



# MASTER OF SCIENCE IN MATHEMATICS

**DOMESTIC STUDENTS** (US citizens) interested in applying for admission for **Fall Semester 2008, Spring Semester 2009, or Summer Semester 2009** will need to submit a completed application packet to the Graduate School at least 20 days prior to the beginning of the semester you intend to enroll.

**INTERNATIONAL STUDENTS** interested in applying for admission for **Fall Semester 2008** will need to submit a completed International Student Application Packet to the Graduate by June 2, 2008; for **Spring Semester 2009** the application deadline is **October 6, 2008**; and for **Summer Semester 2009**, the application deadline is **February 16, 2009**.

Classes will begin on **August 15, 2008** for **Fall Semester 2008**; on **January 7, 2009** for **Spring Semester 2009**, and on **May 18, 2009** (Session I), **June 8, 2009** (Sessions II & III), & **July 6, 2009** (Session IV) for **Summer Semester 2009**.

- ✓ **Completed application for admission to the UWG Graduate School**
- ✓ **Non-refundable \$30.00 application fee (one time only)**
- ✓ **One official transcript from each college or university attended**
- ✓ **Earned Bachelor of Science in mathematics (or related field) from an accredited institution. Individuals without a degree in mathematics are expected to complete undergraduate and/or graduate course work to compensate for deficiencies.**
- ✓ **2.7 cumulative undergraduate GPA (4.0 scale)**
- ✓ **A minimum Graduate Record Examination – (GRE) score of 1030. The Miller Analogies Test (MAT) is acceptable only for those seeking the MS in Mathematics degree with an option in Teaching. Please see page 2 for more information about test score requirements.**
- ✓ **Three letters of recommendation from individuals knowledgeable of your professional and academic abilities**
- ✓ **Satisfactory certificate of immunization (if you are a new student)**
- ✓ **Academic Honor Form**

Please send all of the above documents directly to the Graduate School, the University of West Georgia, Carrollton, GA 30118-4160. Inquiries related to your application status or admission test information should be directed to the Graduate School. Phone - 678-839-6419; Fax - 678-839-5949; E-mail – [gradsch@westga.edu](mailto:gradsch@westga.edu); Web site – [www.westga.edu/~gradsch/](http://www.westga.edu/~gradsch/).

## IMPORTANT PHONE NUMBERS

Dept of Mathematics	678-839-6489	<a href="http://www.westga.edu/~math/">www.westga.edu/~math/</a>
Financial Aid	678-839-6421	
Registrar	678-839-6438	

Please be advised that applicants who do not have an undergraduate degree in mathematics must complete the required prerequisite courses, MATH 1634, MATH 2644, and MATH 2654 plus 12 hours of advanced mathematics courses at the undergraduate level (3000-level or higher courses or the equivalent).

## **THE IMPORTANCE OF ADMISSION TEST SCORES**

All individuals applying for admissions to graduate programs at the University of West Georgia must take the appropriate test. For graduate programs in the Arts & Sciences, prospective students must submit an official Graduate Record Examination (GRE) score.

### **REGULAR ADMISSION**

- 2.7 cumulative grade point average on all undergraduate work
- A GRE score of at least 1030 (no score lower than 400 on the verbal or quantitative tests) and a minimum Analytical Writing score of 3.5. The GRE mathematics subject test is not a requirement for admission into the MS in Mathematics program.
- Applicants interested in the **MS in Mathematics with an option in Teaching** may submit an official GRE score or new Miller Analogies Test (MAT) score. The new MAT score requirement for regular admission is 401-405 (percentile rank of 53-60). The Graduate School will accept scores for the New MAT taken after October 1, 2004 only.

**\* These criteria represent minimal admissions standards. Specific graduate programs may establish higher standards if they so choose. Therefore, meeting minimal grade point average and test score criteria are no guarantee for admission.**

### **PROVISIONAL ADMISSION**

Students with less than the required GPA and GRE scores may be considered for provisional admission if the undergraduate grade point average multiplied by 100 and added to the applicant's verbal and quantitative scores on the GRE equal a minimum of 1000. In no event may the grade point average be less than 2.2 or the score on any portion of the GRE be less than 350. Applicants must also submit a minimum GRE Analytical Writing score of 3.0.

Criteria for meeting provisional admission using MAT scores for tests taken in October 2004 or later have been established by the Graduate School. If your MAT score does not meet regular admission requirements, the Graduate School will determine by previously established criteria if it meets the Graduate School minimum for consideration for provisional admission.

**Meeting the criteria for provisional status is no guarantee of admission. Provisional admission is ultimately subject to departmental approval and the Dean of the Graduate School.**

### **ADMISSION TEST INFORMATION**

Computer-based testing is available throughout the year by calling **1-800-GRE-CALL** or via the Internet at <http://www.gre.org/gentest.html>. Information about the MAT is available at <http://www.milleranalogies.com>. The MAT is administered here at UWG. For more information, call the Graduate School at 678-839-6419.

### **IMPORTANT NOTICE**

No more than 9 hours taken as a post-baccalaureate or non-degree student may subsequently be applied to a degree. In most situations, students will not be allowed to take the full 9 hours. Therefore, students attempting to gain admittance to a degree program should make every effort to take the appropriate admissions test and submit the necessary materials required to complete the application process as soon as possible.

## PROGRAM INFORMATION

### A. Teaching Option

This program is designed for teachers and aspiring teachers with an undergraduate degree in Mathematics or Mathematics Education who wish to obtain an advanced degree that will make them more qualified and marketable as mathematics teachers at the high school and junior college level. This would also be appropriate for those seeking to enroll in a doctoral program in Mathematics Education or Mathematics. The major elements of the program are (i) mathematics education courses that are specifically designed to address current needs of teachers of secondary mathematics in Georgia and (ii) advanced mathematics courses which promote a greater depth of understanding of concepts relevant to in-class teaching. The Department of Mathematics has graduate faculty with expertise in Mathematics Education and Mathematics who will lead the students in these areas.

**This program does not lead to initial certification (level T-4 certification). However, for those who already have T-4 certification, it does lead to level T-5 certification in Secondary Education – Mathematics.**

### Degree Requirements

A candidate for the MS in Mathematics degree with Concentration in Teaching must complete a minimum of 36 semester hours of graduate work approved by the Department of Mathematics graduate committee. These include:

**Required Courses:** 24 semester hours  
**Electives:** 12 semester hours

### Comprehensive Examination:

Each candidate for the Concentration in Teaching must perform satisfactorily on a final comprehensive examination.

<b>Courses</b>	<b>Credits</b>
<b>Required Mathematics Education Courses</b>	<b>9</b>
MATH 6713 – Strategies for Teaching Mathematics	3
MATH 6723 – Assessment and Classroom Management in Mathematics Education	3
MATH 6733 – Research in Mathematics Education	3
<b>Required Mathematics Courses</b>	<b>15</b>
MATH 6743 – Advanced Perspectives on Secondary Mathematics	3
MATH 6253 – Mathematical Analysis I	3
MATH 6263 – Mathematical Analysis II	3
MATH 6233 – Geometry	3
MATH 6513 – Applied Linear Algebra	3
<b>Electives (Choose 4)</b>	<b>12</b>
MATH 6043 – Theory of Numbers	3
MATH 6203 – Applied Probability	3
MATH 6213 – Statistical Methods	3
MATH 6413 – Advanced Modern Algebra I	3
MATH 6423 – Advanced Modern Algebra II	3
MATH 6473 – Combinatorial Analysis	3
MATH 6483 – Theory of Graphs	3
<b>Total Program</b>	<b>36</b>

### Sample Course of Study

#### First Year:

Fall Semester: MATH 6253 – Mathematical Analysis I  
MATH 6513 – Applied Linear Algebra

Spring Semester: MATH 6263 – Mathematical Analysis II  
MATH 6743 – Advanced Perspectives on Secondary Education

Summer: MATH 6473 – Combinatorial Analysis  
MATH 6713 – Strategies for Teaching Mathematics

**Second Year:**

Fall Semester: MATH 6233 – Geometry  
MATH 6203 – Applied Probability

Spring Semester: MATH 6723 – Assessment & Classroom Management in Mathematics Education  
MATH 6213 – Statistical Methods

Summer: MATH 6483 – Theory of Graphs  
MATH 6733 – Research in Mathematics Education

**B. Applied Mathematics Option.**

This program is designed for those who seek enhanced employment opportunities in industry, government, or two-year college teaching, as well as those who desire to enter a doctoral program. Mathematics has always played an important role in understanding and predicting real-world phenomena, and that role has increased rapidly as many areas of technology and science have advanced in recent years. There has also been an increase in new areas of mathematics used to model these phenomena. A wealth of applications can be found in areas such as economics, biology, computation, social and management sciences, and engineering. The Department of Mathematics at the University of West Georgia has a strong contingent of faculty in applied areas. The program is designed to expose students to a broad range of mathematical subjects that are important in applied fields. The program includes (i) a set of core courses fundamental to the study of applied mathematics, (ii) a broad range of elective courses in several applied areas, and (iii) a research project class.

**Degree Requirements**

A candidate for the MS in Mathematics degree with Concentration in Applied Mathematics must complete a minimum of 36 semester hours of graduate work approved by the Department of Mathematics graduate committee.

**Required Courses:** 24 semester hours  
**Electives:** 9 semester hours  
**Research Project:** 3 semester hours

All candidates for the Concentration in Applied Mathematics are required to complete an independent project under the supervision of a member of the graduate faculty.

**Comprehensive Examination:**

Each candidate for the Concentration in Applied Mathematics must perform satisfactorily on a final comprehensive examination.

<b>Courses</b>	<b>Credits</b>
<b>Required Mathematics Courses</b>	<b>27</b>
MATH 6253 – Mathematical Analysis I	3
MATH 6263 – Mathematical Analysis II	3
MATH 6203 – Applied Probability	3
MATH 6213 – Statistical Methods	3
MATH 6513 – Applied Linear Algebra	3
MATH 6503 – Numerical Methods in Applied Mathematics	3
MATH 6363 – Theory of Partial Differential Equations	3
MATH 6003 – Dynamical Systems and Applications	3
MATH 6733 – Research Project	3
<b>Electives (Choose one sequence and one additional course)</b>	<b>12</b>
MATH 6103 – Discrete Optimization	3
MATH 6303 – Introduction to Mathematical Control Theory	3
MATH 6903 – Bio-Mathematics	3

<b>Sequence I:</b> MATH 6473 – Combinatorial Analysis	3
MATH 6483 – Theory of Graphs	3
<b>Sequence II:</b> MATH 6403 – Signal Processing	3
MATH 6413 – Inverse Problems	3
<b>Total Program</b>	<b>36</b>

### Sample Course of Study

#### First Year:

Fall Semester: MATH 6253 – Mathematical Analysis I  
MATH 6513 – Applied Linear Algebra

Spring Semester: MATH 6263 – Mathematical Analysis II  
MATH 6103 – Numerical Methods in Applied Mathematics

Summer: MATH 6473 – Combinatorial Analysis  
MATH 6003 – Dynamical Systems and Applications

#### Second Year:

Fall Semester: MATH 6203 – Applied Probability  
MATH 6363 – Theory of Partial Differential Equations

Spring Semester: MATH 6213 – Statistical Methods  
MATH 6903 – Bio-Mathematics

Summer: MATH 6483 – Theory of Graphs  
MATH 6023 – Introduction to Mathematical Control Theory