Name	ID#	Date

Planning Sheet: BACHELOR OF ARTS in BIOLOGY

(Effective Fall 2013. This major consists of 56-60 semester credits)

Biology Major Requirements:

Term	Grade	Course #	Lib. Arts	Title
____	____	BIO 151	NSM-L	Introductory Biology (Prereq: MPG 3)
____	____	BIO 152	NSM-L	Evolution, Ecology, and Diversity (Prereq: BIO 151)
____	____	BIO 253		Introductory Cellular Biology (Prereq: CHM 116 and sophomore status)
____	____	BIO 255		Genetics (Prereq: BIO 151 & 152, CHM 116, & 1 of: MPG 4, MAT 114, 145, 163, 248 or PSY 215)

Biology Electives: Select and complete five (5) upper division Biology electives, one (1) of which must be BIO 361 or 481:

____	____	BIO 361 or 481	Biology Elective: _____
____	____	BIO _____	Biology Elective: _____
____	____	BIO _____	Biology Elective: _____
____	____	BIO _____	Biology Elective: _____
____	____	BIO _____	Biology Elective: _____

Non-Departmental Supporting Requirements:

Chemistry Requirements

____	____	CHM 115	NSM-L	General Chemistry I (Prereq: MPG 3; high school chemistry recommended)
____	____	CHM 116	NSM-L	General Chemistry II (Prereq: CHM 115)

Physics Requirements: Select & complete one (1) of the following introductory Physics options:

____	____	PHY 116	NSM-L	Introduction to Physics (Prereq: MPG 3)
OR				
____	____	PHY 121	NSM-L	General Physics I (Prereq: MAT 145 or concurrent registration)
____	____	PHY 122	NSM-L	General Physics II (Prereq: PHY 121, & MAT 146 or concurrent registration, and ENL 111 or 112 or HON 111)

Mathematics Requirement: Select & complete one (1) of the following courses:

____	____	MAT 114	NSM	❒ Precalculus (Prereq: MPG 3)
		MAT 145	NSM	❒ Calculus I (Prereq: MPG 4)
		MAT 163	NSM	❒ Introductory Statistics (Prereq: MPG 3)
		MAT 248	NSM	❒ Introductory Biostatistics (Prereq: MAT145 or BIO151 & MPG 4)
		PSY 215		❒ Research Methods and Statistics I (Prereq: PSY105 & MPG 3)

Notes:

- **Grade and GPA requirements:**
  - Grade and GPA requirements for courses with a prerequisite of BIO 253: GPA of 2.0 in BIO 151, 152, & 253 and minimum grade of 1.0 in each of these courses.
  - Grade and GPA requirements for courses with prerequisite of BIO 151 & 152: GPA of 2.0 in BIO 151 & 152 and minimum grade of 1.0 in each of these courses.
  - A grade of 2.0 or above is requires for all supporting courses and upper division biology courses applied to the major.
  - Upper division biology courses must be traditionally graded when used to satisfy a major requirement.
- A student completing BIO 151, 152, 253, and at least two upper division electives may, in consultation with their advisor, seek approval from the department to complete major requirements with as many as 4 upper division courses from other institutions.
- **Keystone:** BIO 490: Biology Keystone (2 sem. credit) or SCI 490: Integrated Science (2 sem. credit) is required. Double majors and students in the Honors program should consult with their BIO faculty advisor regarding the keystone requirement.
- **Abbreviation Key:** ML = Modern Language; SC = Signature Curriculum; EM = Engaging Minneapolis; AE = Augsburg Experience; KC = Senior Keystone Course; NSM = Natural Science & Mathematics - no lab; NSM-L = Natural Science & Mathematics-with lab; SBS = Social & Behavioral Science; FA = Fine Arts; HUM = Humanities

See back for information on graduation skills requirements

Planning Sheet: GRADUATION SKILLS REQUIREMENTS

These requirements were implemented for Fall 2008. Please talk with your faculty advisor for information.

Graduation skills, including the Quantitative Reasoning requirements, are completed as follows. Graduation skills in Critical Thinking, Writing, Speaking, and Quantitative Reasoning are required for graduation. Critical Thinking is embedded in all majors. Plans for completion of other graduation skills are determined by the major department. Consult your department chair or faculty advisor to select appropriate courses to meet the Quantitative Reasoning (QR) graduation skill. QR is satisfied by completing one (1) Quantitative Foundational course (QF) and one (1) Quantitative Application course (QA), or one (1) combined QFA course. The most current information on Graduation Skills can be found in the Augsburg College catalog at www.augsburg.edu/catalog/.

Transfer students must consult an advisor about potential adjustments to their course requirements to fulfill each graduation skill.

Designated Major Course	GRADUATION SKILLS – Biology B.A.		Completed
Embedded in major	**Writing Requirements** TWO (2) Writing courses		
Embedded in major			
COM 115*	**Speaking** One (1) Speaking course		
Designated Major Course	**QUANTITATIVE REASONING**		Completed
Embedded in major	**Quantitative Foundations & Applications** One (1) QFA course (Prereq: MPG3)	QFA course	
– OR –			
Embedded in major	**Quantitative Foundations and Quantitative Applications** One (1) QF course (Prereq: MPG 3) **and** one (1) QA course	QF course	
Embedded in major		QA course	

* COM 111 or HON 130 are also accepted to fulfill the Speaking Graduation Skill

Graduation Tally Checklist

These requirements were implemented in April 2003 and remain in effect until further notice.

Requirement	Progress Towards Completion	
Cumulative Course Credits ▪ Minimum number of course credits needed for graduation = **128** ▪ At least 32 semester credits completed at Augsburg. ▪ 24 of last 32 semester credits completed in residence. ▪ Second degree – minimum of 32 sem. credits completed in residence.	Transfer Credits Earned	
	+ Aug. Credits Earned	
	= Total Credits Earned	
	# Credits Needed	

Grade Point Average (GPA)
▪ Minimum 2.0 GPA required in major, minor, & overall.
▪ Some majors require higher GPA.
▪ Latin Honors GPA requirements:
  ○ Summa cum laude: 3.9-4.0
  ○ Magna cum laude: 3.80-3.89
  ○ Cum laude: 3.60-3.79
	Cumulative GPA	

	Major 1 GPA	
	Major 2 GPA	
	Minor GPA	

Other Limits	Minimum/Maximum	Your Total
Overall maximum courses graded Pass/No Pass (P/N) ▪ Grade of 2.0 or above required to Pass and earn credit for course. ▪ Maximum of 8 of 24 sem. credits P/N may be in major.	Maximum of 24 sem. Credits	
Major Courses graded Pass/No Pass (P/N)	Maximum of 8 semester credits	
Latin Honors courses graded Pass/No Pass (P/N)	Maximum of 8 semester credits	
Latin Honors traditionally graded courses	Minimum of 54 semester credits	
Internships	Maximum of 16 semester credits	
Independent/Directed Studies	Maximum of 8 semester credits	

Sample Four-Year Plan (B.A.)

This is a possible plan for the Bachelor of Arts in Biology, though there are many configurations of courses. Students should limit lab courses to two per term. In general, students should try to complete math earlier in the curriculum, and physics during the junior or senior years. Liberal Arts Foundation (LAF), Modern Language and other Core courses are more flexible.

Freshman Year

Fall Term	Spring Term
BIO 151	BIO 152
CHM 115	CHM CHM 116
LAF Course	MAT 163
REL 100	ENL 111
AugSem	

Sophomore Year

Fall Term	Spring Term
BIO 253 or 255	BIO 253 or 255
Modern Language	Modern Language
Minor or Elective	Minor or Elective
COM 115	REL 200

Junior Year

Fall Term	Spring Term
PHY 116	Upper-Division BIO elective
Upper-Division BIO elective	LAF Course
LAF Course	Minor or Elective
Minor or Elective	Minor or Elective
HPE 001	

Senior Year

Fall Term	Spring Term
Upper-Division BIO elective	Upper-Division BIO elective
Upper-Division BIO elective	Keystone: BIO 490 (2 sem. credits)
LAF Course	LAF Course
Minor or Elective	Minor or Elective
HPE skill	Minor or Elective

Notes:

- COM 115, COM 111 or HON 130 fulfill both the speaking skill and a Humanities Liberal Arts Foundation requirement.

Biology Department

The Biology Department is located in Science Hall 224. You may contact the following faculty for more information on the major requirements, and also check out the website at www.augsburg.edu/biology.

Dale C. Pederson, Dept Chair
Associate Professor
Phone: 612-330-1073
Email: pederson@augsburg.edu

Jennifer Bankers-Fulbright
Assistant Professor
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David Crowe
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Assistant Professor
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What can I do with a Biology major?

The following jobs are some of the positions that Biology majors could pursue. Many require professional or graduate school.

For more information on possible careers in biology, please talk with your faculty adviser, and also the Strommen Career and Internship Services office.

- Agronomist
- Botanist
- Cell Biologist
- Chiropractor
- Conservationist
- Dentist
- Environmental Scientist
- Environmental Lawyer
- Field Biologist
- Field Ecologist
- Fish and Wildlife Officer
- Forestry
- Geneticist
- Health Inspector
- Horticulturalist
- Naturalist
- Nutritionist
- Optometrist
- Pharmacologist
- Physical Therapist
- Physician
- Public Health
- Researcher
- Resource Management
- Taxonomist
- Veterinarian

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