
SOC 174 Psychological and Sociological Aspects of Death (3)
SOC 309 Sociology of Health (3)

**B. Ethical Competencies**

H P A 301 Health Services Policy Issues (3)
HD FS 301 Values and Ethics in Health and Human Development (3)
PHIL 001 (GH) Basic Problems of Philosophy (3)
PHIL 103 (GH) Introduction to Ethics (3)
PHIL 110 (GH) Introduction to Philosophy of Science (3)
PHIL 132 (GH) (RL ST 131) Introduction to Bioethics (3)
PHIL 221 Philosophy of Science (3)
PHIL 410 Philosophy of Science (3)
PHIL 432 (S T S 432) Medical and Health Care Ethics (3)
S T S 200 (GS) Critical Issues in Science, Technology, and Society (3)

*Please note pre-requisites and co-requisites when selecting course options for your program.*
Penn State University
Eberly College of Science
Science (SC BS) and Premedicine (PM) Majors

Program List Exclusions:
Coursework Not Applicable to Degree Requirements

Students may select supporting courses from nearly the entire range of the University’s course offerings. However, the following courses may **NOT** be used to satisfy degree requirements in the Science and Premedicine majors. This list applies to ALL options in the Science BS major.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL</td>
<td>001, 003, 011*, 012*</td>
</tr>
<tr>
<td>BI SC</td>
<td>001, 002, 003*, 004*</td>
</tr>
<tr>
<td>B M B</td>
<td>001*</td>
</tr>
<tr>
<td>CAS</td>
<td>126</td>
</tr>
<tr>
<td>CHEM</td>
<td>001, 003, 005, 101, 108</td>
</tr>
<tr>
<td>CMPSC</td>
<td>100</td>
</tr>
<tr>
<td>ENGL</td>
<td>004, 005</td>
</tr>
<tr>
<td>ESL</td>
<td>004, 005</td>
</tr>
<tr>
<td>LL ED</td>
<td>005, 010</td>
</tr>
<tr>
<td>MATH</td>
<td>003, 004, 010, 017, 018, 021, 022, 026, 030, 033, 034, 035, 036, 040, 041, 081, 082, 083, 097, 110, 111, 200</td>
</tr>
<tr>
<td>MICRBM</td>
<td>150, 151A, 151B, 151C, 151D, 151E, 151F, 151G, 151W</td>
</tr>
<tr>
<td>PHYS</td>
<td>001, 010, 097, 114, 150, 151</td>
</tr>
<tr>
<td>STAT</td>
<td>100</td>
</tr>
</tbody>
</table>

*On rare occasions, with adequate justification, a student may be permitted to use one or more of these courses to satisfy degree requirements. A petition must be submitted to request such an exception. Consult with your academic adviser.

In addition, the following types of courses may not be used to satisfy degree requirements in the Science or Premedicine majors:

- Courses which are remedial in nature or which focus on reading improvement or study skills.
- Courses which substantially duplicate the subject matter covered in other completed courses taught at a comparable level.

Some courses may be counted toward degree requirements in the Science and Premedicine majors with some restrictions:

- No more than 4 credits of MATH 140A may be used.
- No more than 6 credits of ROTC courses (AIR, ARMY, NAVSC) may be used.
- No more than 12 credits of independent study (296, 496, etc.) may be used.
  **Unless special permission is granted, Independent Study credit may only be used in “Supporting Courses” and “Any 400-level Course Work” categories.**
- No more than 5 credits of KINES Physical Activity courses may be used.
  **KINES Health Courses (KINES 180, etc.) are not limited to 5 credits.**