



Republic of the Philippines

NUEVA ECIJA UNIVERSITY OF SCIENCE AND TECHNOLOGY

Cabanatuan City, Nueva Ecija, Philippines

ISO 9001:2015 CERTIFIED

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**CURRICULUM IN MASTER OF ARTS IN TEACHING
MAJOR IN MATHEMATICS
(MAT MATHEMATICS)**

COURSE CODE

I. FOUNDATION COURSES

MT 211 FOUNDATIONS OF SCIENCE/MATH EDUCATION

This course deals with the philosophical, sociological and psychological foundation applied to teaching and learning situations.

Call No.	Author	Title of Book	Copyright date	No. of copies
CIR GE 105 .W54e2 2007	Scott, Brenna	Environment : the science behind the stories	2007	1
CIR LB 17 .O76f9 2006	Ornstein, Allan C.	Foundations of education	2006	2

MT 212 STATISTICAL METHODS

The course deals with the basic concepts in statistics including the collection, organization, analysis and interpretation of data.

Call No.	Author	Title of Book	Copyright date	No. of copies
CIR HF 1017 .A53s13 2018	Anderson, David R.	Statistics for business and economics	2018	1
CIR HA 29 .T65f 2016	Tokunaga, Howard.	Fundamental statistics for the social and behavioral sciences	2016	1
CIR QA 278 .K55p4 2016	Kline, Rex B.	Principles and practice of structural equation modeling	2016	1
CIR QA 276 .B6846 2015	Brase, Charles Henry	Understandable statistics : concepts and methods	2015	2
CIR QA 276 .R36s3 2013	Ramsey, Fred L.	The Statistical sleuth : / a course in methods of data analysis /	2013	1
CIR RT 81.5 .M86 2012	Plichta, Stacey B.	Statistical methods for health care research	2012	1



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MT 213 RESEARCH METHODOLOGY

The course deals with the different research design and methods in quantitative and qualitative approaches. It includes problem identification selection, elements of a research proposal and ethics in doing research.

Call No.	Author	Title of Book	Copyright date	No. of copies
CIR H 62 .Q83 2016	Scott, Brenna	Qualitative research	2016	1
CIR BF 76.5 .U93i5 2014	Flick, Uwe.	An Introduction to qualitative research	2014	1
CIR G 73 .M66i2 2013	Montello, Daniel R.	An Introduction to scientific research methods in geography and environmental studies	2013	1
CIR H 61 .B4715 2007	Berg, Bruce L.	Qualitative research methods for the social sciences	2007	1
CIR BF 76.5 .S73r3 2007	Stangor, Charles.	Research methods for the behavioral sciences	2007	1
CIR LB 1028 .F73h 2005 c.2	Fraenkel, Jack R.	How to design and evaluate research in education	2006	1

MT 214 CURRICULUM PLANNING & DEVELOPMENT IN SCIENCE/MATH EDUCATION

The course is primarily with the concept and theoretical foundation on curriculum, planning and development. It includes the process, techniques, and problems in curriculum planning, teaching tools, requirements, implementation and evaluation.

Call No.	Author	Title of Book	Copyright date	No. of copies
CIR LB 2806.15 .G53c4 2016	Glatthorn, Allan A.	Curriculum leadership : strategies for development and implementation	2016	1
CIR GV 363 .L86s3 2015	Lund, Jacalyn Lea.	Standards-based physical education curriculum development	2015	1
FIL LB 2806.15 .B55c 2015 c.3	Bilbao, Purita P.	Curriculum development for teacher	2015	1
FIL LB 2806.15 .R49c 2015 c.3	Reyes, Emerita	curriculum development	2015	1

II. MAJOR COURSES

MT 221 SET THEORY

The course covers the basic concept of sets, operations sets, function and relations, special type of functions. It also includes the fundamentals and algebra of logic.

Call No.	Author	Title of Book	Copyright date	No. of copies
CIR QA 248 .C86s 2016	Cunningham, Daniel W..	Set theory : a first course	2016	1
CIR QA 278 .K55p4 2016	Kline, Rex B..	Principles and practice of structural equation modeling	2016	1



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CIR QD 462 .R66m 2016	Roos, B. O. (Björn O.)	Multiconfigurational quantum chemistry	2016	1
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MT 222 LINEAR ALGEBRA

This course deals with the solution of linear system of equations, matrixes and determinants, vector space and subspaces and linear independence.

Call No.	Author	Title of Book	Copyright date	No. of copies
CIR QA 184.2 .K86l 2017	Kumaresan, S.	Linear algebra : a geometric approach	2017	1
CIR QA 184.2 .D44i 2009	DeFranza, Jim.	Introduction to linear algebra with applications	2009	1
CIR QA 184.2 .W55l6 2008	Williams, Gareth.	Linear algebra with applications	2008	1
CIR QA 184.2 .C37l 2007	Carlen, Eric A.	Linear algebra : from the beginning	2007	1

MT 223 ABSTRACT ALGEBRA

The study of groups, group homomorphism's, Cayley's Theorem, Langrange Theorem, permutation group, Sylow's Theorems.

Call No.	Author	Title of Book	Copyright date	No. of copies
FIL QA 162 .Y63a 2016	Ymas, Sergio E., Jr.	Abstract algebra (modern algebra)	2016	1
CIR QA 162 .K55a 2000	Klima, Richard E.	Applications of abstract algebra with Maple	2000	1
CIR QA 155 .G66a 1998	Goodman, Frederick M.	Algebra : abstract and concrete	1998	1

MT 224 MODERN GEOMETRY

This course deals with the historical development of Geometry in three periods: Early geometry, Euclidean and non-Euclidean geometry. It includes the study of basic geometric ideas in the context of vectors and vector space.

Call No.	Author	Title of Book	Copyright date	No. of copies
CIR QA 473 .D87m2 1992	Dubrovin, B. A.	Modern geometry methods and application	1992	1

MT 225 MATHEMATICAL ANALYSIS

The course deals with analysis and methods of calculus together with the application in Geometry and Physics and other related fields. A logical development of the fundamental principle is done to give emphasis on computation and applied of calculus. The course deals with the theories and concepts of functions of one variable and their graphs, limits and continuity, the tangent line, derivatives, rate of change, applications of the derivatives, the definite integral and application of the definite integral



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Call No.	Author	Title of Book	Copyright date	No. of copies
CIR QA 276 S378 2017	Joseph Schmuller, PhD.	Statistical analysis with R	2017	1
CIR QA 278 .K55p4 2016	Kline, Rex B.	Principles and practice of structural equation modeling	2016	1
CIR QA 276 .R36s3 2013	Ramsey, Fred L.	The Statistical sleuth : / a course in methods of data analysis /	2013	1

MT 226 SPECIAL TOPICS IN MATHEMATICS

The course covers special topics in the fields of mathematics which are not usually covered in other mathematics courses or maybe included but not given thorough and in-depth discussion. Topics include tessellations, transformation, methods and styles of divisibility, prime numbers and congruence.

Call No.	Author	Title of Book	Copyright date	No. of copies

III. ELECTIVES/COGNATES (ANY TWO OF THE FOLLOWING SUBJECTS)

PT 231 COMPUTER APPLICATIONS IN SCIENCE/MATH EDUCATION

This course deals with the concepts and skill acquisition on basic, intermediate and advanced computer literacy and their application teaching and learning situations. It includes the application of selected Microsoft Office Computer applications.

Call No.	Author	Title of Book	Copyright date	No. of copies
CIR QA 76.76 .P47i2 2015	Perkovic, Ljubomir.	Introduction to computing using Python : an application development focus	2015	1
CIR QA 76.76 .P47i2 2012	Perkovic, Ljubomir.	Introduction to computing using Python : an application development focus	2012	1
CIR QA 76.9.D3 B56m 2011	Bingham, Richard	Managing oracle fusion applications : best practices for a high-performance enterprise application management strategy	2011	1

PT 232 ENVIRONMENTAL SCIENCES

The course is interdisciplinary; it embraces a wide variety of topics from different areas of study. This course deal with principles of science process, energy conversion that underlie all ecological processes. It also includes the study of Earth in its natural composition and natural system change over time and space and the interrelationship of human's environment.

Call No.	Author	Title of Book	Copyright date	No. of copies
FIL QH 541 .G85f 2015 c.1	Ryan Manuel D. Guido.	Fundamentals of environmental science	2015	3



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CIR G 73 .M66i2 2013	Montello, Daniel R.	An Introduction to scientific research methods in geography and environmental studies	2013	1
CIR GE 340 .E58 2012		Environmental science	2012	1
CIR GE 105 .E5838 2011		Environmental Science : understanding our changing earth	2011	2

PT 233 TEACHING STRATEGIES AND EVALUATION IN SCIENCE/MATH EDUCATION

This course deals with the different teaching strategies and type and modes of evaluation in mathematics and science education.

Call No.	Author	Title of Book	Copyright date	No. of copies
CIR LB 1025 S22 2002	Songco, Evelyn A.	Teaching strategies in social science : for elementary grades	2002	4
FIL LB 1025 .S35t 1996	Salandanan, Gloria G.	An Introduction to scientific research methods in geography and environmental studies	1996	5

PT 234 ETHICS AND VALUES IN SCIENCE/MATH EDUCATION

The course deals with the discussion of issues, problems and values on morality and spirituality in the public service and education. It includes the concept and principles of ethical character and leadership, and professionalism.

Call No.	Author	Title of Book	Copyright date	No. of copies
CIR QA 278 .K55p4 2016	Kline, Rex B.	Principles and practice of structural equation modelling	2016	1

PT 235 SEMINAR ON TRENDS, ISSUES AND PROBLEMS IN SCIENCE/MATH EDUCATION

This course deals with the different trends, issues and problems in mathematics/science education in context of school organization and management, curriculum implementation, instruction and educational outcomes.

Call No.	Author	Title of Book	Copyright date	No. of copies
CIR QA 278 .K55p4 2016	Kline, Rex B.	Principles and practice of structural equation modelling	2016	1

IV. COMPREHENSIVE EXAMINATIONS



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