PROGRAM CURRICULUM

Program	: BACHELOR OF SCIENCE IN APPLIED MATHEMATICS (BSAM)
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

FIRST SEMESTER

Grade	COURSE CODE		DESCRIPTIVE TITLE	Units Total	Units Lec.	Units Lab.	Contact Hrs. Total	Contact Hrs. Lec.	Contact Hrs. Lab.	Pre-requisite (s)	Co-requisite (s)
	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				
			Total	**18**	**18**	**0**	**21.5**	**20**	**0**		

SECOND SEMESTER

Grade	COURSE CODE		DESCRIPTIVE TITLE	Units Total	Units Lec.	Units Lab.	Contact Hrs. Total	Contact Hrs. Lec.	Contact Hrs. Lab.	Pre-requisite (s)	Co-requisite (s)
	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				
			Total	**22**	**20**	**2**	**27.5**	**20**	**6**		

SECOND YEAR

FIRST SEMESTER

Grade	COURSE CODE		DESCRIPTIVE TITLE	Units Total	Units Lec.	Units Lab.	Contact Hrs. Total	Contact Hrs. Lec.	Contact Hrs. Lab.	Pre-requisite (s)	Co-requisite (s)
	MATH	15	Calculus III	4	4	0	4	4	0	MATH 14	
	ITE	13	Intermediate Programming	3	2	1	5	2	3	ITE 12	
	TTL	1	Technology for Teaching and Learning I	3	2	1	5	3	2		
	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				
			Total	**21**	**19**	**2**	**26.5**	**20**	**5**		

SECOND SEMESTER

Grade	COURSE CODE		DESCRIPTIVE TITLE	Units Total	Units Lec.	Units Lab.	Contact Hrs. Total	Contact Hrs. Lec.	Contact Hrs. Lab.	Pre-requisite (s)	Co-requisite (s)
	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				
			Total	**19**	**18**	**1**	**23.5**	**19**	**3**		

THIRD YEAR

FIRST SEMESTER

Grade	COURSE CODE		DESCRIPTIVE TITLE	Units Total	Units Lec.	Units Lab.	Contact Hrs. Total	Contact Hrs. Lec.	Contact Hrs. Lab.	Pre-requisite (s)	Co-requisite (s)
	Math	115	Discrete Mathematics	3	3	0	3	3	0	MATH 101	
	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	
	PE	3	Individual and Dual Sports	2	2	0	3	3	0		
	LWR		Life and Works of Rizal	3	3	0	3	3	0		
			Qualified Elective/Cognate 1	3	3	0	3	3	0		
	SE	105	Career Readiness 1	0			1.5				
			Total	**19**	**17**	**2**	**25.5**	**18**	**6**		

SECOND SEMESTER

Grade	COURSE CODE		DESCRIPTIVE TITLE	Units Total	Units Lec.	Units Lab.	Contact Hrs. Total	Contact Hrs. Lec.	Contact Hrs. Lab.	Pre-requisite (s)	Co-requisite (s)
	MATH	130	Operations Research I	3	2	1	5	2	3	MATH 114	
	MATH	135	Theory of Interest	3	2	1	5	2	3	MATH 15	
	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				
			Total	**20**	**17**	**3**	**27.5**	**17**	**9**		

SUMMER

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

FOURTH YEAR

FIRST SEMESTER

Grade	COURSE CODE		DESCRIPTIVE TITLE	Units Total	Units Lec.	Units Lab.	Contact Hrs. Total	Contact Hrs. Lec.	Contact Hrs. Lab.	Pre-requisite (s)	Co-requisite (s)
	MATH	124	Mathematical Modeling I	3	3	0	3	3	0	MATH 113 & MATH 114	
			Applied Math Elective 1	3	3	0	3	3	0		
			Applied Math Elective 2	3	3		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				
			Total	**15**	**15**	**0**	**16.5**	**15**	**0**		

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Basis	: CMO no. 48, series of 2017

FOURTH YEAR

SECOND SEMESTER

Grade	COURSE CODE		DESCRIPTIVE TITLE	Units Total	Units Lec.	Units Lab.	Contact Hrs. Total	Contact Hrs. Lec.	Contact Hrs. Lab.	Pre-requisite (s)	Co-requisite (s)
_____			Applied 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				
			Total	**11**	**9**	**2**	**16.5**	**9**	**6**		

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 APPLIED MATH ELECTIVES

COURSE CODE		DESCRIPTIVE TITLE	Units Total	Units Lec.	Units Lab.	Contact Hrs. Total	Contact Hrs. Lec.	Contact Hrs. Lab.	Pre-requisite (s)	Co-requisite (s)
MATH	111	Abstract Algebra I	3	3	0	3	3	0	MATH 101	
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	
CSC	108	Algorithms and Complexity	3	3	0	3	3	0	ITE 14	
MATH	142	Applied Multivariate Analysis	3	2	1	5	2	3	MATH 110	
CSC	109	Automata Theory and Formal Languages	3	3	0	3	3	0	ITE 14	
MATH	129	Combinatorics	3	3	0	3	3	0	MATH 101 & MATH 110	
MATH	145	Convex Analysis	3	3	0	3	3	0	MATH 125	
ITE	14	Data Structures and Algorithms	3	2	1	5	2	3	ITE 13	
MATH	152	Differential Equations II	3	3	0	3	3	0	MATH 113	
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	
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	147	Linear Models	3	3	0	3	3	0	MATH 120	
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	128	Mathematical Modeling II	3	2	1	5	2	3	MATH 113 & MATH 114	
MATH	149	Nonlinear Programming	3	3	0	3	3	0	MATH 148	
MATH	139	Advanced Statistics (Nonparametric Statistics)	3	2	1	5	2	3	MATH 110	
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	121	Real Analysis	3	3	0	3	3	0	MATH 111	
MATH	102	Risk Theory	3	3	0	3	3	0	MATH 120	
MATH	173	Sampling Theory	3	2	1	5	2	3	MATH 110	
MATH	174	Simulation	3	2	1	5	2	3	MATH 125	
MATH	134	Statistical Inference	3	2	1	5	2	3	MATH 120	
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	175	Time Series Analysis	3	2	1	5	3	2	MATH 120 & MATH 117	
ITE	16	Information Management(Theory of Databases)	3	2	1	5	3	2	ITE 14	

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 applied 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 applied 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
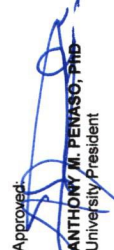
Free Electives

	COURSE CODE		DESCRIPTIVE TITLE	Total	Lec.	Lab.	Total	Lec.	Lab.
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
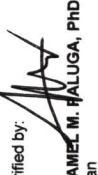
	COURSE CODE		DESCRIPTIVE TITLE	Total	Lec.	Lab.	Total	Lec.	Lab.
1	EDUC	103	Facilitating Learner - Centered Teaching	3	3	0	3	3	0
2	EDUC	108	The Teacher and the School Curriculum	3	3	0	3	3	0

Summary of Courses	No. of Subjects	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
Total	**50**	**147**

Summary of Courses	No. of Subjects	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
Total	**45**	**135**

Approved:

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Noted:

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