

RECORD OF PROGRESS

Biology BA, BS (for students entering Fall 2007 or after)

DEPARTMENT OF BIOLOGICAL SCIENCES

These sheets are for advisement & tracking progress only. Official degree requirements can be found in the College Catalog.

Name: _____

Date of Graduation: Year _____ May _____ Aug _____ Dec _____

Degree Program: BioBA (035) ___ BioBS (040) ___ BioBA PreHealth (036) ___

College-wide Degree Requirements:

- ___ Overall cumulative average at least 2.0
- ___ Cumulative average in major at least (include cognate courses) 2.0
- ___ Minimum of half of major at Oswego (BioBA = 31-32 hours, BioBS = 38-39 hours)
- ___ BA: maximum of 48 hours in one discipline (Note: Bio and Zoo are **not** separate disciplines)
- ___ Minimum of 60 hours at a four-year institution
- ___ Minimum of 30 hours at SUNY Oswego
- ___ Minimum of 42 hours of upper division courses (numbered 300 or higher & does not include any hours from 2 yr. colleges.)
- ___ Minimum total of 122 hours

General Education Requirements (GE2000): see newspaper for approved courses

Basic Skills:

- ___ Writing Eng 102 (1 course or waiver)
- ___ Computer Literacy (1 course or waiver)
- ___ Critical Thinking (1 course or waiver)

Foreign Language: satisfied by high school study of another language through Regents level 4; high school study of two other languages (through level 2 in each); CLEP exam; or completion of a 102-level college language course or equivalent

- ___ (approved course #1)
- ___ (approved course #2)

Knowledge Foundations:

- ___ Fine & Performing Arts (1 approved course)
- ___ Humanities (1 approved course)
- ___ Mathematics (1 approved course, e.g. Math 179, Math 210)

Natural sciences: Students in the Biological Sciences are exempt from this requirement

Social & Behavioral Sciences (2 approved courses from 2 disciplines)

- ___ (approved course # 1)
- ___ (approved course # 2)

America & the Western Heritage:

- ___ American History (1 approved course)
- ___ Western Civilization (1 approved course)

Human Diversity:

- ___ Tolerance & Intolerance in the U.S. (1 approved course)
- ___ Non-Western Civilizations (1 approved course)

Intellectual Issues: Must be taken at SUNY Oswego.

- ___ Explorations in the Natural Sciences (1 approved course e.g. Bio 303, Bio 341, Bio 363, Bio 400)
- ___ Cultures & Civilizations OR Self & Society (1 approved course)

Expository writing: 5 approved courses (see pages 4 & 5)

1. Introductory Level (e.g. Bio 120) _____

2. Writing to Learn (At least two courses must be from list of approved courses; see page 4).

Course # 1 _____ course #2 _____ course #3 _____

3. Advanced Level Course (one course, see pages 4 & 5) _____

BIOLOGY BA REQUIREMENTS

A. Core Requirements: required for all biology majors

15 credits

___ Bio 110 Biology Seminar	1	___ Bio 316 Genetics Lab	1
___ Bio 120 Mol. & Cellular Found.	4	___ Bio 425 Evolution	3
___ Bio 315 Genetics	3	___ Bio 492 Research	3

B. Electives

21 credits

1. Area Electives. At least one course from each Area I to III. **9-11 credits**

Area I. Organismal Biology

___ Bio 310 Microbiology	3
___ Bio 325 Behavioral Biology	4
___ Bio 340 The Plant Kingdom	3
___ Bio 357 Plant Sys/Local Flora	3
___ Bio 370 The Animal Kingdom	4
___ ^{1*} Bio 492 Research	3
___ Zoo 330 Invertebrate Zoology	4
___ Zoo 340 Vertebrate Zoology	4

Area II. Ecology (with field component)

___ Bio 320 Introductory Ecology	3
___ Bio 358 Plant Ecology	3
___ ^{2*} Bio 492 Research	3
___ Zoo 405 Limnology	3

Area III. Molecular / Cellular / Physiology

___ Bio 309 Cellular Physiology	3
___ Bio 439 Molecular Biology	3
___ ^{3*} Bio 492 Research	3
___ Zoo 360 Animal Physiology	4
___ Che 461 Biochemistry	3

2. Free Electives in Department **10-12 credits**

With advisement select courses from the unused Biology and Zoology courses. The free electives and area electives must total **21 credits**. Please see list of Biological Science courses on page 4.

C. Cognates

26-27 credits

1. Take both:

- ___ Che 111 General Chemistry I
- ___ Che 212 General Chemistry II

3. One of the following Physics Courses:

- a. ___ Phy 111 College Physics I
- b. ___ Phy 112 General University Physics I

2. One of the following Chem sequences:

- a. ___ Che 331 Organic Chemistry I
- ___ Che 332 Organic Chemistry II
- b. ___ Che 230/230L Intro Org Chem+Lab
- ___ Che 360/360L Intro Biochem + Lab

4. Math courses (2 total):

- ___ Mat 179 Measuring life
- ___ Either Mat 120 or Mat 210

Notes:

*A single Bio 492 course cannot be used to fulfill multiple requirements. A Bio 492 used for an area elective is in addition to the Bio 492 used as a core requirement. A Bio 492 that is used for one area elective cannot also be used for another area elective.

¹Bio 492 must be an approved Area I topic.

²Bio 492 must be an approved Area II topic.

³Bio 492 must be an approved Area III topic.

(Apply Fall 2007)

BIOLOGY BS DEGREE REQUIREMENTS

A. Core Requirements: required of all Biology majors 15 credits

___ Bio 110 Biology Seminar	1	___ Bio 316 Genetics Lab	1
___ Bio 120 Mol. & Cellular Found.	4	___ Bio 425 Evolution	3
___ Bio 315 Genetics	3	___ Bio 492 Research	3

B. Electives 27 Credits

1. Area Electives. At least one course from each Area I to III. **9-11**

Area I. Organismal Biology

___ Bio 310 Microbiology	3
___ Bio 325 Behavioral Biology	4
___ Bio 340 The Plant Kingdom	3
___ Bio 357 Plant Sys/Local Flora	3
___ Bio 370 The Animal Kingdom	4
___ ^{1*} Bio 492 Research	3
___ Zoo 330 Invertebrate Zoology	4
___ Zoo 340 Vertebrate Zoology	4

Area II. Ecology (with field component)

___ Bio 320 Introductory Ecology	3
___ Bio 358 Plant Ecology	3
___ ^{2*} Bio 492 Research	3
___ Zoo 405 Limnology	3

Area III. Molecular / Cellular / Physiology

___ Bio 309 Cellular Physiology	3
___ Bio 439 Molecular Biology	3
___ ^{3*} Bio 492 Research	3
___ Zoo 360 Animal Physiology	4
___ Che 461 Biochemistry	3

2. Free Electives in Department **16-18 credits**

With advisement select courses from the unused Biology and Zoology courses. The free electives and area electives must total **27 credits**. Please see list of Biological Science courses on page 4.

C. Cognates 33-35 credits

1. Take both:

- ___ Che 111 General Chemistry I
- ___ Che 212 General Chemistry II

2. One of the following Chem sequences:

- a. ___ Che 331 Organic Chemistry I
- ___ Che 332 Organic Chemistry II
- b. ___ Che 230/230L Intro Org Chem+Lab
- ___ Che 360/360L Intro Biochem + Lab

3. One of the following Physics Sequences:

- a. ___ Phy 111 College Physics I
- ___ Phy 212 College Physics II
- b. ___ Phy 112 General Physics I&I
- ___ Phy 213 General Physics II

4. Math courses (3 total):

- a. ___ Mat 179 Measuring life
- ___ Either Mat 120 or Mat 210
- b. One additional math from:
- ___ Mat 210, Mat 220, or Mat 258

Notes:

* A single Bio 492 course cannot be used to fulfill multiple requirements. A Bio 492 used for an area elective is in addition to the Bio 492 used as a core requirement. A Bio 492 that is used for one area elective cannot also be used for another area elective.

¹Bio 492 must be an approved Area I topic.

²Bio 492 must be an approved Area II topic.

³Bio 492 must be an approved Area III topic.

Department of Biological Sciences Majors' Courses

Note: Many courses are not taught every semester – see college catalog and “Course Bulletin”

Course	Hrs	Lab?	Writing Level	Oral Comm. Level	Title
Bio 110	1				Biology Seminar
Bio 120	4	✓	1	1	Molecular & Cellular Foundations
Bio 289	3	✓	2	2	Computer Applications in Biology
Bio 300	3	✓			Field Natural History
Bio 301	3		2	2	Topics in Modern Biology
Bio 303	3		2	2	Conservation...Non-human Primates
Bio 309	3		2		Cell Physiology
Bio 310	3	✓	2	2	Microbiology
Bio 315	3				Genetics
Bio 316	1	✓	2		Laboratory in Genetics
Bio 320	3	✓	2		Introductory Ecology
Bio 325	3	✓	2	2	Behavioral Biology
Bio 340	3	✓	2	2	Plant Kingdom
Bio 341	3		2	2	Plants and Society
Bio 345	3	✓			Trees and Shrubs
Bio 356	3	✓			Local Flora
Bio 357	3	✓	2	2	Plant Systematics
Bio 358	3	✓	2	2	Plant Ecology
Bio 360	4	✓	2		Animal physiology
Bio 363	3				Great Lakes Environmental Issues
Bio 370	3	✓	2		Animal Kingdom
Bio 388	3	✓	3	3	Field Herpetology
Bio 399	1-6	**	3*		Independent Study
Bio 400	3		3	2	Current Issues in Envir & Pop Biology
Bio 420	?	✓	?	?	Wetlands Ecology
Bio 425	3		3	2	Evolution
Bio 439	3		3		Molecular Biology
Bio 440	4	✓	2		Developmental Biology of Plants
Bio 460	3		2	2	Conservation Biology
Bio 492	3		3	3	Research
Bio 497	6	**	3	3	Senior Honors Thesis
Bio 498	1-12	**	3*		Internship in Biology
Bio 499	1-6	**	3*		Independent Study
Zoo 305	4	✓			Human Anatomy and Physiology I
Zoo 306	4	✓			Human Anatomy and Physiology II
Zoo 330	4	✓	2		Invertebrate Zoology
Zoo 340	4	✓	2	2	Vertebrate Zoology
Zoo 360	4	✓	2		Animal Physiology
Zoo 370	4	✓	2	2	Comparative Anatomy
Zoo 373	4	✓	2	2	Embryology
Zoo 375	3	✓			Entomology
Zoo 376	3	✓			Ornithology
Zoo 384	4	✓	2	2	Mammalogy
Zoo 385	3	✓			Field Mammalogy
Zoo 399	1-3	**	3*		Independent Study
Zoo 405	3	✓	2		Limnology
Zoo 440	3	✓	2		Ichthyology
Zoo 498	1-12	**	3*		Internship in Zoology
Zoo 499	1-6	**	3*		Independent Study

* May satisfy level 3 with advisor's approval

** Depends on nature of course or project

Biology Research Courses: (others may also be available)

Course	Hrs	Lab?	Level 3 Writing	Level 3 Oral Com.	Title
Bio 492	3	✓	✓	✓	Aquatic Ecology
Bio 492	3	✓	✓	✓	Behavioral Biology
Bio 492	3	✓	✓	✓	Biotechnology
Bio 492	3	✓	✓	✓	Conservation Genetics
Bio 492	3	✓	✓	✓	Field Ecology
Bio 492	3	✓	✓	✓	Field Herpetology
Bio 492	3	✓	✓	✓	Molecular Genetics
Bio 492	3	✓	✓	✓	Plant Physiology
Bio 492	3	✓	✓	✓	Pollution & Plant Development
Bio 492	3	✓	✓	✓	Toxic Algal Blooms
Bio 492	3	✓	✓	✓	Zoo Data Analysis

Cognate Courses

Course	Hrs	Title
Che 111	4	General Chemistry I
Che 212	4	General Chemistry II
Che 230	3	Introductory Organic Chemistry
Che 230L	1	Introductory Organic Chemistry Lab
Che 331	4	Organic Chemistry I
Che 332	4	Organic Chemistry II
Che 360	3	Introductory Biochemistry
Che 360L	1	Introductory Biochemistry Lab
Phy 111	4	College Physics I
Phy 112	4	General Physics I
Phy 212	4	College Physics II
Phy 213	4	General Physics II
Mat 120	3	Precalculus
Mat 179	3	Measuring Life (Statistics for Biological Science Majors)
Mat 210	4	Calculus I
Mat 220	4	Calculus II
Mat 258	3	Introduction to Statistics B

GENERAL ADVISEMENT POINTS

1. **General education** (apply to GE2000 only).

Students in coming with a BA/BS degree are waived from general education requirements.

Students with AA, AS, and AAS degree from another SUNY College are covered by articulation and will only be waived of:

1. Computer literacy (via infusion).
2. Critical thinking (via infusion).
3. The second course of Social & behavioral sciences.
4. The lower-division component of the writing plan.

Foreign language satisfied by one college semester course i.e. level 101 (or high school equivalent – three years through Regents exam).

5. Exempt from lower division component of the writing plan.
2. MAX100/101 do not count toward graduation credit hours.
3. AP Biology: A grade of 4 or 5 on the AP exam for Biology will count as either Bio 120 or 4 hours of free electives in the major, by advisement.
4. A score of 50 or above on the CLEP biology exam will result in 4 credit hours being awarded, and will satisfy Bio101 (non-majors, knowledge foundations course)
5. Upper division credits: satisfied by any 300-level major or non-major courses from Oswego or from a 4-year college.
6. A course may count towards GPA only if taken at Oswego. Transfer credits do not count towards students' GPA no matter where they come from.
7. Low grade (D and below) in courses taken at Oswego can be *eliminated* from a student's GPA if these courses were repeated off campus. However the new earned grade cannot be used in tabulating a student's GPA.
8. Courses with 'D' grades (including transferred courses) are accepted to satisfy a major requirement.
9. Advisors can override the registrar office's evaluation of the transfer credits in the major. Advisors should send a note to the registrar of any changes no later than the beginning of a transfer student's second semester.
10. No course satisfying the American History requirement will at the same time satisfy the Tolerance & Intolerance requirement.
11. For independent studies students need to complete a minimum of 60 hrs of college work and a GPA of 3.0 in the discipline.
12. For internships students need to complete at least 60 hrs of college work and a GPA of 2.5 for Bio majors and 2.75 for Zoo majors.
13. To graduate with Honors in Biological Sciences a student needs: 1) A 3.2 GPA in the major and a 3.2 GPA overall and 2) A 6 credit hour Senior Honors Thesis (BIO 497). For both BA and BS degrees, this will be included in the degree credit hour requirements. BIO 497 will substitute for the requirement for BIO 492 in the undergraduate degrees.