Program of Study for Biology Majors BIOLOGY SECONDARY EDUCATION LICENSURE

I.		ENERAL EDUCATION CURRICULUM			
II.	PROFESSIONAL EDUCATION REQUIREMENTS				
	inimum grade of C is required in each professional education course. CI 2300 & FDN 2400 are required prior to admission to Teacher Educ.				
•	CI 2300 (2) Teaching and Learning in the Digital Age (Entry course to teacher education)				
FDN 2400 (2) Critical Perspectives on Teaching and Learning (<i>Pre or Co: Cl 2300</i>) (Entry course to teacher education)				ation)	
	PSY 3010 (3) Psychology Applied to Teaching (Pre or Co: Cl 2300) PROFICIENCIES:				
				Reading	
	C 3400* (2) Policies and Practice in Educational Assessment (Pre: Cl 2300, FDN 2400, PSY 3010)			English	
	,			Speech	
	C (2.0) or higher prior to student teaching, along with oth				
	*Admission to Teacher Education required.				
	NOTE: To be admitted to the Teacher Education Program students must take and satisfy testing requirements for Reading, Writing and Math				
	areas of the PRAXIS (PPST or CBT). The PRAXIS II Area Exams are required	d for student t	eaching.		
III.	MAJOR REQUIREMENTS (Not including 12 semester hours already cou				
	2.0 major GPA is required for graduation. Major GPA calculation will in				
	courses under III. Minimum of 18 semester hours of courses taken to fu	Ifill major req	uirements must be courses offere	ed by Appalachian.	
A.	Biology Core Requirements: 8 semester hours (must be completed before taking any other biology courses)				
	BIO 1801 (4) Biological Concepts I (Co: CHE 1101) AND	BIO 1802	(4) Bio Concepts II (Pre: Bio 1	801 w/min grade "C")	
В.	Additional Required Biology Courses: 22-23 semester hours (Pre:	BIO 1801 & 1802	2 required for all additional BIO course	25)	
	BIO 2012 (3) Introduction to Evolutionary Biology				
	BIO 2400 (3) Genetics (Pre: BIO 1801, CHE 1102, MAT 1025)				
	BIO 2410 (1) Genetics Laboratory (<i>Pre/Co: BIO 2400/2700</i>)				
	BIO 3312 (3) Environmental Studies [WID] (Pre: CHE 2201 or 2101; ENG 2001)				
	BIO 3521 (1) Secondary Science Field Experience				
	BIO 3800 (4) Molecular Biology [WID] (Pre: 1 semester organic CHE; ENG 2001)				
	BIO 3301 (4) Human Systems Physiology [WID] (Pre: CHE 2201/2101; ENG 2001 OR BIO 4555 (4) Plant Phys (Pre: CHE 1102/1120)				
	Biodiversity: Choose one course from the following: 3-4 semeste		(4) Introduction to Zoologo		
	BIO 2000 (4) Introduction to Botany	BIO 2001	(4) Introduction to Zoology		
	BIO 3304(4) Systematic Botany (Pre: BIO 2000)	BIO 4551	(4) Ornithology		
	BIO 4552 (4) Entomology	BIO 4556	(4) Mycology		
	BIO 4557 (4) Ichthyology	BIO 4558	(3) Taxonomy of the Fleshy	Fungi	
	BIO 4559 (4) Mammalogy	BIO 4560 (4) Herpetology			
	BIO 4569 (4) Invertebrate Zoology				
C.	Required Cognate Courses: 37 semester hours (12 semester hours of cognate courses are counted in general ed requirements.)				
	Chemistry	Mathemati	_		
	CHE 1101/1110 (4) Intro. Chem I & lab		 (4) Calc w/Analytical Geom. 	(Pre: MAT 1025 w/C-)	
	CHE 1102/1120 (4) Intro. Chem II & lab (Pre: CHE 1101/1110)	_	(3) Intro to Statistics (Pre: N		
	CHE 2101/2102 (4) Fundamentals of Organic Chem I & lab (<i>Pre: CHE 1102/1120</i>)				
				:	
	Physics Physics (4) Compared Physics I (2) 147 147 147 147 147 147 147 147 147 147		ence (minimum grade of "C" requ		
	PHY 1103 (4) General Physics I (<i>Co: MAT 1020 or 1025</i>)	G S 4403(3) Tchg Sci in Mid/HS [WID] (<i>Pre: ENG 2001</i>)			
	Y 1104(4) General Physics II (<i>Pre: PHY 1103</i>) G S 4404(3) Meaning & Nature of Sci [WID] (<i>Pre: ENG 2001</i>)				
	Geology CIV 4104				
	GLY 1101 (4) Intro to Physical Geology				
IV.	MINOR (optional)				
V.	ELECTIVES (taken to total 128 hours for the degree)			4-5	
	2 semester hours of free electives must be outside the major dis			128	

Total major requirements – 67-68; Gen Ed courses that may count in major (depends on choices) – 12; net major 55-56 hours.