

ADMISSION

To qualify for the Master of Science in Mathematics, the applicant must:

- Have a bachelor's degree in Mathematics, Computer Science, Statistics, Engineering or its equivalent from a recognized institution of higher learning
- Have a background on Differential and Integral Calculus, Linear Algebra, Introduction to Differential Equations, and Introduction to Probability and Statistics
- Be knowledgeable on Matlab, Scilab, Pascal, C, Fortran, Java, or similar/comparable Mathematics Software



REQUIREMENTS

- Duly accomplished application form (UPB-GP Form No.1) (<http://gpo.upb.edu.ph/forms-fees>)
- Original Official Transcript of Records, updated with records of most recent enrollment
- Three (3) Reference Report Forms (2 from former professors and 1 from the applicant's immediate supervisor)
- Recent 2" x 2" Photo (3 copies, 1 copy to be pasted on the application form)
- For working applicants: an official permit from his/her employer/supervisor indicating the maximum number of units the student is allowed to enroll
- For married women: PSA Marriage Certificate
- TOEFL exam certification with a score of 500 for the pen and paper test, 173 for the internet-based test, and 61 for the computer-based test (Original, for foreigners from non-English speaking countries)
- Original PSA Birth Certificate (or an equivalent document for foreign applicants)
- Application and Testing fee (250.00 PHP)

Note: Foreign applicants are required to pay an additional 20 USD on top of the application fee.

FACULTY PROFILE

Addawe, Joel M.
Ph.D. Mathematics
University of the Philippines, 2012
Specialization: *Mathematical Modelling, Dynamical Systems*

Addawe, Rizavel C.
Ph.D. Statistics
University of the Philippines, 2018
Specialization: *Statistics, Time-Series Analysis*

Alangui, Wilfredo V.
Ph.D. Mathematics Education
University of Auckland, 2010
Specialization: *Ethnomathematics, Indigenous Knowledge*

Bacani, Jerico B.
Dr. rer. nat. Mathematik
Karl-Franzens-Universitaet Graz, 2013
Specialization: *Shape Derivatives, Diophantine Equations*

Collera, Juancho A.
Ph.D. Mathematics
Queen's University, 2012
Specialization: *Delay Differential Equations, Dynamical Systems*

Domogo, Andrei
Ph.D. Mathematics
University of the Philippines, 2022
Specialization: *Mathematical Modelling, Dynamical Systems*

Gueco, Edna N.
Ph.D. Mathematics
University of the Philippines, 2012
Specialization: *Matrix Analysis, Algebraic Systems*

Ignacio, Paul Samuel P.
Ph.D. Mathematics
University of Iowa, 2019
Specialization: *Algebraic Topology, Data Science*

Manongsong, Saraleen Mae M.
Ph.D. Mathematics
University of the Philippines, 2023
Specialization: *Robotics, Algebraic Geometry*

Mina, Renz Jimwel S.
Ph.D. Mathematics
University of the Philippines, 2023
Specialization: *Number Theory, Elliptic Curves*

Peralta, Gilbert R.
Dr. rer. nat. Mathematik
Karl-Franzens-Universitaet Graz, 2014
Specialization: *Partial Differential Equations, Optimal Control*

Macasantos, Priscilla S.
(Professor Emeritus)
Ph.D. Mathematics
University of Delaware, 1996
Specialization: *Fixed Point Theory, Differential Equation*

FOR SUBMISSIONS

The Graduate Programs Office
University of the Philippines Baguio
Gov. Pack Road, Baguio City 2600
Telefax No. +6374-442-2460
Website: <http://gpo.upb.edu.ph>
Facebook Page: <https://www.facebook.com/upbgpo>
E-mail: gpo.upbaguiop@up.edu.ph

Download application forms at gpo.upb.edu.ph/forms-fees



MASTER OF SCIENCE IN MATHEMATICS



University of the Philippines Baguio
College of Science
Department of Mathematics and Computer Science
dmcsweb.upb.edu.ph

PROGRAM DESCRIPTION

The Master of Science in Mathematics (MS Math) program of UP Baguio provides students with a firm grounding in theoretical mathematics to prepare them for doctoral studies, research, careers in industry and government, and for teaching junior and senior level undergraduate mathematics courses.

LEARNING OUTCOMES

At the end of the program, the graduate student must be able to:

- Discuss advanced concepts from various fields of mathematics including, but not limited to Algebra, Analysis, and Statistics, to exhibit mastery in the different areas of mathematics;
- Provide accurate and rigorous solutions and proofs, both verbal and written, for mathematical problems, to demonstrate deep understanding of the theory and its applications;
- Generate new results to contribute to mathematical knowledge; and
- Prepare for doctoral studies, advanced research, and careers in education, industry, and government, towards the students' professional development and personal growth.

COURSE STRUCTURE

Non-Thesis Option

The student should complete 33 units of graduate courses, pass a comprehensive examination in Algebra and Analysis, and do an oral paper presentation.

Required Courses: 12 units

Electives: 21 units

Thesis Option

The student should complete 30 units of graduate courses, successfully defend his/her master's thesis, and submit bound copies of approved thesis.

Required Courses: 12 units

Electives: 12 units

Thesis: 6 units

REQUIRED COURSES

Math 221 Abstract Algebra I
 Math 222 Linear Algebra
 Math 232 Real Analysis
 Math 234 Complex Analysis

ELECTIVE COURSES

Math 213 Theory of Differential Equations
 Math 214 Dynamical Systems
 Math 215 Introduction to Mathematical Modeling
 Math 216 Applied Partial Differential Equations
 Math 217 Integral Equations
 Math 218 Introduction to Applied Mathematics
 Math 219 Delay Differential Equations
 Math 223 Abstract Algebra II
 Math 224 Matrix Analysis
 Math 225 Number Theory with Applications
 Math 235 Applied Complex Variables
 Math 236 Numerical Analysis
 Math 237 Functional Analysis
 Math 238 Semigroup Theory and Applications
 Math 239 Numerical Partial Differential Equations
 Math 240 Topological Structures
 Math 241 Algebraic Topology
 Math 245 Computational Topology with Applications
 Math 250 Modern Geometry
 Math 251 Differential Geometry
 Math 255 Applied Combinatorics
 Math 256 Graph Theory
 Math 260 Probability and Applications
 Math 280 Linear and Nonlinear Optimization
 Math 296 Selected Topics in Applied Analysis
 Math 298 Special Topics

STUDY PLAN (THESIS OPTION)

1ST YEAR

1ST SEMESTER	2ND SEMESTER
Math 221 Math 222 Math 232	Math 234 Elective (1) Elective (2)

2ND YEAR

1ST SEMESTER	2ND SEMESTER
Elective (3) Elective (4)	Math 300*

*Student must enroll the 6-unit thesis course in one semester and continue his/her thesis work in the following semester/s.

ACTIVITIES

Graduate Seminars and Colloquia
 Research Group Discussions
 Breakthroughs in Mathematics

SCHOLARSHIP OPPORTUNITIES

- DOST-SEI Accelerated Science and Technology Human Resource Development Program (ASTHRDP): <https://sei.dost.gov.ph/>
- CHED-Scholarship for Instructors Knowledge and Advancement Program (SIKAP): <https://ched.gov.ph/sikap/>

Benefits include free tuition and monthly stipend



STUDY PLAN (NON-THESIS OPTION)

1ST YEAR

1ST SEMESTER	2ND SEMESTER
Math 221 Math 222 Math 232	Math 234 Elective (1) Elective (2)

2ND YEAR

1ST SEMESTER	2ND SEMESTER
Elective (3) Elective (4) Elective (5)	Elective (6) Elective (7)