

1209 **XII. Study Plan of Proposed Curricula**
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BS Biology							
UP Tacloban College							
Proposed Date of Effectivity: First Semester AY 2024-2025							
(156 units)							
<i>Concentration: General Biology</i>							
FIRST YEAR							
<i>First Semester</i>				<i>Second Semester</i>			
Course Number	Course Title	Units	Prerequisite	Course Number	Course Title	Units	Prerequisite
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
Phys 21	Introductory Physics	4	None	Chem 23.1	Inorganic Analytical Chemistry Laboratory	2	Corequisite: Chem 23
Phys 21.1	Introductory Physics Laboratory	1	Corequisite: Phys 21	Math 50	Applied Calculus	4	None
Zoo 14	University Zoology	3	None	PE 2*		(2)	PE 1
PE 1	Foundations of Physical Fitness	(2)		NSTP 2		(3)	NSTP 1
NSTP 1		(3)					
	TOTAL	20			TOTAL	18	
SECOND YEAR							
<i>First Semester</i>				<i>Second Semester</i>			
Course Number	Course Title	Units	Prerequisite	Course Number	Course Title	Units	Prerequisite
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	2	Coreq:	Chem 40	General	3	Chem 31



	Laboratory		Bio 160		Biochemistry		
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)					
	TOTAL	21			TOTAL	21	

THIRD YEAR

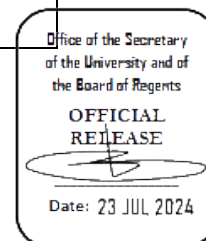
<i>First Semester</i>				<i>Second Semester</i>			
Course Number	Course Title	Units	Prerequisite	Course Number	Course Title	Units	Prerequisite/ Course stipulation
GE Elective 4		3		GE Core 6		3	
Bio 140	Elementary Genetics	3	Bio 180 & Chem 40	Bio 189	Technical Writing in the Life Sciences	3	Junior Standing
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				
	TOTAL	19			TOTAL	19	

MIDYEAR

Course Number	Course Title	Units	Course Stipulation
Bio 195	Practicum in Biology	3	Junior Standing
	TOTAL	3	

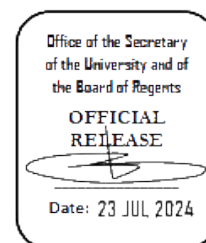
FOURTH YEAR

<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	
	TOTAL	18			TOTAL	17	
TOTAL NUMBER OF UNITS: 156							

1211 * Students are strongly advised to enroll in PE 2 Swimming in the second semester of their first year.



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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>			
Course Number	Course Title	Units	Prerequisite	Course Number	Course Title	Units	Prerequisite
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
Phys 21	Introductory Physics	4	None	Chem 23.1	Inorganic Analytical Chemistry Laboratory	2	Corequisite: Chem 23
Phys 21.1	Introductory Physics Laboratory	1	Corequisite: Phys 21	Math 50	Applied Calculus	4	None
Zoo 14	University Zoology	3	None	PE 2*		(2)	PE 1
PE 1	Foundations of Physical Fitness	(2)		NSTP 2		(3)	NSTP 1
NSTP 1		(3)					
	TOTAL	20			TOTAL	18	
SECOND YEAR							
<i>First Semester</i>				<i>Second Semester</i>			
Course Number	Course Title	Units	Prerequisite	Course Number	Course Title	Units	Prerequisite
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 Laboratory	2	Corequisite: Bio 160	MCB 101 (Major 1)	Advance Microbiology	5	Bio 120
Chem 31	Elementary Organic	3	Chem 18	PE 2		(2)	



	Chemistry						
Chem 31.1	Elementary Organic Chemistry Laboratory	2	Corequisite: Chem 33				
PE 2		(2)					
	TOTAL	21			TOTAL	21	
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 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				
	TOTAL	20			TOTAL	20	
MIDYEAR							
Course Number	Course Title	Units	Course Stipulation				
Bio 195	Practicum in Biology	3	Junior Standing				
	TOTAL	3					
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	Bio 196	Seminar in Biology	1	Senior

			Standing				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					
	TOTAL	19			TOTAL	15	
TOTAL NUMBER OF UNITS: 157							

1213 * Students are strongly advised to enroll in PE 2 Swimming in the second semester of their first year.



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<p style="text-align: center;">BS Biology UP Tacloban College</p> <p style="text-align: center;">Proposed Date of Effectivity: First Semester AY 2024-2025 (157 units)</p> <p style="text-align: center;">Concentration: Environmental Biology</p> <p style="text-align: center;">FIRST YEAR</p>							
<i>First Semester</i>				<i>Second Semester</i>			
Course Number	Course Title	Units	Prerequisite	Course Number	Course Title	Units	Prerequisite
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
Phys 21	Introductory Physics	4	None	Chem 23.1	Inorganic Analytical Chemistry Laboratory	2	Corequisite: Chem 23
Phys 21.1	Introductory Physics Laboratory	1	Corequisite: Phys 21	Math 50	Applied Calculus	4	None
Zoo 14	University Zoology	3	None	PE 2*		(2)	PE 1
PE 1	Foundations of Physical Fitness	(2)		NSTP 2		(3)	NSTP 1
NSTP 1		(3)					
	TOTAL	20			TOTAL	18	
<p style="text-align: center;">SECOND YEAR</p>							
<i>First Semester</i>				<i>Second Semester</i>			
Course Number	Course Title	Units	Prerequisite	Course Number	Course Title	Units	Prerequisite
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

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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)					
	TOTAL	21			TOTAL	20	
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				
	TOTAL	21			TOTAL	21	
MIDYEAR							
Course Number	Course Title	Units	Course Stipulation				
Bio 195	Practicum in Biology	3	Junior Standing				
	TOTAL	3					
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		3	

				Elective 5			
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	
	TOTAL	18			TOTAL	15	
TOTAL NUMBER OF UNITS: 157							

1215 * Students are strongly advised to enroll in PE 2 Swimming in the second semester of their first year.



1216 **Annex A. List of Courses and Curriculum Map**

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1218 The BS Biology program is composed of 156-157 units, as shown in Table 1.

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1220 **Table 1. Proposed program structure**

Courses	Concentration 1: General Biology	Concentration 2: Microbiology	Concentration 3: Environmental Biology
General Education Courses	36	36	36
Foundation Courses	27	27	27
Core Courses	54	54	54
Major Courses	30	31	31
Elective Courses*	6	6	6
Legislated Course	3	3	3
PE and NSTP courses	(8 + 6)	(8 + 6)	(8 + 6)
Total	156	157	157

1221 * An elective is a non-GE course a student can choose from any area or discipline and regardless of
 1222 course number that contributes to the student's program of study or track. The elective should enhance the
 1223 student's technical competence, knowledge, and skills (as per OVPAA Memo No. 2022-115 dated 5 April
 1224 2022).

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1226 **Table 2. General Education Courses (36 units)**

Course No.	Course Title	Credit Units	Prerequisite
ARTS 1	Critical Perspectives in the Arts	3	None
COMM 10	Critical Perspectives in Communication	3	None
ETHICS 1	Ethics and Moral Reasoning in Everyday Life	3	None
KAS 1	Kasaysayan ng Pilipinas	3	None
MATH 10	Mathematics, Culture and Society	3	None
STS 1	Science, Technology and Society	3	None
WIKA 1	Wika, Kultura at Lipunan	3	None
GE Elective 1		3	None
GE Elective 2		3	None
GE Elective 3		3	None
GE Elective 4		3	None
GE Elective 5		3	None

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1228 **Table 3. Foundation Courses (27 units)**

Course No.	Course Title	Credit Units	Prerequisite	Corequisite
Chem 18	University Chemistry	3	None	
Chem 23	Inorganic Analytical Chemistry	3	Chem 18	
Chem 23.1	Inorganic Analytical Chemistry Lab	2		Chem 23

Chem 31	Elementary Organic Chemistry	3	Chem 18	
Chem 31.1	Elementary Organic Chemistry Lab	2		Chem 31
Chem 40	General Biochemistry	3	Chem 31	
Chem 40.1	General Biochemistry Laboratory	2		Chem 40
Math 50	Applied Calculus	4	None	
Physics 21	Introductory Physics	4	None	
Physics 21.1	Introductory Physics Laboratory	1		Phys 21

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Table 4. Core courses (54 units)

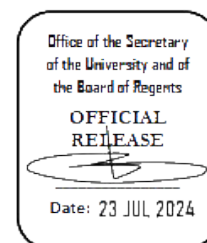
Course No.	Course Title	Credit Units	Prerequisite	Corequisite	Course Stipulation
Bot 14	University Botany	3	None		
Zoo 14	University Zoology	3	None		
Bio 120	General Microbiology	3	Bot 14 & Zoo 14		
Bio 120.1	General Microbiology Laboratory	2		Bio 120	
Bio 121	General Physiology	5	Bot 14 & Zoo 14		
Bio 140	Elementary Genetics	3	Bio 180 & Chem 40		
Bio 140.1	Elementary Genetics Laboratory	1		Bio 140	
Bio 142	Principles of Systematic Biology	3	None		
Bio 160	General Ecology	3	None		
Bio 160.1	General Ecology Laboratory	2		Bio 160	
Bio 150	Introduction to Molecular and Cell Biology	4	Chem 40 & 40.1		
Bio 180	Statistical Methods in Biology	3	None		
Bio 189	Technical Writing in the Life Sciences	3			Junior Standing
Bio 191	Biological Evolution	3	Bio 140		
Bio 195	Practicum in Biology	3			Junior Standing
Bio 196	Seminar in Biology	1			Senior Standing
Bio 200	Undergraduate Thesis	4			Senior Standing

Zoo 131	Introduction to Developmental Biology of Animals	3	Bio 150 & Zoo 14		
Zoo 131.1	Introduction to Developmental Biology of Animals Laboratory	2		Zoo 131	

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Table 5. Major courses (30-31 units)

Course No.	Course Title	Credit Units	Prerequisite	Corequisite
Concentration: General Biology (30 units)				
Bot 111	Plant Morphoanatomy and Diversity	3	Bot 14	
Bot 111.1	Plant Morphoanatomy and Diversity Laboratory	2		Bot 111
Bot 121	Elementary Plant Physiology	5	Bio 121	
MCB 101	Advanced Microbiology	5	Bio 120	
Zoo 102	Comparative Anatomy of Vertebrates	3	Zoo 14	
Zoo 102.1	Comparative Anatomy of Vertebrates Laboratory	2		Zoo 102
Zoo 111	Invertebrate Zoology	3	Zoo 14	
Zoo 111.1	Invertebrate Zoology Laboratory	2		Zoo 111
Zoo 120	Animal Physiology	3	Bio 121	
Zoo 120.1	Animal Physiology Laboratory	2		Zoo 120.1
Concentration: Microbiology (31 units)				
MCB 101	Advanced Microbiology	5	Bio 120	
MCB 103	Introductory Medical Microbiology	3	Bio 120	
MCB 120	Microbial Physiology	3	Bio 120 & Chem 40	
MCB 143	Virology	3	Bio 120	
MCB 145	Fungi of Medical Importance	3	Bio 120	
MCB 148	Microbial Genetics	3	Bio 120	



MCB 150	Microbial Ecology	5	Bio 120 & Bio 120.1	
MCB 160	Industrial Microbiology	3	Bio 120 & Chem 40	
MCB 180	Introductory Food Microbiology	3	Bio 120	
Concentration: Environmental Biology (31 units)				
Bio 162	Terrestrial Communities	4	Bio 160	
Bio 164	Limnology	4	Bio 160	
Bio 160	Marine Ecology	4	Bio 160	
Bio 175	Coastal Flora: Mangroves and Beach Forest Species	5	Bot 14	
ENS 101	Introduction to Environmental Science	3	None	
ENS 110	Environmental Impact Assessment	3	ENS 101 or Bio 160	
ENS 120	Biological Resource Management	3	ENS 101 or Bio 160	
MCB 150	Microbial Ecology	3	Bio 120 and Bio 120.1	

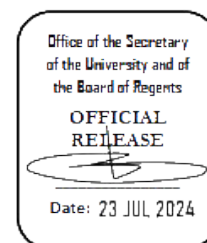
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Table 6. Electives (6 units)

Course No.	Course Title	Credit Units	Prerequisite
Bot 185	Economic Botany	3	Bot 14
Chem 189	Environmental Chemistry	3	Chem 23, 31, 31.1
CMSC 154	Fundamentals of Geographic Information Systems	3	None
MB 114	Marine Plankton	3	
Zoo 113	Parasitology	3	Zoo 14 & Bio 150
WLDL 101	Introduction to Philippine Wildlife	3	None
Other Elective*		3	

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**An elective is a non-GE course a student can choose from any area or discipline and regardless of course number that contributes to the student's program of study or track. The elective should enhance the student's technical competence, knowledge, and skills (as per OVPAA Memo No. 2022-115 dated 5 April 2022)*



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1240 **Table 7. Legislated course (3 units)**

Course No.	Course Title	Credit Units	Prerequisite
PI 100	The Life and Works of Jose Rizal	3	None

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1242 **Table 8. PE and NSTP courses**

Course No.	Course Title	Credit Units	Prerequisite
PE 1	Foundations of Physical Fitness	(2)	None
Three (3) PE 2*		(6)	PE 1
NSTP 1		(3)	None
NSTP 2		(3)	NSTP 1

1243 * Students are strongly advised to enroll in PE 2 Swimming in the second semester of their first year.

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