

# B.S. Natural Science Checklist

## Biology Concentration with Suggested Coursework

### for the MOT Program

### 2015-2016 Catalog

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

#### GENERAL EDUCATION PROGRAM (27-29 hrs)

##### **English Composition**

COURSE	TITLE	HRS.
ENGL 1101	Discourse & Comp.	5
or		
ENGL 1102	Discourse & Comp.	3
ENGL 1105	Comp. & Argument.	3

Depending on placement, either 8 or 6 semester hours.

ENGL 1101	Discourse & Comp.	5	
or			
ENGL 1102	Discourse & Comp.	3	_____
ENGL 1105	Comp. & Argument.	3	_____

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

COURSE	TITLE	HRS.
ARTH 1101	Introduction to Art	3
ENGL 2275	Amer. Film History	3
MUSI 1201	Music Appreciation	3
MUSI 2211	Music History I	3
PHIL 3300	Philosophy of Film	3
THAR 1000	Introduction to Theater	3

ARTH 1101	Introduction to Art	3	_____
ENGL 2275	Amer. Film History	3	_____
MUSI 1201	Music Appreciation	3	_____
MUSI 2211	Music History I	3	_____
PHIL 3300	Philosophy of Film	3	_____
THAR 1000	Introduction to Theater	3	_____

##### **Quantitative Reasoning**

COURSE	TITLE	HRS.
MATH 1250	Trigonometry	3

MATH 1250	Trigonometry	3	_____
-----------	--------------	---	-------

##### **Social Science**

COURSE	TITLE	HRS.
PSYC 1101	Intro. to Psychology	3

PSYC 1101	Intro. to Psychology	3	_____
-----------	----------------------	---	-------

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

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

PHIL 3320	Ethics Public/Priv. Life	3	_____
ROCI 4485	Reflec. Comm. Involv.	3	_____

#### Natural Sciences

The Natural Sciences component of the GEP will be met within the natural science degree.

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

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

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

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

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

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

##### **Capstone**

COURSE	TITLE	HRS.
IDST 4490	Senior Seminar	3

IDST 4490	Senior Seminar	3	_____
-----------	----------------	---	-------

(Checklist continued on reverse side)

# B.S. Natural Science Checklist

## Biology Concentration with Suggested Coursework

### for the MOT Program

#### 2015-2016 Catalog

#### BIOLOGY CONCENTRATION (28 hrs)

COURSE	TITLE	HRS.	
BIOL 1151	<i>General Biology 1</i>	4	_____
BIOL 1152	<i>General Biology 2</i>	4	_____
BIOL 3560	<i>Principles of Anatomy</i>	4	_____
BIOL 3561	<i>Principles of Physiology</i>	4	_____
BIOL 3650	<i>Pathophysiology</i>	4	_____
BIOL 3660	<i>Neuroanatomy</i>	4	_____
BIOL 4660	<i>Adv. Human Anatomy</i>	4	_____

#### ADDITIONAL SCIENCE (24 hrs)

COURSE	TITLE	HRS.	
--------	-------	------	--

#### *Area II Chemistry (12 hrs)*

CHEM 1141	<i>General Chemistry 1</i>	4	_____
CHEM 1142	<i>General Chemistry 2</i>	4	_____
CHEM 2200	<i>Intro. to Org. Chem.</i>	4	_____

#### *Area III Physics (8 hrs)*

PHYS 2201	<i>Physics 1</i>	4	_____
PHYS 2202	<i>Physics 2</i>	4	_____

#### *Additional Science (4 hrs)*

BIOL 4770	<i>Cell Biology</i>	4	_____
-----------	---------------------	---	-------

#### COMM 1103 (3 hrs) PUBLIC SPEAKING AND HUMAN COMMUNICATION

#### MATHEMATICS PROFICIENCY REQUIREMENT

*Each student must show proficiency in MATH 1250 (Trigonometry) either through placement at a higher level or completion of this or a higher level math course.*

#### GENERAL ELECTIVES

*Once all other requirements have been met (GEP, Biology Concentration, Additional Science, Comm 1103 and Math Proficiency) you must take the following courses and enough General Electives to meet the 120 hour requirement.*

COURSE	TITLE	HRS.	
PSYC 2120	<i>Quant. Meth in Psyc.</i>	3	_____
or			
MATH 1500	<i>Statistics</i>	3	_____
PSYC 2130	<i>Child &amp; Adol. Psyc.</i>	3	_____
PSYC 3130	<i>Psyc. Of the Adult</i>	3	_____
PSYC 3160	<i>Abnormal Psychology</i>	3	_____
SOCI 1101	<i>Intro. to Sociology</i>	3	_____
or			
ANTH _____		3	_____
SOCI 3000 or above		3	_____
or			
ANTH 2250	<i>Prin. of Cult. Anth.</i>	3	_____
BUHE 3000	<i>Medical Terminology</i>	3	_____
_____	_____	-	_____
_____	_____	-	_____
_____	_____	-	_____

#### 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 <u>ALL</u> biology, chemistry, and physics courses.	_____

#### 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 the natural sciences completed at SSU at the 3000 or 4000 level of which 8 must be in biology	_____

120 Hours Required.

7/23/2015

## Guide for the Natural Sciences Student

<b>Freshman Year</b>	<p>Meet with your academic advisor to form a plan for your degree. Talk with your advisor about future career goals.</p> <p>Pick up the every-other-year course list, degree checklist, and four-year plan.</p>	<p>Join a club! Pre-Med / Chemistry / World Before Us / Geology.</p> <p>Like the Department Facebook page to learn about goings on. <a href="http://bit.ly/SSU_Science">http://bit.ly/SSU_Science</a></p> <p>Follow us on Twitter too: @SSU_Science</p>	<p>Start drafting your résumé</p> <p>Visit Student Career Development Office : ADM036</p> <p>Spring semester: Create a profile and upload resume to College Central: <a href="http://www.collegecentral.com/shawnee">www.collegecentral.com/shawnee</a></p>
<b>Sophomore Year</b>	<p>Meet with your academic advisor and make sure that you are on track with your degree.</p> <p>Learn about our minors, and consider signing up for one.</p>	<p>Talk to faculty members about becoming a lab assistant.</p> <p>Consider applying for a summer internship through the Student Career Development office.</p> <p>Consider joining a professional organization in your major, such as the ACS (Chemistry), GSA (Geology), etc.</p>	<p>Learn about our study abroad opportunities: <a href="http://www.shawnee.edu/offices/international-students/study-abroad.aspx">www.shawnee.edu/offices/international-students/study-abroad.aspx</a></p> <p>Volunteer on/off campus to gain experience</p> <p>Meet with Peer Career to update your résumé</p>
<b>Junior Year</b>	<p>Meet with your academic advisor.</p> <p>Make sure you examine the every-other-year science course list and talk with your advisor about your graduation plan.</p> <p>Consider getting involved with an undergraduate research project. Talk to several professors about research possibilities.</p>	<p>Consider running for office in a student club</p> <p>Late fall semester, apply for a summer research experience for undergraduates (REU), such as NSF-REU: <a href="http://www.nsf.gov/crssprgm/reu/">www.nsf.gov/crssprgm/reu/</a> or a summer internship.</p>	<p>Have the Career Development Office assist with updating your résumé and practice interviewing through Mock Interviews.</p>
<b>Senior Year</b>	<p>Meet with your academic advisor and be sure that you will soon meet all your degree requirements.</p> <p>Print off your degree audit, and cross reference with your degree checklist.</p>	<p>Get involved with tutoring through the student success center.</p> <p>Continue your involvement with a student club.</p>	<p>Start job search in fall semester. Update résumé, join LinkedIn, and consider taking advantage of your professional science organization's job database and other tools.</p> <p>If applying for graduate school, take the GRE and start applying in fall.</p>

## 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

AMN