## **B.S. in BIOLOGY CHECKLIST**

Ecology, Conservation, & Envir. Biology Track

(Revised November 2016)

Student	 
Advisor	

BIOLOGY COURSES (36-37 cr)					Taken	Grade
Biology Core	Cour			191 - 112-11		
BIOL	201	Principles of Ecology & Evolution	4cr			
BIOL	202	Principles of Cell & Molecular Biology	4cr	3-40		
BIOL	203	Principles of Genetics & Development	4cr			
Required Bio	ology (	Courses (18-19 cr)				
BIOL	210	Botany	3cr			
BIOL	220	General Zoology	3cr			
BIOL	272	Conservation of Plant and Animal Resources	3cr	_		
BIOL	362	Ecology	3cr			
BIOL	451	Evolutionary Biology	3cr			
BIOL	400	Field Studies in Biology (Field Research	3or			
BIOL	490	Methods Section only) or	4cr			
		Field Biology at Pymatuning Laboratory of				
BIOL	450	Ecology (Field Methods in Ecology and				
		Conservation Section only)				
Controlled B	iology	Electives (6 cr)*			. 1500	
BIOL					0.00.0001.00000000000000000000000000000	
BIOL						
* No more that free electives.		total from Independent Study, Special Topics, or	Internshi	ip applies to m	ajor; excess a	pplied as
REOUIRED	CHEN	MISTRY COURSES (8 cr)*		111 35 1114		
			4cr		-	
CHEM	111 112	General Chemistry I	4cr			
CHEM CHEM	111 112	General Chemistry I General Chemistry II	4cr	nay be substitu	ıted.	
CHEM CHEM	111 112	General Chemistry I	4cr	nay be substitu	ated.	
CHEM CHEM * Fulfills the	111 112 Liberal	General Chemistry I General Chemistry II Studies Natural Science Requirement. CHEM 1	4cr	may be substitu	uted.	
CHEM CHEM * Fulfills the  REQUIRED	111 112 Liberal	General Chemistry I General Chemistry II Studies Natural Science Requirement. CHEM 1 HEMATICS COURSES (7 cr)	4cr 13-114 r	nay be substitt	ated.	
CHEM CHEM * Fulfills the  REQUIRED MATH	111 112 Liberal <b>MAT</b> 1 121	General Chemistry I General Chemistry II Studies Natural Science Requirement. CHEM 1 HEMATICS COURSES (7 cr) Calculus I*	4cr 13-114 r 4cr	may be substitt	ated.	
CHEM CHEM * Fulfills the  * REQUIRED MATH MATH	111 112 Liberal MATI 121 216	General Chemistry I General Chemistry II Studies Natural Science Requirement. CHEM 1  HEMATICS COURSES (7 cr) Calculus I* or MATH 217 Probability and Statistics	4cr 13-114 r 4cr 3cr			Studies
CHEM CHEM * Fulfills the  * REQUIRED MATH MATH *MATH 121	111 112 Liberal  MATI 121 216 fulfills	General Chemistry I General Chemistry II Studies Natural Science Requirement. CHEM 1  HEMATICS COURSES (7 cr) Calculus I* or MATH 217 Probability and Statistics the Liberal Studies Mathematics Requirement. N	4cr 13-114 r 4cr 3cr			1 Studies
CHEM CHEM * Fulfills the  * REQUIRED MATH MATH *MATH 121	111 112 Liberal  MATI 121 216 fulfills	General Chemistry I General Chemistry II Studies Natural Science Requirement. CHEM 1  HEMATICS COURSES (7 cr) Calculus I* or MATH 217 Probability and Statistics the Liberal Studies Mathematics Requirement. N	4cr 13-114 r 4cr 3cr			1 Studies
CHEM CHEM * Fulfills the  * Fulfills the  REQUIRED MATH MATH *MATH 121 Elective Requ	111 112 Liberal MATI 121 216 fulfills iremer	General Chemistry I General Chemistry II Studies Natural Science Requirement. CHEM 1  HEMATICS COURSES (7 cr) Calculus I* or MATH 217 Probability and Statistics the Liberal Studies Mathematics Requirement. Nat.	4cr 13-114 r 4cr 3cr			1 Studies
CHEM CHEM * Fulfills the  REQUIRED MATH MATH *MATH 121 Elective Requ	111 112 Liberal MATI 121 216 fulfills siremer	General Chemistry I General Chemistry II Studies Natural Science Requirement. CHEM 1  HEMATICS COURSES (7 cr) Calculus I* or MATH 217 Probability and Statistics the Liberal Studies Mathematics Requirement. Int.  ICS COURSES (4 cr)	4cr 13-114 r 4cr 3cr MATH 2			1 Studies
CHEM CHEM * Fulfills the  * Fulfills the  REQUIRED MATH MATH *MATH 121 Elective Requ  REQUIRED PHYS	MATI 121 216 fulfills irremer PHYS	General Chemistry I General Chemistry II Studies Natural Science Requirement. CHEM 1  HEMATICS COURSES (7 cr) Calculus I* or MATH 217 Probability and Statistics the Liberal Studies Mathematics Requirement. Nat.  ICS COURSES (4 cr) Physics I Lecture	4cr 13-114 r 4cr 3cr MATH 2			l Studies
CHEM CHEM * Fulfills the  REQUIRED MATH MATH *MATH 121 Elective Requ	111 112 Liberal MATI 121 216 fulfills siremer	General Chemistry I General Chemistry II Studies Natural Science Requirement. CHEM 1  HEMATICS COURSES (7 cr) Calculus I* or MATH 217 Probability and Statistics the Liberal Studies Mathematics Requirement. Int.  ICS COURSES (4 cr)	4cr 13-114 r 4cr 3cr MATH 2			1 Studies
CHEM CHEM * Fulfills the  * Fulfills the  REQUIRED MATH MATH *MATH 121 Elective Requ  REQUIRED PHYS PHYS	MATI 121 216 fulfills siremer  PHYS 111 121	General Chemistry I General Chemistry II Studies Natural Science Requirement. CHEM 1  HEMATICS COURSES (7 cr) Calculus I* or MATH 217 Probability and Statistics the Liberal Studies Mathematics Requirement. Nat.  ICS COURSES (4 cr) Physics I Lecture Physics I Lab	4cr 13-114 r 4cr 3cr MATH 2			1 Studies
CHEM CHEM * Fulfills the  * Fulfills the  REQUIRED MATH MATH *MATH 121 Elective Requ REQUIRED PHYS PHYS PHYS  REQUIRED	MATI 121 216 fulfills tiremer PHYS 111 121	General Chemistry I General Chemistry II Studies Natural Science Requirement. CHEM 1  HEMATICS COURSES (7 cr) Calculus I* or MATH 217 Probability and Statistics the Liberal Studies Mathematics Requirement. Not.  ICS COURSES (4 cr) Physics I Lecture Physics I Lab  GCIENCE COURSES (4 cr)	4cr 13-114 r 4cr 3cr MATH 2			1 Studies
CHEM CHEM * Fulfills the  * Fulfills the  REQUIRED MATH MATH *MATH 121 Elective Requ  REQUIRED PHYS PHYS	MATI 121 216 fulfills siremer  PHYS 111 121	General Chemistry I General Chemistry II Studies Natural Science Requirement. CHEM 1  HEMATICS COURSES (7 cr) Calculus I* or MATH 217 Probability and Statistics the Liberal Studies Mathematics Requirement. Nat.  ICS COURSES (4 cr) Physics I Lecture Physics I Lab	4cr 13-114 r 4cr 3cr MATH 2			1 Studies
CHEM CHEM * Fulfills the  * Fulfills the  REQUIRED MATH MATH *MATH 121 Elective Requ  REQUIRED PHYS PHYS PHYS  REQUIRED GEOS	111 112 Liberal  MATI 121 216 fulfills iremer  PHYS 111 121  GEOS 201	General Chemistry I General Chemistry II Studies Natural Science Requirement. CHEM 1  HEMATICS COURSES (7 cr) Calculus I* or MATH 217 Probability and Statistics the Liberal Studies Mathematics Requirement. Nat.  ICS COURSES (4 cr) Physics I Lecture Physics I Lab  GCIENCE COURSES (4 cr) Foundations of Geology	4cr 13-114 r 4cr 3cr MATH 2			1 Studies
CHEM CHEM * Fulfills the  * Fulfills the  REQUIRED MATH MATH *MATH 121 Elective Requ  REQUIRED PHYS PHYS PHYS  REQUIRED GEOS	111 112 Liberal  MATI 121 216 fulfills iremer  PHYS 111 121  GEOS 201	General Chemistry I General Chemistry II Studies Natural Science Requirement. CHEM 1  HEMATICS COURSES (7 cr) Calculus I* or MATH 217 Probability and Statistics the Liberal Studies Mathematics Requirement. Not.  ICS COURSES (4 cr) Physics I Lecture Physics I Lab  GCIENCE COURSES (4 cr)	4cr 13-114 r 4cr 3cr MATH 2			1 Studies
CHEM CHEM * Fulfills the  * Fulfills the  REQUIRED MATH MATH *MATH 121 Elective Requ  REQUIRED PHYS PHYS PHYS  REQUIRED GEOS	111 112 Liberal  MATI 121 216 fulfills iremer  PHYS 111 121  GEOS 201	General Chemistry I General Chemistry II Studies Natural Science Requirement. CHEM 1  HEMATICS COURSES (7 cr) Calculus I* or MATH 217 Probability and Statistics the Liberal Studies Mathematics Requirement. Nat.  ICS COURSES (4 cr) Physics I Lecture Physics I Lab  GCIENCE COURSES (4 cr) Foundations of Geology	4cr 13-114 r 4cr 3cr MATH 2			l Studies
CHEM CHEM * Fulfills the  * Fulfills the  REQUIRED MATH MATH *MATH 121 Elective Requ  REQUIRED PHYS PHYS PHYS  REQUIRED GEOS	111 112 Liberal  MATI 121 216 fulfills iremer  PHYS 111 121  GEOS 201	General Chemistry I General Chemistry II Studies Natural Science Requirement. CHEM 1  HEMATICS COURSES (7 cr) Calculus I* or MATH 217 Probability and Statistics the Liberal Studies Mathematics Requirement. Nat.  ICS COURSES (4 cr) Physics I Lecture Physics I Lab  GCIENCE COURSES (4 cr) Foundations of Geology	4cr 13-114 r 4cr 3cr MATH 2			l Studies
CHEM CHEM * Fulfills the  * Fulfills the  REQUIRED MATH MATH *MATH 121 Elective Requ  REQUIRED PHYS PHYS PHYS  REQUIRED GEOS	111 112 Liberal  MATI 121 216 fulfills iremer  PHYS 111 121  GEOS 201	General Chemistry I General Chemistry II Studies Natural Science Requirement. CHEM 1  HEMATICS COURSES (7 cr) Calculus I* or MATH 217 Probability and Statistics the Liberal Studies Mathematics Requirement. Nat.  ICS COURSES (4 cr) Physics I Lecture Physics I Lab  GCIENCE COURSES (4 cr) Foundations of Geology	4cr 13-114 r 4cr 3cr MATH 2			l Studies
CHEM CHEM * Fulfills the  * Fulfills the  REQUIRED MATH MATH *MATH 121 Elective Requ  REQUIRED PHYS PHYS PHYS  REQUIRED GEOS	111 112 Liberal  MATI 121 216 fulfills iremer  PHYS 111 121  GEOS 201	General Chemistry I General Chemistry II Studies Natural Science Requirement. CHEM 1  HEMATICS COURSES (7 cr) Calculus I* or MATH 217 Probability and Statistics the Liberal Studies Mathematics Requirement. Nat.  ICS COURSES (4 cr) Physics I Lecture Physics I Lab  GCIENCE COURSES (4 cr) Foundations of Geology	4cr 13-114 r 4cr 3cr MATH 2			l Studies

\* Select from: ANTH 420; BIOC 301, 302, 311, 312, 401, 480, 490; CHEM 231, 232, 351; COSC 105, 110; ECON 361; GEOG 343, 345, 419; GEOG/RGPL 231, 314, 316, 415, 417, 440, 464; GEOS 201, 202, 203, 303, 310, 311, 312, 313, 351, 352, 353, 354, 362, 370, 371; MATH 122, 417, 418; PHYS 112, 122, 151, 161; PSYC 290, 291, 315, 331, 341, 342 or 345, 350, 355, 356, 359, 372; RGPL 350, 458. Other appropriate major courses at 200-level and above (excluding liberal studies courses) in the above departments may be substituted with permission of the advisor and the biology department chairperson in advance of taking the course.

FOREIGN L	ANG	UAGE REQUIREMENT (0-6 cr)*					
		one language, including the placement course; or					
language, students may elect to take a sequence of two courses in either Computer Science, exclusive of COSC 101							
		recommended), or two courses in Geography/Reg	gional P	lanning (from	the following	<b>;</b> :	
GEOG/RGPI	213, 3	314, 316, 415, 417)					
		BERAL STUDIES REQUIREMENTS		Planned	Taken	Grade	
Learning Ski		T					
ENGL	101	English Composition I	3cr				
ENGL	202	English Composition II	3cr				
	reas -	Humanities:		·		eque e s	
HIST			3cr				
PHIL/RLST			3cr				
ENGL	121	Humanities: Literature	3cr				
Knowledge A	reas -	- Fine Arts:					
			3cr				
Knowledge A	reas -	- Dimensions of Wellness:					
		or	3cr	10 11			
MLSC	101	Intro. to Military Science & Lab	2cr				
MLSC	102	Fundamentals of Military Sci. & Lab	2cr				
Knowledge A	reas –	- Social Sciences*:					
			3cr				
			3cr				
1000			3cr				
*No course pr	efix m	ay be used more than once. One of these courses	may ful	fill the Libera	Studies Glob	oal &	
Multicultural	Aware	ness Requirement.					
Knowledge A	reas –	Liberal Studies Elective:				1 2	
MATH		or MATH 217 Probability and Statistics	3cr				
Global & Mu	lticult	ural Awareness Course:				, , , , , , , , , , , , , , , , , , , ,	
Two 'Writing	g Inten	sive' Courses (at least one in major):					
FREE ELECTIVES (10-16 cr):							
				No. 20.			
					1300000		
					7.00		
					<i>(i)</i>		
EXIT SURVEY REQUIREMENT:			DATE TAKEN:				
DIALD ALMADITI							
COMMENTS	S:				331	190	