

## PROGRAM CURRICULUM

Program : BACHELOR OF SCIENCE IN MATHEMATICS (BSMATH)  
 Department : Department of Mathematics  
 College : College of Arts and Sciences  
 Date of Revision : Rev. 1, 01-04-2019  
 Effectivity : 2nd Semester, AY 2018-2019  
 Basis : CMO no. 48, series of 2017

FIRST YEAR										
Grade	COURSE CODE	DESCRIPTIVE TITLE	Units			Contact Hrs.			Pre-requisite (s)	Co-requisite (s)
			Total	Lec.	Lab.	Total	Lec.	Lab.		
	MATH 13	Calculus I	4	4	0	4	4	0		
	MATH 101	Fundamental Concepts of Mathematics	3	3	0	3	3	0		
	MMW	Mathematics in the Modern World (with lab)	3	3	0	3	3	0		
	UTS	Understanding the Self	3	3	0	3	3	0		
	MATH* A	Calculus Enhancement Program	(2)	(2)	0	2	2	0	MATH 13	
	PE 1	Physical Fitness	2	2	0	2	2	0		
	NSTP 1	CWTS/LTS/ROTC 1	3	3	0	3	3	0		
	SE 101	Orientation to University Life	0			1.5				
		<b>Total</b>	<b>18</b>	<b>18</b>	<b>0</b>	<b>21.5</b>	<b>20</b>	<b>0</b>		

SECOND SEMESTER										
Grade	COURSE CODE	DESCRIPTIVE TITLE	Units			Contact Hrs.			Pre-requisite (s)	Co-requisite (s)
			Total	Lec.	Lab.	Total	Lec.	Lab.		
	MATH 14	Calculus II	4	4	0	4	4	0	MATH 13	
	ITE 12	Fundamentals of Programming	3	2	1	5	2	3		
	Phys 21	University Physics 1 (Mechanics with fluid Mechanics)	4	3	1	6	3	3		
	STS	Science, Technology and Society	3	3	0	3	3	0		
	PC	Purposive Communication	3	3	0	3	3	0		
	EEP 1	English Enhancement Program 1	2	2	0	2	2	0		
	NSTP 2	CWTS/LTS/ROTC 2	3	3	0	3	3	0		
	SE 102	The Elements of Success	0			1.5				
		<b>Total</b>	<b>22</b>	<b>20</b>	<b>2</b>	<b>27.5</b>	<b>20</b>	<b>6</b>		

FIRST SEMESTER										
Grade	COURSE CODE	DESCRIPTIVE TITLE	Units			Contact Hrs.			Pre-requisite (s)	Co-requisite (s)
			Total	Lec.	Lab.	Total	Lec.	Lab.		
	MATH 15	Calculus III	4	4	0	4	4	0	MATH 14	
	MATH 111	Abstract Algebra I	3	3	0	3	3	0	MATH 101	
	TTL 1	Technology for Teaching and Learning I	3	2	1	5	2	3		
	TCW	The Contemporary World	3	3	0	3	3	0		
	Eth	Ethics	3	3	0	3	3	0		
	EEP 2	English Enhancement Program 2	2	2	0	2	2	0	EEP 1	
	MATH 114	Linear Algebra	3	3	0	3	3	0	MATH 101	
	SE 103	Intrapersonal and Interpersonal Skills	0			1.5				
		<b>Total</b>	<b>21</b>	<b>20</b>	<b>1</b>	<b>22.5</b>	<b>20</b>	<b>3</b>		

SECOND SEMESTER										
Grade	COURSE CODE	DESCRIPTIVE TITLE	Units			Contact Hrs.			Pre-requisite (s)	Co-requisite (s)
			Total	Lec.	Lab.	Total	Lec.	Lab.		
	MATH 117	Advanced Calculus 1	3	3	0	3	3	0	MATH 15 & MATH 101	
	MATH 113	Differential Equations 1	3	3	0	3	3	0	MATH 14	
	MATH 110	College Statistics and Probability	3	2	1	5	2	3		
	RPH	Readings in the Philippine History	3	3	0	3	3	0		
	EEP 3	English Enhancement Program 3	2	2	0	3	3	0	EEP 2	
		Free Elective 1	3	3	0	3	3	0		
	PE 2	Rhythmic Activities	2	2	0	2	2	0		
	SE 104	Social Responsibility and Accountability	0			1.5				
		<b>Total</b>	<b>19</b>	<b>18</b>	<b>1</b>	<b>23.5</b>	<b>19</b>	<b>3</b>		

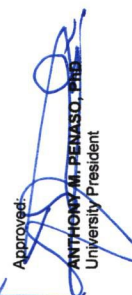
FIRST SEMESTER										
Grade	COURSE CODE	DESCRIPTIVE TITLE	Units			Contact Hrs.			Pre-requisite (s)	Co-requisite (s)
			Total	Lec.	Lab.	Total	Lec.	Lab.		
	MATH 118	Advanced Calculus II	3	3	0	3	3	0	MATH 117	
	BioSci 1	General Biology	5	3	2	9	3	6		
	MATH 120	Probability Theory	3	3	0	3	3	0	MATH 14, MATH 101 & MATH 110	
	LWR	Life and Works of Rizal	3	3	0	3	3	0		
	PE 3	Individual and Dual Sports	2	2	0	3	3	0		
		Qualified Elective/Cognate 1	3	3	0	3	3	0		
	SE 105	Career Readiness 1	0			1.5				
		<b>Total</b>	<b>19</b>	<b>17</b>	<b>2</b>	<b>25.5</b>	<b>18</b>	<b>6</b>		

SECOND SEMESTER										
Grade	COURSE CODE	DESCRIPTIVE TITLE	Units			Contact Hrs.			Pre-requisite (s)	Co-requisite (s)
			Total	Lec.	Lab.	Total	Lec.	Lab.		
	MATH 116	Modern Geometry	3	3	0	3	3	0	MATH 101	
	MATH 126	Topology	3	3	0	3	3	0	MATH 117	
	MATH 125	Numerical Analysis	3	2	1	5	2	3	MATH 113 & MATH 114	
	ArtApp	Art Appreciation	3	3	0	3	3	0		
	TEM	The Entrepreneurial Mind	3	3	0	3	3	0		
	MATH 196	Mathematics Research Problem	3	3	0	3	3	0	MATH 117 & MATH 120	
	PE 4	Major/Team Sports	2	2	0	2	2	0		
	SE 106	Career Readiness 2	0			1.5				
		<b>Total</b>	<b>20</b>	<b>19</b>	<b>1</b>	<b>23.5</b>	<b>19</b>	<b>3</b>		

SUMMER										
Grade	COURSE CODE	DESCRIPTIVE TITLE	Units			Contact Hrs.			Pre-requisite (s)	Co-requisite (s)
			Total	Lec.	Lab.	Total	Lec.	Lab.		
	MATH 197	Practicum A	2	0	2	6	0	6	MATH 125	
		<b>Total</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>6</b>	<b>0</b>	<b>6</b>		

FIRST SEMESTER										
Grade	COURSE CODE	DESCRIPTIVE TITLE	Units			Contact Hrs.			Pre-requisite (s)	Co-requisite (s)
			Total	Lec.	Lab.	Total	Lec.	Lab.		
	MATH 123	Complex Analysis	3	3	0	3	3	0	MATH 117	
		Math Elective 1	3	3	0	3	3	0		
		Math Elective 2	3	3	0	3	3	0		
		Free Elective 2	3	3	0	3	3	0		
	MATH 199	Thesis	3	3	0	3	3	0	MATH 196	
	SE 107	Pre-Employment Seminar 1	0			1.5				
		<b>Total</b>	<b>15</b>	<b>15</b>	<b>0</b>	<b>16.5</b>	<b>15</b>	<b>0</b>		

## FOURTH YEAR

Approved by:  
  
 ANTHONY M. PENASCO, Ph.D.  
 University President

Noted by:  
  
 ROLANDO M. PALUGA, Ph.D.  
 VPAA

Verified by:  
  
 ESAMEL M. PALUGA, PhD  
 Dean

Prepared by:  
  
 ERWIN N. ARLAN, MSc  
 Chairperson

PROGRAM CURRICULUM

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SECOND SEMESTER			Units			Contact Hrs.			Pre-	Co-
Grade	COURSE CODE	DESCRIPTIVE TITLE	Total	Lec.	Lab.	Total	Lec.	Lab.	requisite (s)	requisite (s)
		Math Elective 3	3	3	0	3	3	0		
		Free Elective 3	3	3	0	3	3	0		
		Qualified Elective/Cognate 2	3	3	0	3	3	0		
	MATH 198	Practicum B	2	0	2	6	0	6	Math 125	
	SE 108	Pre-Employment Seminar 2	0			1.5				
		<b>Total</b>	<b>11</b>	<b>9</b>	<b>2</b>	<b>16.5</b>	<b>9</b>	<b>6</b>		

OVER-ALL TOTAL 147

\* Calculus Enhancement Program for non-STEM and/or as required by the program

Pre-requisite course(s) - refers to a course or set of courses which should be enrolled in and passed accordingly before the specified course can be enrolled in.

Co-requisite course(s) - refers to a course or set of courses which may be enrolled in earlier or the latest taken simultaneously with specific course. However the respective incurred grade will not affect the validity of the grade of the other specified course.

LIST OF MATH ELECTIVES

COURSE CODE		DESCRIPTIVE TITLE	Units			Contact Hrs.			Pre-	Co-
			Total	Lec.	Lab.	Total	Lec.	Lab.	requisite (s)	requisite (s)
MATH	112	Abstract Algebra II	3	3	0	3	3	0	MATH 111	
MATH	161	Actuarial Mathematics I	3	3	0	3	3	0	MATH 110	
MATH	162	Actuarial Mathematics II	3	3	0	3	3	0	MATH 161	
MATH	163	Algebraic Geometry	3	3	0	3	3	0	MATH 101	
MATH	129	Combinatorics	3	3	0	3	3	0	MATH 101 & MATH 110	
MATH	152	Differential Equations II	3	3	0	3	3	0	MATH 113	
MATH	165	Differential Geometry	3	3	0	3	3	0	MATH 116	
MATH	115	Discrete Mathematics	3	3	0	3	3	0	None	
MATH	166	Dynamical Systems	3	3	0	3	3	0	MATH 113	
MATH	106	Elementary Number Theory	3	3	0	3	3	0	MATH 101	
ITE	13	Intermediate Programming	3	2	1	5	2	3	ITE 12	
MATH	131	Graph Theory and Applications	3	3	0	3	3	0	MATH 101	
MATH	167	History and Development of Fundamental Ideas in Mathematics	3	3	0	3	3	0	None	
MATH	148	Linear Programming	3	3	0	3	3	0	MATH 114	
MATH	168	Mathematical Biology	3	3	0	3	3	0	MATH 113	
MATH	127	Mathematical Modeling	3	2	1	5	2	3	MATH 113 & MATH 114	
MATH	128	Mathematical Modeling II	3	2	1	5	2	3	MATH 113 & MATH 114	
MATH	139	Advanced Statistics (Nonparametric Statistics)	3	2	1	5	2	1	MATH 110	
MATH	170	Operations Research I	3	2	1	5	2	3	MATH 114	
MATH	171	Operations Research II	3	2	1	5	2	3	MATH 170	
MATH	153	Partial Differential Equations	3	3	0	3	3	0	MATH 113	
MATH	164	Projective Geometry	3	3	0	3	3	0	MATH 114	
MATH	121	Real Analysis	3	3	0	3	3	0	MATH 117	
MATH	102	Set Theory	3	3	0	3	3	0	MATH 101	
MATH	140	Statistical Modeling	3	2	1	5	2	3	MATH 120	
MATH	141	Stochastic Analysis	3	3	0	3	3	0	MATH 120	
MATH	135	Theory of Interest	3	2	1	5	2	3	MATH 15	

Qualified Electives or Cognates are any academic courses offered in allied or relevant fields in the institution chosen by a student and approved by the program adviser.

Together with the math electives, these courses serve to incorporate a research focus or specialization to the student's program. In combination with or in lieu of qualified electives or cognates, the student with approval of the program adviser may also choose from the list of math electives to satisfy this requirement.

Free Electives are academic courses in any discipline offered in the institution freely chosen by a student.

Suggested Free Electives and Qualified Electives/Cognates for those who want to take LET

Free Electives


1	EDUC	105	Assessment in Learning 1	3	3	0	3	3	0
2	EDUC	100	Principles and Strategies of Teaching Mathematics	3	3	0	3	3	0
3	EDUC	106	Teaching Profession	3	3	0	3	3	0

Qualified Electives/Cognates

1	EDUC	103	Facilitating Learner - Centered Teaching	3	3	0	3	3	0
2	EDUC	108	The Teacher and the School Curriculum	3	3	0	3	3	0

Summary of Courses	No. of	Total Units
THIS REVISED CURRICULUM		
General Education (GE) Courses	13	36
Professional Courses	18	57
Required Courses	3	12
Elective Courses	8	24
PE	4	8
NSTP	2	6
Immersion	2	4
<b>Total</b>	<b>50</b>	<b>147</b>

Summary of Courses	No. of	Total Units
BASED ON CMO no.48, series of 2017		
General Education (GE) Courses	12	36
Professional Courses	17	54
Required Courses	3	10
Elective Courses	7	21
PE	4	8
NSTP	2	6
Immersion	0	0
<b>Total</b>	<b>45</b>	<b>135</b>

Approved:   
 ANTHONY M. PENASCO, PhD  
 University President

Noted:   
 ROLANDO N. PALUGA, VPAA

Verified by:   
 ESAMEL M. PALUGA, PhD  
 Dean

Prepared by:   
 ERWIN N. ARLAN, MSc  
 Chairperson