Republic of the Philippines
BATANGAS STATE UNIVERSITY
Pablo Borbon Main I, Batangas City, Philippines 4200
COLLEGE OF TEACHER EDUCATION
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CURRICULUM

Doctor of Philosophy major in Mathematics Education

Academic Year 2018-2019
Reference CMO: CMO No. 53, s. 2007

Curriculum Description

Doctoral programs in education aim to develop capacities of teachers and other education professionals for developing new knowledge and strategies in specific areas within the broad field of educational science and practice. Such programs shall focus on the development and validation of new theories, models, programs, and practices about the different aspects of the educational process.

Program Objectives

The Doctor of Philosophy major in Mathematics Education aims to produce educators who:

1. assume professional leadership roles involving mathematics education in the local, national or international level;
2. conceptualize and instigate progressive reforms and innovations in the educational community concerning the teaching of mathematics appropriate for the demands of the 21st century; and
3. embark as mathematicians or mathematics education faculty in colleges and universities; as decision makers in local or national education agencies; as researchers in corporations or non-profit organizations; or as high-ranking staff in foundations or international organizations.

Program Outcomes

Graduates of the Doctor of Philosophy major in Mathematics Education program are expected to:

1. demonstrate a breadth and depth of knowledge of mathematics and its applications;
2. link mathematics content to pedagogy for effective teaching that addresses educational needs;
3. design the most effective mathematics curriculum and ways to deliver this curriculum;
4. conduct original research or other forms of advanced scholarship, with statistical and qualitative interpretations, of a level of quality that meets the standards of peer review and eventually merit publication;
5. analyze problems and formulate appropriate mathematical models in a variety of areas in mathematics;
6. design various assessments, and interpret and use assessment results for planning and teaching mathematics; and
7. effectively communicate mathematics by showing the ability to read and understand basic technical mathematics, and present mathematical ideas in a coherent, literate fashion, both orally and in writing.

Curriculum Components

Code	Course Description	Units	Total
	A. Basic Courses		**9 units**
EM 601	Educational Legislations	3	
EM 602	Advanced Educational Statistics	3	
EM 603	Seminar in Advanced Educational Research	3	
	B. Philosopy Courses		**12 units**
EM 606	Advanced Philosophy of Education	3	
EM 608	Social and Political Philosophy	3	
EM 609	Seminar in Phil Education Philosophy	3	
EM 610	Philosophy of Man		
	C. Major Courses		**24 units**
Math 600	Number Theory	3	

Code	Course Description	Units	Total
Math 601	Advanced Calculus II	3	
Math 602	Abstract Algebra II	3	
Math 603	Modern Complex Analysis II	3	
Math 604	Modern Real Analysis	3	
Math 605	Topology I	3	
Math 606	Linear Algebra	3	
Math 607	Differential Equation II (Partial Differential Equations)	3	
	D. Electives		**9 units**
Math 608	Vector Analysis	3	
Math 609	Riemannian Geometry	3	
Math 610	Calculus of Variation	3	
Math 611	Special Problems in Higher Mathematics (with Computer Application)	3	
	E. Dissertation Writing		**12 units**
DW I	Dissertation Writing I (Proposal Defense)	4	
DW II	Dissertation Writing II (Final Defense)	8	
	Total		

SUMMARY	
Courses	**Number of Units**
Basic Courses	9
Philosopy Courses	12
Major Courses	24
Electives	9
Dissertation Writing	12
TOTAL	**66**

ADMISSION POLICIES

1. Automatic admission of an applicant with Master's degree in education major in Mathematics Teaching, Master's Degree in Mathematics, Statistics and Physics.

2. For Non-mathematics major graduate, the following 18 units should be completed before taking major and cognate courses.

Course Code	Course Description	No. of Units
Math 504	Differential Calculus	3 units
Math 505	Integral Calculus	3 units
Math 506	Differential Equation	3 units
Math 509	Abstract Algebra I	3 units
Math 510	Linear Algebra I	3 units
Math 511	Elementary Number Theory	3 units