BIOLOGY - SECONDARY MAJOR

Requirements for a Secondary Major in Biology

Code	Title	Hours
Thirty-five semester hours including the following: [1]		
Required Courses		
BIO 1305 & BIO 1105	Modern Concepts of Bioscience and Modern Concepts of Bioscience Laboratory	4
or BIO 1405	Investigations of Modern Biology Concepts I	
BIO 1306 & BIO 1106	Modern Concepts of Bioscience, continued and Modern Concepts of Bioscience Laboratory	4
or BIO 1406	Investigations of Modern Biology Concepts II	
BIO 2306 & BIO 2106	Genetics and Genetics Laboratory	4
BIO 3303	Ecology	3
BIO 3366	Foundations of Evolutionary Biology	3
BIO 4001	Achievement Test	0
Select at least one hour from the following:		1
BIO 3100	Seminar in Biology	
BIO 3103	Ecology Laboratory	
BIO 3300	Advanced Topics in Biology	
BIO 3V9R	Research [3]	
BIO 4199	Scientific Communication	
Select three hours from each group:		12
Group 1		
BIO 3324 & BIO 3124	Entomology and Laboratory for Entomology	
BIO 3429	Comparative Chordate Anatomy	
BIO 4301	Immunology	
BIO 4302 & BIO 4102	General Microbiology and General Microbiology Lab	
BIO 4304 & BIO 4104	Medical Entomology and Medical Entomology Laboratory	
BIO 4308 & BIO 4108	Genes and Development and Genes and Development Laboratory	
BIO 4316	Plant Anatomy	
BIO 4323 & BIO 4123	Parasitology and Laboratory for Parasitology	
BIO 4422	Ichthyology	
BIO 4428	Ornithology	
Group 2		
BIO 3322 & BIO 3122	Human Physiology and Human Physiology Lab	
BIO 3342	Molecular Cell Biology	
BIO 4307	Biochemistry and Physiology of the Cell	
BIO 4317 & BIO 4117	Plant Physiology and Plant Physiology Lab	
BIO 4332	Comparative Vertebrate Physiology	
BIO 4418	Biology of Wetland and Aquatic Vascular Plants	
Group 3		
BIO 3320	Climate Change Biology	
BIO 4310	Biogeography	
BIO 4365	Topics in Evolution	
BIO 4381	Restoration Ecology	
BIO 4405	Limnology	
BIO 4406	Aquatic Biology	
Group 4		
BIO 3350	Genomics and Bioinformatics	
BIO 4306 & BIO 4106	Molecular Genetics and Genomics and Molecular Genetics and Genomics Laboratory	
BIO 4333	Science Leadership: Improvement of Science Education	
Four hours of 3000-4000 level BIO courses		4
Subtotal		**35**
Required Courses in Other Fields [2]		
CHE 1301 & CHE 1101	Basic Principles of Modern Chemistry I and General Chemistry Laboratory I	4
CHE 1302 & CHE 1102	Basic Principles of Modern Chemistry II and General Chemistry Laboratory II	4
CHE 3331	Organic Chemistry I	3
CHE 3332	Organic Chemistry II	3
CHE 3238	Organic Chemistry Laboratory	2
MTH 1321	Calculus I	3
MTH 1322	Calculus II	3
or STA 2381	Introductory Statistical Methods	
Select one of the following sequences:		8
PHY 1408 & PHY 1409	General Physics for Natural and Behavioral Sciences I and General Physics for Natural and Behavioral Sciences II	
PHY 1420 & PHY 1430	General Physics I and General Physics II	
PHY 1420 & PHY 1409	General Physics I and General Physics for Natural and Behavioral Sciences II	
Total Hours		**65**

1. A grade of “C” or better in all BIO courses used in the major and a GPA of 2.0 or higher on all BIO courses completed.
2. A grade of “C” or better in all courses required in other fields.
3. A maximum of 6 hours total of any combination of BIO 3V90/3V9R/4V90/4V9R may be used for elective credit.
4. A maximum of 2 credit hours of BIO 3111 may be used towards major.