

**Recommended Academic Plan for SCIAB/GEN**  
Effective Fall 2007

Semester 1	Credits	Semester 2	Credits
ENGL 015 or 030 (GWS) Rhetoric & Composition/Honors Composition	3	MATH 141 (GQ) Calculus w/Analytic Geometry II	4
<b>MATH 140</b> (GQ) Calculus w/Analytic Geometry I	4	Physical, Mathematical, or Life Science Course	3
<b>BIOL 110</b> (GN) Biology: Basic Concepts & Biodiversity	4	<b>CHEM 112</b> (GN) Chemical Principles II	3
<b>CHEM 110</b> (GN) Chemical Principles	3	CHEM 113 (GN) Experimental Chemistry II	1
<b>CHEM 111</b> (GN) Experimental Chemistry I	1	General Education	3
First-Year Seminar	1	Health and Physical Activity (GHA)	1.5
Total Credits:	16	Total Credits:	15.5
Semester 3	Credits	Semester 4	Credits
Elective	3	Physical, Mathematical, or Life Science Course	3
Earth and Mineral Science Course	3	Elective	3
STAT 200 or 250 (GQ) Elementary Statistics/Intro to Biostatistics or MATH 250 Ordinary Differential Equations or CMPSC 101 Introduction to Algorithmic Processes	4-3	Phys 251 (GN) or 212 (GN) Intro Physics II/General Physics: Electricity and Magnetism	4
<b>Phys 250</b> (GN) or <b>211</b> (GN) Intro Physics I/General Physics: Mechanics	4	Eng 202C (GWS) Effective Writing: Tech	3
CAS 100 Effective Speech	3	Health and Physical Activity (GHA)	1.5
Total Credits:	16-17	Total Credits:	14.5
Semester 5	Credits	Semester 6	Credits
Physical, Mathematical, or Life Science Course	3	General Education or Phys 213 (GN) & 214 (GN): General Physics:Fluids & Thermal Physics/Wave Motion and Quantum Physics	3-4
400-Level Selection	3	General Education	3
Language I	4	<b>400-Level Science</b>	3
General Education	3	Language II	4
Elective	3	Elective	3
Total Credits:	16	Total Credits:	16-17
Semester 7	Credits	Semester 8	Credits
<b>400-Level Science</b>	3	BMB 211 Elementary Biochem or MICRB 201 Introductory Microbiology	3
400-Level Selection	3	<b>400-Level Science</b>	3
General Education	3	General Education	3
General Education	3	Elective	3
Elective	3	Elective	3
Total Credits:	15	Total Credits:	15

- **Bold type** indicates courses requiring a quality grade of C or better.
- *Italics* indicates courses that satisfy both major and General Education requirements.
- ***Bold Italics*** indicates courses requiring a quality grade of C or better and that satisfy both major and General Education requirements.
- GWS, GHA, GQ, GN, GA, GH, and GS are codes used to identify General Education requirements.
- US, IL, and US;IL are codes used to designate courses that satisfy University United States/International Cultures requirements.
- W is the code used to designate courses that satisfy University Writing Across the Curriculum requirements.
- second semester proficiency Foreign Language is required (if fewer than 8 credits are needed to reach the required proficiency, students choose selections from program list).

### Program List:

Students may select free elective courses from nearly the entire range of the University's offerings. However, the following courses may **NOT** be used to satisfy degree requirements in the Science major, regardless of option, not even as free electives.

ASTRO 001**, 010**, 011**, 120**, 140**	MATH 001, 002, 003, 004, 017, 018, 021, 022, 026,
BIOL 011**, 012**	030, 035, 036, 040, 081, 082, 083, 110, 111, 200
BISC 001, 002, 003**, 004**	MICRB 106, 107, 120, 121A, 121B, 150 151A,
BMB 001**	151C, 151D, 151E, 151F, 151W
CHEM 001, 002, 006, 011	PHYS 001, 150, 151
CMPS 001, 100, 110	CAS 004, 126
ENGL 004, 005	STAT 100
LL ED 005, 010	

In addition, the following types of courses may **NOT** be used to satisfy degree requirements in the Science major:

- Courses intended for students in associate degree programs.
- Courses which are remedial in nature or which focus on reading improvement or study skills.  
**NOTE:** Only 3 credits of CHEM 017 and only 4 credits of MATH 140A may be used to satisfy degree requirements.
- Courses which substantially duplicate the subject matter covered in other completed courses taught at a comparable level.
- No more than 6 credits of ROTC and 12 credits of Independent Study (296, 496) may be used to satisfy degree requirements. Unless special permission is granted, Independent Study credit may only be used in the "Free Electives" category.
- No more than 5 credits of KINES may be used to satisfy degree requirements.

\*\* 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 and will be considered on a case-by-case basis.

## CURRENT ROTATION OF BIOLOGY COURSES FOR MAJORS †

B M B 211 Elementary Biochemistry	Spring of even-numbered years
B M B 342 Laboratory in Proteins, Nucleic Acids, and Molecular Cloning (*Will count as 400-level course)	Spring of even-numbered years
B M B 400 Molecular Biology of the Gene	Every summer
B M B 401 Biochemistry I	Every fall
B M B 402 Biochemistry II	Every spring
BIOL 110 Biology: Basic Concepts	Every fall (5 sec.); spring (3 sec.); summer (1 sec.)
BIOL 220W Biology: Populations and Communities	Every spring (1 sec.)
BIOL 230W Biology: Molecules and Cells	Every fall (2 sec.); summer (1 sec.)
BIOL 240W Biology: Function and Development of Organisms	Every spring (2 sec.)
BIOL 422W Advanced Genetics	Spring of odd-numbered years
BIOL 429 Animal Behavior	Fall of odd-numbered years
BIOL 430 Developmental Biology	Spring of even-numbered years
BIOL 437 Histology	Spring of odd-numbered years
BIOL 439 Practical Bioinformatics	Spring of even-numbered years
BIOL 460 Human Genetics	Fall of even-numbered years
BIOL 469 Neurobiology	Spring of odd-numbered years
BIOL 472 Mammalian Physiology	Every fall
BIOL 473 Laboratory in Mammalian Physiology	Every fall
BIOL 479 General Endocrinology	Spring of even-numbered years
BIOL 482 Coastal Biology	Fall of even-numbered years
MICRB 201 Introductory Microbiology	Spring of odd-numbered years
MICRB 202 Introductory Microbiology Laboratory	Spring of odd-numbered years
MICRB 410 Principles of Immunology	Fall of odd-numbered years

† These are the typical semesters during which these courses are offered. However, this schedule is subject to change without notice and is for planning purposes only. It does NOT constitute a commitment on the part of the college that the courses will absolutely be offered during the listed semesters.

**Program Notes:**

[http://bulletins.psu.edu/bulletins/bluebook/major/sc\\_bs.htm](http://bulletins.psu.edu/bulletins/bluebook/major/sc_bs.htm)

**Academic Advising Notes**

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

- 1) attained at least a 2.00 cumulative grade-point average
- 2) completed MATH 140 GQ(4) with a grade of C or better
- 3) completed at least two of the following courses with a grade of C or better: BIOL 110 GN(4); CHEM 110 GN(3); PHYS 211 GN(4) or PHYS 250 GN(4)

In order to graduate, students must earn a grade of C or better in BIOL 110, CHEM 110, MATH 140, PHYS 211 or 250, and all 400-level classes in science.