

# B.S. Biology Checklist

## Biomedical Sciences Track

### 2015-2016 Catalog

Name: \_\_\_\_\_

ID Number: \_\_\_\_\_

#### GENERAL EDUCATION PROGRAM (24-27 hrs)

##### **English Composition**

COURSE	TITLE	HRS.	
<i>Depending on placement, either 8 or 6 semester hours.</i>			
ENGL 1101	<i>Discourse &amp; Comp.</i>	5	
<i>or</i>			
ENGL 1102	<i>Discourse &amp; Comp.</i>	3	_____
ENGL 1105	<i>Comp. &amp; Argument.</i>	3	_____

##### **Fine & Performing Arts (Select 1)**

COURSE	TITLE	HRS.	
ARTH 1101	<i>Introduction to Art</i>	3	_____
ENGL 2275	<i>Amer. Film History</i>	3	_____
MUSI 1201	<i>Music Appreciation</i>	3	_____
MUSI 2211	<i>Music History 1</i>	3	_____
PHIL 3300	<i>Philosophy and Film</i>	3	_____
THAR 1000	<i>Introduction to Theater</i>	3	_____

##### **Quantitative Reasoning**

*The Quantitative Reasoning component of the GEP will be met within the biology degree.*

##### **Social Science (Select 1)**

COURSE	TITLE	HRS.	
ANTH 3350	<i>Biological Anthr.</i>	4	_____
GOVT 2250	<i>Intro. to Political Sci.</i>	3	_____
HIST 2430	<i>World History I</i>	3	_____
HIST 2440	<i>World History II</i>	3	_____
HIST 2530	<i>World Prehist. &amp; Arch</i>	3	_____
HIST 4110	<i>Intellectual History</i>	3	_____
PHIL 3360	<i>Social &amp; Politic. Hist.</i>	3	_____
PSYC 1101	<i>Intro. to Psychology</i>	3	_____
SOCI 1101	<i>Intro. to Sociology</i>	3	_____
SOSC 1110	<i>Foun. of Social Sci.</i>	3	_____

##### **Ethics (Select 1)**

COURSE	TITLE	HRS.	
PHIL 3320	<i>Ethics Public/Priv. Life</i>	3	_____
ROCI 4485	<i>Reflec. Comm. Involv.</i>	3	_____

##### **Natural Sciences**

*The Natural Sciences component of the GEP will be met within the biology degree.*

##### **Western Perspectives (Select 1)**

COURSE	TITLE	HRS.	
ENGL 2211	<i>Survey of English Lit. 1</i>	3	_____
ENGL 2212	<i>Survey of English Lit. 2</i>	3	_____
HIST 3115	<i>Women in Medieval Eur.</i>	3	_____
HIST 3300	<i>Christianity in Ea. Am.</i>	3	_____
HIST 3520	<i>History of Crusades</i>	3	_____
IDST 2225	<i>Civilization &amp; Lit. 1</i>	3	_____
IDST 2226	<i>Civilization &amp; Lit. 2</i>	3	_____
PHIL 2200	<i>Intro. to Philosophy</i>	3	_____
RELI 2230	<i>Hist. of Chr. Thought</i>	3	_____

##### **Non-Western Perspectives (Select 1)**

COURSE	TITLE	HRS.	
ANTH 2250	<i>Cultural Anthropology</i>	3	_____
ARTH 3366	<i>Non-Western Survey</i>	3	_____
GEOG 2201	<i>Cultural Geography</i>	3	_____
GEOG 3351	<i>Reg. Geog.: Middle E.</i>	3	_____
GOVT 3320	<i>Third World Politics</i>	3	_____
HIST 3410	<i>East Asian History</i>	3	_____
HIST 3430	<i>Anc. Indian Cu. of Soc</i>	3	_____
HIST 3432	<i>Gandhi &amp; Mod. India</i>	3	_____
HIST 3500	<i>History of So. Africa</i>	3	_____
HIST 3550	<i>Islam: Rel., Pol., Soc.</i>	3	_____
HIST 4420	<i>Middle East (modern)</i>	3	_____
IDST 2227	<i>Civilization &amp; Lit. 3</i>	3	_____
PHIL 2284	<i>Asian Philosophy</i>	3	_____

##### **Capstone**

IDST 4490	<i>Senior Seminar</i>	3	_____
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#### BIOLOGY CURRICULUM (51 hrs)

##### **Biology Foundation (16 hrs)**

COURSE	TITLE	HRS.	
BIOL 1151	<i>General Biology 1</i>	4	_____
BIOL 1152	<i>General Biology 2</i>	4	_____
BIOL 3770	<i>Genetics &amp; Molecu.</i>	4	_____
BIOL 4770	<i>Cell Biology</i>	4	_____

(Checklist continued on reverse side)

# B.S. Biology Checklist

## Biomedical Sciences Track

### 2015-2016 Catalog

#### Biomedical Track Requirements (35 hrs)

COURSE	TITLE	HRS.	
<b>Biomedical Sciences Core (19 hrs)</b>			
BIOL 3560	<i>Prin. of Anatomy</i>	4	
or			
BIOL 3359	<i>Comp. Vert. Anatomy</i>	4	_____
BIOL 3561	<i>Prin. of Physiology</i>	4	
or			
BIOL 3360	<i>Animal Physiology</i>	4	_____
BIOL 3750	<i>Microbiology</i>	4	_____
BIOL 4771	<i>Biotechnology</i>	4	_____
CHEM 4411	<i>Biochemistry</i>	3	_____

Note: Students may count either BIOL 3359 or BIOL 3560 toward the biomedical science core, but not both. Students may count either BIOL 3360 or BIOL 3561 toward the biomedical science core, but not both.

#### Anatomy/Physiology Electives (8 hrs) (select from the following)

BIOL 3640	<i>Histology</i>	4	_____
BIOL 3650	<i>Pathophysiology</i>	4	_____
BIOL 3660	<i>Neuroanatomy</i>	4	_____
BIOL 4660	<i>Adv. Human Anatomy</i>	4	_____

#### Microbiology Electives (8 hrs) (select from the following)

BIOL 4765	<i>Virology</i>	4	_____
BIOL 4680	<i>Parasitology</i>	4	_____
BIOL 4760	<i>Diagnostic Micro.</i>	4	_____
BIOL 4780	<i>Immunology</i>	4	_____

#### SPECIAL MINIMUM REQUIREMENTS FOR TRANSFER STUDENTS

30 semester credit hours completed at SSU, of which 21 credit hours must be upper division courses (3000-4000 level) \_\_\_\_\_

12 semester credit hours in biology completed at SSU at the 3000 or 4000 level \_\_\_\_\_

#### MATHEMATICS & SUPPORT SCIENCE (30-31 hrs)

COURSE	TITLE	HRS.	
MATH 1250	<i>Trigonometry</i>	3	
or			
MATH 2110	<i>Calculus 1</i>	4	_____
MATH 1500	<i>Principles of Statistics</i>	3	
or			
MATH 2500	<i>Statistics 1</i>	3	_____
CHEM 1141	<i>General Chemistry 1</i>	4	_____
CHEM 1142	<i>General Chemistry 2</i>	4	_____
CHEM 3305	<i>Organic Chemistry 1</i>	4	_____
CHEM 3306	<i>Organic Chemistry 2</i>	4	_____
PHYS 2201	<i>Physics 1</i>	4	
or			
PHYS 2211	<i>Calc. Based Physics 1</i>	4	_____
PHYS 2202	<i>Physics 2</i>	4	
or			
PHYS 2212	<i>Calc. Based Physics 2</i>	4	_____

#### General Electives

COURSE TITLE HRS.  
Once all other requirements have been met (GEP, Biology Curriculum, and Math and Support Science) you must take enough General Electives to meet the 120 hour requirement.

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

#### ADDITIONAL MINIMUM REQUIREMENTS

120 semester credit hours \_\_\_\_\_

2.00 overall, cumulative GPA \_\_\_\_\_

60 semester credit hours at 2000 level or above \_\_\_\_\_

C- or better required in ALL biology, chemistry and physics courses. \_\_\_\_\_

**120 Semester Hours Required**

7/23/2015

## BS BIOL (Biomedical)—Suggested Four-Year Course Schedule

Year 1			
Fall Semester		Spring Semester	
BIOL1151: General Biology 1	4	BIOL1152: General Biology 2	4
CHEM1141: General Chemistry 1	4	CHEM1142: General Chemistry 2	4
ENGL1102: Discourse and Composition	3	ENGL1105: Comp. and Argumentation	3
MATH1250: Trigonometry	3	MATH1500: Principles of Statistics	3
		General Electives	2
<b>Total Hours:</b>	<b>14</b>	<b>Total Hours:</b>	<b>16</b>
Year 2			
Fall Semester		Spring Semester	
BIOL3560: Principles of Anatomy or BIOL3359: Comp. Vert. Anat.	4	BIOL3561: Principles of Physiology or BIOL3360: Animal Physiology	4
BIOL3750: Microbiology	4	CHEM3306: Organic Chemistry 2	4
CHEM3305: Organic Chemistry 1	4	Social Science GEP (suggest PSYC1101)	3
Fine Arts GEP	3	General Electives (suggest SOCI1101)	4
<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>15</b>
Year 3			
Fall Semester		Spring Semester	
Anatomy or Microbiology Elective	4	Anatomy or Microbiology Elective	4
BIOL3770: Genetics	4	CHEM4411: Biochemistry	3
PHYS2201: Physics 1	4	PHYS2202: Physics 2	4
Western Perspectives GEP	3	Non-Western Perspectives GEP	3
		General Electives	1
<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>15</b>
Year 4			
Fall Semester		Spring Semester	
Anatomy or Microbiology Elective	4	Anatomy or Microbiology Elective	4
Ethics GEP	3	BIOL4770: Cell Biology	4
General Electives	8	BIOL4771: Biotechnology	4
		IDST4490: Senior Seminar	3
<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>15</b>
<b>Total Hours: 120</b>			

*Note about General Electives:* General electives may be rearranged to have more or less in any particular semester. For example, a student may want to combine several of the general electives in order to take a 3 or 4 credit course. They have been placed as they are on this schedule so that no semester has over 16 hours.

# Guide For The Pre-Med Student

## College: Freshman Year

- Meet with Pre-Med adviser/learn requirements
- Think about a major and minor course of study
- Plan a tentative schedule for the next 2/3 years
- Develop study skills
- Maintain excellent GPA
- Begin extracurricular activities and participate in Pre-Med club
- Develop a Pre-Med course of study
- Talk to Pre-Med upperclassmen to get a reality check
- Contact senior medical students or residents and ask to “shadow” them for a 24- or 36-hour shift

## College: Sophomore Year

- Work/volunteer in medical area
- Meet with Pre-Med adviser to discuss your program
- Maintain excellent GPA
- Check medical schools’ entry requirements
- Consider participating in research
- Study for MCAT (summer before junior year if you will take the MCAT early)

## College: Junior Year

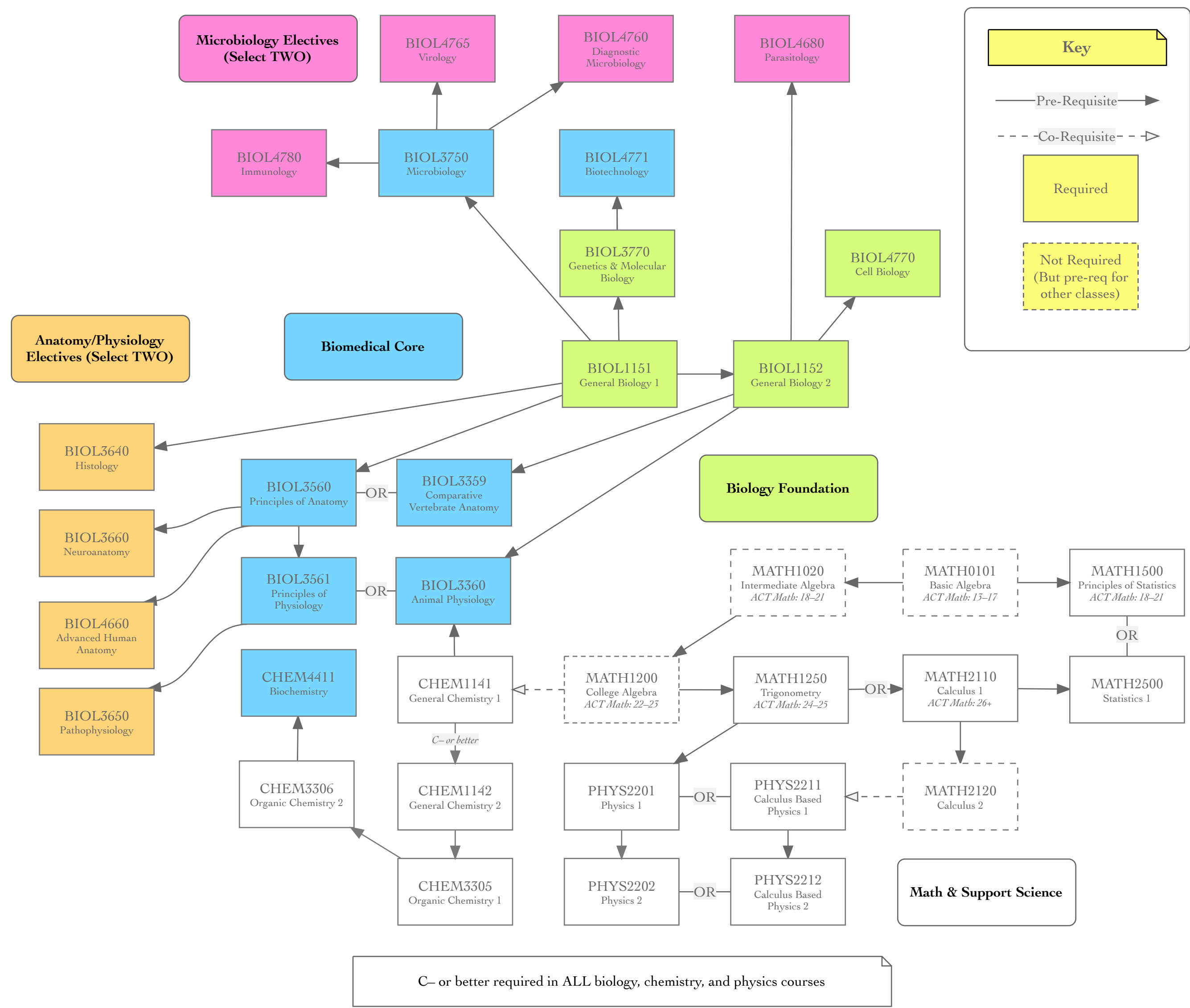
- Study for MCAT (if not yet taken)
- Apply for MCAT (if not yet taken)
- Take MCAT
- Meet with Pre-Med adviser
- Maintain the best GPA you can
- Gather information about medical schools
- Work/volunteer in medical area
- Request reference letters
- Obtain/send/review transcripts
- Visit nearby schools in which you are interested

## College: Senior Year

- Work/volunteer in medical area
- Take MCAT in August to improve scores or if not yet taken
- Confirm that schools have received your application materials & letters
- Maintain the best GPA you can
- Complete secondary medical school applications
- Interview at medical schools

BS Biology (Biomedical Sciences), AY15 – 16

Last Updated: July 23, 2015



## Every-Other-Year Course Schedule

### Natural Sciences

*Note: This course schedule is subject to change. Be sure to talk to your advisor before you schedule your classes!*

Course	Fall 2014	Spring 2015	Fall 2015	Spring 2016	Fall 2016	Spring 2017	Fall 2017	Spring 2018	Fall 2018	Spring 2019	Fall 2019	Spring 2020	Irregular/As Needed
<b>Biology</b>													
BIOL2250 Plant Taxonomy	✓				✓				✓				
BIOL2252 Dendrology			✓				✓				✓		
BIOL2253 Practical Horticulture				✓				✓				✓	
BIOL3350 Entomology	✓				✓				✓				
BIOL3251 Summer Flora													✓ (Summers)
BIOL3254 Economic Botany													✓
BIOL3270 Plant Anatomy & Morphology		✓				✓				✓			
BIOL3271 Non-vascular Plants													✓
BIOL3359 Comparative Vertebrate Anatomy			✓				✓				✓		
BIOL3360 Animal Physiology		✓				✓				✓			
BIOL3640 Histology				✓				✓				✓	
BIOL3850 Ecology	✓				✓				✓				
BIOL3852 Marine Biology			✓				✓				✓		
BIOL3860 Field Methods													✓
BIOL3870 Evolution		✓				✓				✓			
BIOL4270 Plant Physiology													✓
BIOL4355 Animal Behavior		✓				✓				✓			

Course	Fall 2014	Spring 2015	Fall 2015	Spring 2016	Fall 2016	Spring 2017	Fall 2017	Spring 2018	Fall 2018	Spring 2019	Fall 2019	Spring 2020	Irregular/As Needed
BIOL4360 Herpetology				✓				✓				✓	
BIOL4370 Mammalogy				✓				✓				✓	
BIOL4491 Limnology	✓				✓				✓				
BIOL4670 Neuropharmacology	✓				✓				✓				
BIOL4680 Parasitology			✓				✓				✓		
BIOL4760 Diagnostic Microbiology	✓				✓				✓				
BIOL4765 Virology				✓				✓				✓	
BIOL4780 Immunology			✓				✓				✓		
BIOL4850 Forest Ecology & Management													✓
BIOL4851 Wildlife Ecology & Management													✓
<b>Chemistry</b>													
CHEM3325 Analytical Chemistry 2		✓				✓				✓			
CHEM4431 Physical Chemistry 1			✓				✓				✓		
CHEM4432 Physical Chemistry 2				✓				✓				✓	
CHEM4441 Adv. Inorganic Chemistry		✓				✓				✓			
<b>Natural Science</b>													
NTSC3860 Environmental Science			✓				✓				✓		

**Note: This course schedule is subject to change. Be sure to talk to your advisor before you schedule your classes!**

Last Updated: September 25, 2014

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