

**BS Biology  
UP Tacloban College**

**STUDY PLAN  
(156 units)**

***Concentration: General Biology***

**FIRST YEAR**

<i>First Semester</i>				<i>Second Semester</i>			
<b>Course Number</b>	<b>Course Title</b>	<b>Units</b>	<b>Prerequisite</b>	<b>Course Number</b>	<b>Course Title</b>	<b>Units</b>	<b>Prerequisite</b>
GE Core 1		3		GE Core 3		3	
GE Core 2		3		GE Core 4		3	
GE Elective 1		3		Bot 14	University Botany	3	None
Chem 18	University Chemistry	3	None	Chem 23	Inorganic Analytical Chemistry	3	Chem 18
Math 50	Applied Calculus	4	None	Chem 23.1	Inorganic Analytical Chemistry Laboratory	2	Corequisite: Chem 23
Zoo 14	University Zoology	3	None	Phys 21	Introductory Physics	4	None
PE 1	Foundations of Physical Fitness	(2)		Phys 21.1	Introductory Physics Laboratory	1	Corequisite: Phys 21
NSTP 1		(3)		PE 2*		(2)	PE 1
				NSTP 2		(3)	NSTP 1
<b>TOTAL</b>		<b>19</b>		<b>TOTAL</b>		<b>19</b>	

**SECOND YEAR**

<i>First Semester</i>				<i>Second Semester</i>			
<b>Course Number</b>	<b>Course Title</b>	<b>Units</b>	<b>Prerequisite</b>	<b>Course Number</b>	<b>Course Title</b>	<b>Units</b>	<b>Prerequisite</b>
GE Core 5		3		GE Elective 3		3	
GE Elective 2		3		Bio 180	Statistical Methods in Biology	3	None
Bio 120	General Microbiology	3	Bot 14 & Zoo 14	Bio 121	General Physiology	5	Bot 14 & Zoo 14
Bio 120.1	General Microbiology Laboratory	2	Coreq: Bio 120	Bot 111 (Major 1)	Plant Morphoanatomy and Diversity	3	Bot 14

Bio 160	General Ecology	3	None	Bot 111.1	Plant Morphoanatomy and Diversity Laboratory	2	Corequisite: Bot 111
Bio 160.1	General Ecology Laboratory	2	Coreq: Bio 160	Chem 40	General Biochemistry	3	Chem 31
Chem 31	Elementary Organic Chemistry	3	Chem 18	Chem 40.1	General Biochemistry Laboratory	2	Corequisite: Chem 40
Chem 31.1	Elementary Organic Chemistry Laboratory	2	Coreq: Chem 31	PE 2		(2)	
PE 2		(2)					
	<b>TOTAL</b>	<b>21</b>			<b>TOTAL</b>	<b>21</b>	
<b>THIRD YEAR</b>							
<i>First Semester</i>				<i>Second Semester</i>			
<b>Course Number</b>	<b>Course Title</b>	<b>Units</b>	<b>Prerequisite</b>	<b>Course Number</b>	<b>Course Title</b>	<b>Units</b>	<b>Prerequisite/ Course stipulation</b>
GE Elective 4		3		GE Core 6		3	
Bio 140	Elementary Genetics	3	Bio 180 & Chem 40	Bio 189	Technical Writing in the Life Sciences	3	Junior Standing
Bio 140.1	Elementary Genetics Laboratory	1	Coreq: Bio 140	MCB 101 (Major 3)	Advanced Microbiology	5	Bio 120
Bio 142	Principles of Systematic Biology	3	None	Zoo 111 (Major 4)	Invertebrate Zoology	3	Zoo 14
Bio 150	Introduction. to Molecular and Cell Biology	4	Chem 40 & 40.1	Zoo 111.1	Invertebrate Zoology Laboratory	2	Corequisite: Zoo 111
Zoo 102 (Major 2)	Comparative Anatomy of Vertebrates	3	Zoo 14	Elective 1		3	
Zoo 102.1	Comparative Anatomy of Vertebrates Laboratory	2	Coreq: Zoo 102				
	<b>TOTAL</b>	<b>19</b>			<b>TOTAL</b>	<b>19</b>	
<b>MIDYEAR</b>							
<b>Course Number</b>	<b>Course Title</b>	<b>Units</b>	<b>Course Stipulation</b>				
Bio 195	Practicum in Biology	3	Junior Standing				
	<b>TOTAL</b>	<b>3</b>					

FOURTH YEAR							
<i>First Semester</i>				<i>Second Semester</i>			
Course Number	Course Title	Units	Prerequisite/ Course stipulation	Course Number	Course Title	Units	Prerequisite/ Course stipulation
GE Core 7		3		GE Elective 5		3	
PI 100	The Life and Works of Jose Rizal	3		Bio 191	Biological Evolution	3	Bio 140
Bio 200	Undergraduate Thesis	2	Senior Standing	Bio 196	Seminar in Biology	1	Senior Standing
Bot 121 (Major 5)	Elementary Plant Physiology	5	Bio 121	Bio 200	Undergraduate Thesis	2	Senior Standing
Zoo 131	Introduction to Developmental Biology of Animals	3	Bio 150 & Zoo 14	Zoo 120 (Major 6)	Animal Physiology	3	Bio 121
Zoo 131.1	Introduction to Developmental Biology of Animals Laboratory	2	Corequisite: Zoo 131	Zoo 120.1	Animal Physiology Laboratory	2	Corequisite: Zoo 120.1
				Elective 2		3	
	<b>TOTAL</b>	<b>18</b>			<b>TOTAL</b>	<b>17</b>	
<b>TOTAL NUMBER OF UNITS: 156</b>							

\* Students are strongly advised to enroll in PE 2 Swimming in the second semester of their first year.

**BS Biology  
UP Tacloban College**

**Proposed Date of Effectivity: First Semester AY 2024-2025  
(157 units)**

***Concentration: Microbiology***

**FIRST YEAR**

<i>First Semester</i>				<i>Second Semester</i>			
<b>Course Number</b>	<b>Course Title</b>	<b>Units</b>	<b>Prerequisite</b>	<b>Course Number</b>	<b>Course Title</b>	<b>Units</b>	<b>Prerequisite</b>
GE Core 1		3		GE Core 3		3	
GE Core 2		3		GE Core 4		3	
GE Elective 1		3		Bot 14	University Botany	3	None
Chem 18	University Chemistry	3	None	Chem 23	Inorganic Analytical Chemistry	3	Chem 18
Math 50	Applied Calculus	4	None	Chem 23.1	Inorganic Analytical Chemistry Laboratory	2	Corequisite: Chem 23
Zoo 14	University Zoology	3	None	Phys 21	Introductory Physics	4	None
PE 1	Foundations of Physical Fitness	(2)		Phys 21.1	Introductory Physics Laboratory	1	Corequisite: Phys 21
NSTP 1		(3)		PE 2*		(2)	PE 1
				NSTP 2		(3)	NSTP 1
	<b>TOTAL</b>	<b>19</b>			<b>TOTAL</b>	<b>19</b>	

**SECOND YEAR**

<i>First Semester</i>				<i>Second Semester</i>			
<b>Course Number</b>	<b>Course Title</b>	<b>Units</b>	<b>Prerequisite</b>	<b>Course Number</b>	<b>Course Title</b>	<b>Units</b>	<b>Prerequisite</b>
GE Core 5		3		GE Elective 3		3	
GE Elective 2		3		Bio 180	Statistical Methods in Biology	3	None
Bio 120	General Microbiology	3	Bot 14 & Zoo 14	Bio 121	General Physiology	5	Bot 14 & Zoo 14
Bio 120.1	General Microbiology Laboratory	2	Corequisite: Bio 120	Chem 40	General Biochemistry	3	Chem 33
Bio 160	General Ecology	3	None	Chem 40.1	General Biochemistry Laboratory	2	Corequisite: Chem 40
Bio 160.1	General Ecology	2	Coreq-	MCB 101	Advance	5	Bio 120

	Laboratory		quisite: Bio 160	(Major 1)	Microbiology		
Chem 31	Elementary Organic Chemistry	3	Chem 18	PE 2		(2)	
Chem 31.1	Elementary Organic Chemistry Laboratory	2	Corequisite: Chem 33				
PE 2		(2)					
	<b>TOTAL</b>	<b>21</b>			<b>TOTAL</b>	<b>21</b>	
<b>THIRD YEAR</b>							
<i>First Semester</i>				<i>Second Semester</i>			
<b>Course Number</b>	<b>Course Title</b>	<b>Units</b>	<b>Prerequisite</b>	<b>Course Number</b>	<b>Course Title</b>	<b>Units</b>	<b>Prerequisite/ Course stipulation</b>
GE Elective 4		3		GE Core 6		3	
Bio 140	Elementary Genetics	3	Bio 180 & Chem 40	Bio 189	Technical Writing in the Life Sciences	3	Junior Standing
Bio 140.1	Elementary Genetics Lab	1	Corequisite: Bio 140	MCB 120 (Major 4)	Microbial Physiology	3	Bio 120 & Chem 40
Bio 142	Principles of Systematic Biology	3	None	MCB 145 (Major 5)	Fungi of Medical Importance	3	Bio 120
Bio 150	Introduction to Molecular and Cell Biology	4	Chem 40 & 40.1	MCB 150 (Major 6)	Microbial Ecology	5	Bio 120 & Bio 120.1
MCB 103 (Major 2)	Introductory Medical Microbiology	3	Bio 120	Elective 1		3	
MCB 180 (Major 3)	Introductory Food Microbiology	3	Bio 120				
	<b>TOTAL</b>	<b>20</b>			<b>TOTAL</b>	<b>20</b>	
<b>MIDYEAR</b>							
<b>Course Number</b>	<b>Course Title</b>	<b>Units</b>	<b>Course Stipulation</b>				
Bio 195	Practicum in Biology	3	Junior Standing				
	<b>TOTAL</b>	<b>3</b>					
<b>FOURTH YEAR</b>							
<i>First Semester</i>				<i>Second Semester</i>			
<b>Course Number</b>	<b>Course Title</b>	<b>Units</b>	<b>Prerequisite/ Course stipulation</b>	<b>Course Number</b>	<b>Course Title</b>	<b>Units</b>	<b>Prerequisite/ Course stipulation</b>

GE Core 7		3		GE Elective 5		3	
PI 100	The Life and Works of Jose Rizal	3		Bio 191	Biological Evolution	3	Bio 140
Bio 200	Undergraduate Thesis	2	Senior Standing	Bio 196	Seminar in Biology	1	Senior Standing
MCB 160 (Major 7)	Industrial Microbiology	3	Bio 120	Bio 200	Undergraduate Thesis	2	Senior Standing
MCB 143 (Major 8)	Virology	3	Bio 120	MCB 148 (Major 9)	Microbial Genetics	3	Bio 120
Zoo 131	Introduction to Developmental Biology of Animals	3	Coreq: Zoo 131	Elective 2		3	
Zoo 131.1	Introduction to Developmental Biology of Animals Laboratory	2					
	<b>TOTAL</b>	<b>19</b>			<b>TOTAL</b>	<b>15</b>	
<b>TOTAL NUMBER OF UNITS: 157</b>							

*\* Students are strongly advised to enroll in PE 2 Swimming in the second semester of their first year.*

**BS Biology  
UP Tacloban College**

**Proposed Date of Effectivity: First Semester AY 2024-2025  
(157 units)**

***Concentration: Environmental Biology***

**FIRST YEAR**

<i>First Semester</i>				<i>Second Semester</i>			
<b>Course Number</b>	<b>Course Title</b>	<b>Units</b>	<b>Prerequisite</b>	<b>Course Number</b>	<b>Course Title</b>	<b>Units</b>	<b>Prerequisite</b>
GE Core 1		3		GE Core 3		3	
GE Core 2		3		GE Core 4		3	
GE Elective 1		3		Bot 14	University Botany	3	None
Chem 18	University Chemistry	3	None	Chem 23	Inorganic Analytical Chemistry	3	Chem 18
Math 50	Applied Calculus	4	None	Chem 23.1	Inorganic Analytical Chemistry Laboratory	2	Corequisite: Chem 23
Zoo 14	University Zoology	3	None	Phys 21	Introductory Physics	4	None
PE 1	Foundations of Physical Fitness	(2)		Phys 21.1	Introductory Physics Laboratory	1	Corequisite: Phys 21
NSTP 1		(3)		PE 2*		(2)	PE 1
			None	NSTP 2		(3)	NSTP 1
	<b>TOTAL</b>	<b>19</b>			<b>TOTAL</b>	<b>19</b>	

**SECOND YEAR**

<i>First Semester</i>				<i>Second Semester</i>			
<b>Course Number</b>	<b>Course Title</b>	<b>Units</b>	<b>Prerequisite</b>	<b>Course Number</b>	<b>Course Title</b>	<b>Units</b>	<b>Prerequisite</b>
GE Core 5		3		GE Elective 3		3	
GE Elective 2		3		Bio 180	Statistical Methods in Biology	3	None
Bio 120	General Microbiology	3	Bot 14 & Zoo 14	Bio 121	General Physiology	5	Bot 14 & Zoo 14
Bio 120.1	General Microbiology Laboratory	2	Corequisite: Bio 120	Bio 164 (Major 1)	Limnology	4	Bio 160
Bio 160	General Ecology	3	None	Chem 40	General Biochemistry	3	Chem 33

Bio 160.1	General Ecology Laboratory	2	Corequisite: Bio 160	Chem 40.1	General Biochemistry Laboratory	2	Corequisite: Chem 40
Chem 31	Elementary Organic Chemistry	3	Chem 18	PE 2		(2)	
Chem 33.1	Elementary Organic Chemistry Laboratory	2	Corequisite: Chem 33				
PE 2		(2)					
	<b>TOTAL</b>	<b>21</b>			<b>TOTAL</b>	<b>20</b>	

### THIRD YEAR

<i>First Semester</i>				<i>Second Semester</i>			
Course Number	Course Title	Units	Prerequisite	Course Number	Course Title	Units	Prerequisite/ Course Stipulation
GE Elective 4		3		GE Core 6		3	
Bio 140	Elementary Genetics	3	Bio 180 & Chem 40	Bio 162 (Major 4)	Terrestrial Communities	4	
Bio 140.1	Elementary Genetics Lab	1	Corequisite: Bio 140	Bio 189	Technical Writing in the Life Sciences	3	Junior Standing
Bio 142	Principles of Systematic Biology	3	None	ENS 110 (Major 5)	Environmental Impact Assessment	3	ENS 101 or Bio 160
Bio 150	Introduction to Molecular and Cell Biology	4	Chem 40 & 40.1	MCB 150 (Major 6)	Microbial Ecology	5	Bio 120 & Bio 120.1
Bio 166 (Major 2)	Marine Ecology	4	Bio 160	Elective 1		3	
ENS 101 (Major 3)	Introduction to Environmental Science	3	None				
	<b>TOTAL</b>	<b>21</b>			<b>TOTAL</b>	<b>21</b>	

### MIDYEAR

Course Number	Course Title	Units	Course Stipulation
Bio 195	Practicum in Biology	3	Junior Standing
	<b>TOTAL</b>	<b>3</b>	



FOURTH YEAR							
<i>First Semester</i>				<i>Second Semester</i>			
Course Number	Course Title	Units	Prerequisite/ Course Stipulation	Course Number	Course Title	Units	Prerequisite/ Course Stipulation
GE Core 7		3		GE Elective 5		3	
PI 100	The Life and Works of Jose Rizal	3		Bio 191	Biological Evolution	3	Bio 140
Bio 175 (Major 7)	Coastal Flora: Mangroves and Beach Forest	5	Bot 14	Bio 196	Seminar in Biology	1	Senior Standing
Bio 200	Undergraduate Thesis	2	Senior Standing	Bio 200	Undergraduate Thesis	2	Senior Standing
Zoo 131	Introduction to Developmental Biology of Animals	3	Bio 150 & Zoo 14	ENS 120 (Major 8)	Biological Resource Management	3	ENS 101 or Bio 160
Zoo 131.1	Introduction to Developmental Biology of Animals Laboratory	2	Coreq: Zoo 131	Elective 2		3	
	<b>TOTAL</b>	<b>18</b>			<b>TOTAL</b>	<b>15</b>	
<b>TOTAL NUMBER OF UNITS: 157</b>							

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