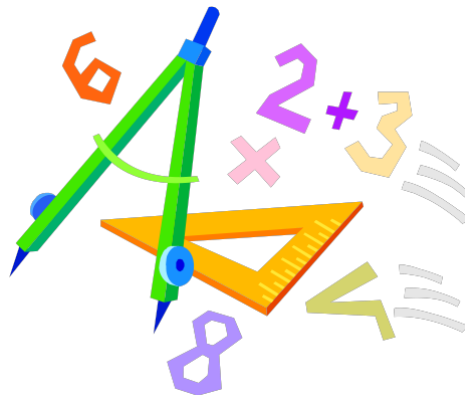




## **Student Handbook**

### **Master of Education (M.Ed.) Mathematics Education-Secondary (MTE)**



**Fall 2014**

(last update 8-04-2014)

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## PROGRAM OVERVIEW

**Program:** Master of Education (M.Ed.) Degree

**Major:** Mathematics Education (MTE)

**Concentration:** Secondary

### Teacher Education Program

### Program Theme: Teacher as Reflective Professional

The M.Ed. major in Secondary Mathematics Education seeks to advance early and mid-career mathematics teachers' ability to effectively implement standards-based instructional practices. The program's chief goal—to strengthen secondary students' mathematical understandings—is achieved, in part, by providing mathematics teachers with opportunities to deepen their understandings of learners from diverse backgrounds and to explore issues of equity in mathematics classrooms within urban environments. The program prepares teachers to conduct action research in the context of their own classrooms in order to inform instruction, and to share the knowledge gained in a professional community of teachers. Through engaging teachers in advanced mathematics coursework, the program strengthens teachers' mathematical content knowledge. In general, the Program of Study is framed by the principles and standards of the National Council of Teachers of Mathematics and the core propositions of the National Board for Professional Teaching Standards.

### Program of Study

#### A. Professional Studies (9 semester hours)

Select professional studies courses early in the program.

*Required (3 semester hours):*

EPY 7080 The Psychology of Learning and Learners (3) [offered most semesters F/S/S]

*Select one (3 semester hours):*

EPSF 7100 Critical Pedagogy (3) [offered rarely, check with Department of Educational Policy Studies]

EPSF 7110 Multicultural Education (3) [offered rarely, check with Department of Educational Policy Studies]

EPSF 7120 Social and Cultural Foundations of Education (3) [offered most semesters F/S/S]

*Select one (3 semester hours):*

EPRS 7900 Methods of Research in Education (3) [offered most semesters F/S/S]

EPRS 7910 Action Research (3) [offered most semesters F/S/S]

#### B. Teaching Field Major (27 semester hours)

*Required (12 semester hours):*

EDMT 8820 Ethnomathematics and the Historical Development of Mathematics (3) [Summer]

EDMT 8430 Sociocultural and Sociohistorical Issues of Mathematics Education (3) [Spring]

EDMT 7560 Theory and Pedagogy of Mathematics Instruction (3) Take with EPRS 7900 or 7910 [Fall]

LT 7360 Integrating Tech in School-based Learning Environments (3) [offered most semesters F/S/S]

*Required (15 semester hours):*

Select from among 6000–8000-level MATH courses related to mathematics in terms of its history, philosophy, conceptual underpinnings, applications, and relationships to the secondary curriculum.

\*Recommended MATH courses (see Graduate Catalogue for course description

[http://www.gsu.edu/es/catalogs\\_courses.html](http://www.gsu.edu/es/catalogs_courses.html)):

MATH 6250 Complex Analysis	MATH 6751 Mathematical Statistics I
6301 College Geometry	MATH 7120 Fund Concepts of Analysis
MATH 6371 Modern Geometry	MATH 7300 Problem Solving with Computers
MATH 6450 Theory of Numbers	MATH 7420 Applied Combinatorics
MATH 6547 Intro to Statistical Methods	MATH 7800 Topics in Secondary Math
MATH 6548 Methods of Regression Analysis	MATH 7820 Historical/Cultural Math I
MATH 6610 Numerical Analysis I	MATH 7821 Historical/Cultural Math II
MATH 6661 Analysis I	MATH 7840 Mathematical Models
MATH 6662 Analysis II	

\* Course recommendations are based on the understanding that student holds a T-4 Clearly Renewable Georgia Educator Certificate, Mathematics (6–12), i.e., the student has completed (at a minimum) the calculus sequence and a course in computer science or discrete mathematics, linear algebra, modern/abstract algebra, probability and statistics, and college geometry at the undergraduate level.

[Different MATH courses are offered throughout the year; check the Department of Mathematics and Statistics for specifics: <http://www2.gsu.edu/~wwwmat/students/schedule.html>]

**Total: Minimum of 36 semester hours**

**Master of Education (M.Ed.) Degree in Mathematics Education  
Program of Study**

Name of Student Panther ID # Semester Admitted

Address Telephone (W) (H) GSU Email

	UGPA _____ GRE V/Q = _____				
<b>COURSE NO.</b>	<b>COURSE NAME</b>		<b>Semester/Yr</b>	<b>Sem Hours</b>	<b>Entrance Continuation Exit</b>
<b>Teaching Field (27 credits)</b>					
LT 7360	Integrating Technology in School-based Learning Environments		F/SP/SU	3	A/B/C*
EDMT 7360 EDMT 7560 EDMT 8290 EDMT 8420 EDMT 8550	Integrating Technology in Math Instruction Theory and Pedagogy of Mathematics Instruction Study of Learning and Instruction in Mathematics Topics in School Mathematics Curriculum Trends and Issues of Teaching Mathematics		F/SP/SU	3	A/B/C
EDMT 8820	Ethnomathematics and the Historical Development of Mathematics		F/SP/SU	3	A/B/C
EDMT 8430	Sociocultural and Sociohistorical Issues of Mathematics Education		Spring	3	A/B/C
**Content Courses Required (15 hours in MATH at the 6000 level or above)					
MATH				3	A/B/C
MATH				3	A/B/C
MATH				3	A/B/C
MATH				3	A/B/C
MATH				3	A/B/C
<b>Professional Studies (9 credits)</b>					
Req	EPY 7080	The Psychology of Learning and Learners (3)		3	A/B/C
Select	EPSF 7100 EPSF 7110 EPSF 7120	Critical Pedagogy (3) Multicultural Education (3) Social and Cultural Foundations (3)		3	A/B/C
Select	EPRS 7900 EPRS 7910	Methods of Research in Education (3) Action Research (3) (suggested)	F/SP/SU	3	A/B/C
Minimum Credit hours for M.ED.			<b>Total Hours: 36</b>		
LiveText e-Portfolio					

\*Entrance/Continuation/Exit depends on when student starts (i.e., A=fall semester start, B=spring semester start, C=summer semester start, see back of page for proposed Program of Study), but in all three cases EDMT 7560 and EPRS 7900/7910 are taken toward the end of the Program of Study.

\*\*Advanced MATH courses: With the consent of their advisor, the student selects coursework numbered 6000 or higher related to mathematics. The coursework should lead to the development of an understanding of the history, philosophy, conceptual underpinnings, and applications of mathematics.\*\*\*

Master of Education (M.Ed.) Degree in Mathematics Education – Program of Study (cont.)

<b>A – Fall Semester Start</b> (proposed Program of Study)	<b>B – Spring Semester Start</b> (proposed Program of Study)	<b>C – Summer Semester Start</b> (proposed Program of Study)
<p>Fall</p> <p>EPSF 7100/7110/7120 (3)</p> <p>MATH 6000 level (3)</p> <p>Spring</p> <p>EDMT 8430 (3)</p> <p>EPY 7080 (3)</p> <p>Summer</p> <p>EDMT 7360 (3)</p> <p>IT 7360 (3)</p> <p>MATH 6000 level (3)</p> <p>MATH 6000 level (3)</p> <p>Fall</p> <p>EDMT 7560 (3)</p> <p>EPRS 7900/7910 (3)</p> <p>Spring</p> <p>MATH 6000 level (3)</p> <p>MATH 6000 level (3)</p>	<p>Spring</p> <p>EDMT 8430 (3)</p> <p>EPY 7080 (3)</p> <p>Summer</p> <p>IT 7360 (3)</p> <p>EPSF 7100/7110/7120 (3)</p> <p>MATH 6000 level (3)</p> <p>Fall</p> <p>EDMT 7560 (3)</p> <p>EPRS 7900/7910 (3)</p> <p>Spring</p> <p>MATH 6000 level (3)</p> <p>MATH 6000 level (3)</p> <p>Summer</p> <p>EDMT 7360 (3)</p> <p>MATH 6000 level (3)</p> <p>MATH 6000 level (3)</p>	<p>Summer</p> <p>EDMT 8820 (3)</p> <p>IT 7360 (3)</p> <p>MATH 6000 level (3)</p> <p>Fall</p> <p>EPSF 7100/7110/7120 (3)</p> <p>MATH 6000 level (3)</p> <p>Spring</p> <p>EDMT 8430 (3)</p> <p>MATH 6000 level (3)</p> <p>Summer</p> <p>EPY 7080 (3)</p> <p>MATH 6000 level (3)</p> <p>MATH 6000 level (3)</p> <p>Fall</p> <p>EDMT 7560 (3)</p> <p>EPRS 7900/7910 (3)</p>

Of the basic 36 semester hours for the Master’s degree, no more than 9 semester hours may be taken as a non-degree student. I understand that the exit requirement for this program is a LiveText e-Portfolio demonstrating my growth as a professional through an action research project.

Signature of the Student	Date
Signature of the Advisor	Date
Signature of the Chairperson	Date

Undergraduate degree: \_\_\_\_\_

Current certification: \_\_\_\_\_



**Master of Education (M.Ed.) Degree in Mathematics Education**

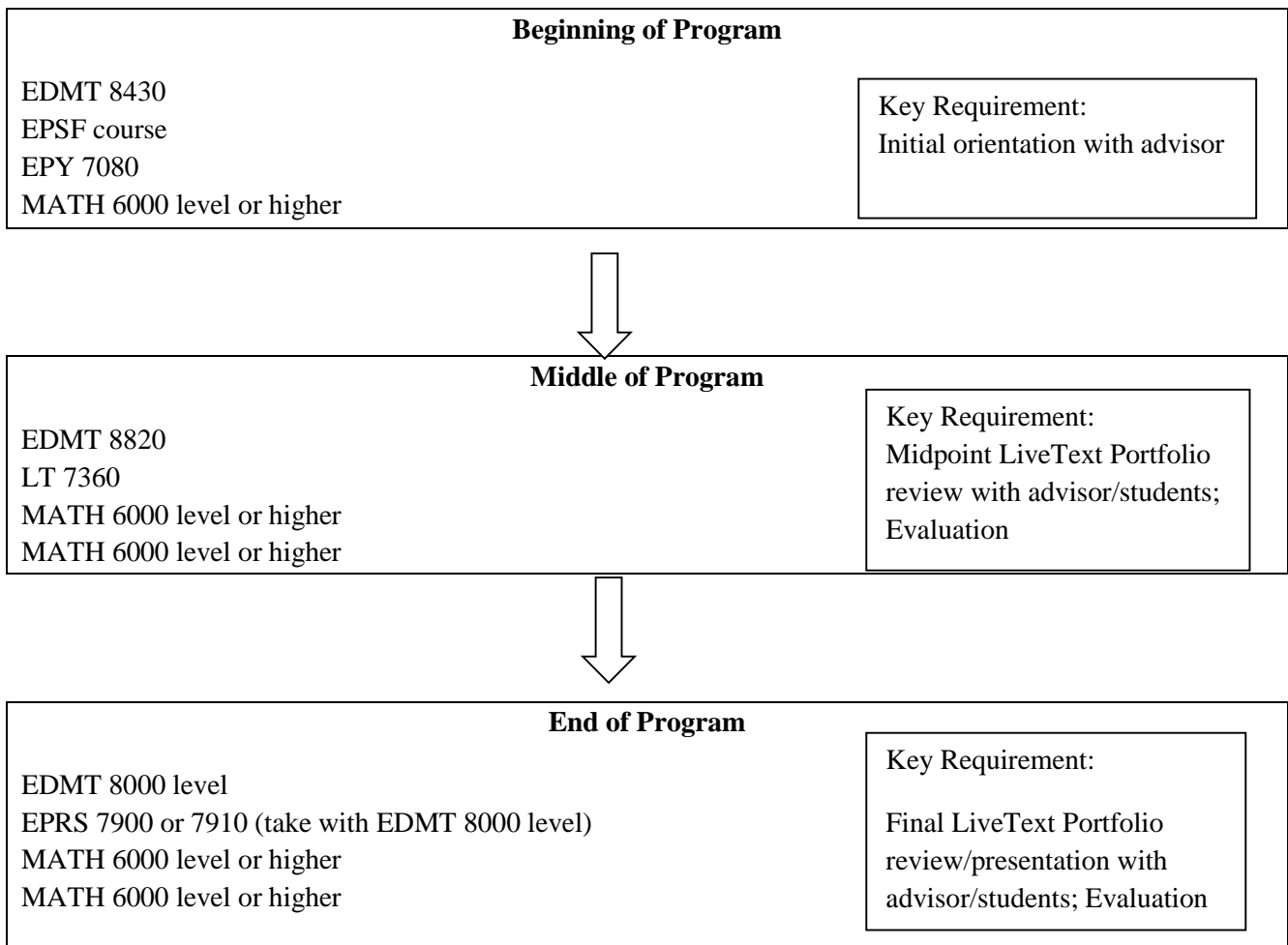
**Flow Chart of Program Requirements**

(This chart provides only a guideline; see Program of Study for more details pertaining to program flow based on when student begins program.)

**Minimum requirements for entry into program:**

- undergraduate degree in Mathematics and/or Mathematics Education;
- undergraduate GPA of 2.5 or higher;
- 800 GRE score, verbal and quantitative combined, taken within the last 5 years; and
- initial certification in Mathematics Education (T-4).

See Graduate Admissions at [http://www.gsu.edu/prospective\\_students.html](http://www.gsu.edu/prospective_students.html) -for complete details of entrance requirements and how to apply.



**36 total semester hours REQUIRED**

**NOTE: STUDENT MUST APPLY FOR GRADUATION (2) TWO SEMESTERS PRIOR TO EXPECTED GRADUATION DATE.**

KEY ASSESSMENTS – MED MATHEMATICS EDUCATION

PSC DOMAINS	KEY ASSESSMENT	When will the assessment take place?	CONCEPTUAL FRAMEWORK STANDARD(S)	NBPTS for Advanced Programs (Math)
<b>Content Knowledge (content areas)</b>	Grade of “C” or higher in each of the MATH content courses. Embedded in <a href="#">portfolio rubric</a> for “Overall Assessment of Content” (i.e., LiveText) NBPTS Standard 3, 8	<a href="#">Final portfolio</a> End of program	1.2	
<b>Pedagogical Knowledge and Skills (Includes Planning and Clinical Practice)</b>	Embedded in <a href="#">portfolio rubric</a> for “Overall Assessment of Planning” “Teacher Preparation and Connections” - (i.e., LiveText) NBPTS Standard 5, 6, 7	<a href="#">Final portfolio</a> End of program	1.1, 1.3, 1.4, 2.3, 3.1	
	Embedded in <a href="#">portfolio rubric</a> for “Overall Assessment of Action Research Project (Clinical Practice)” (i.e., LiveText) Action Research Project Rubric	<a href="#">Final portfolio</a> End of program	2.2, 3.3	
<b>Effects on P-12 Student Learning</b>	Embedded in <a href="#">portfolio rubric</a> for Overall Assessment of “Impact on Student Learning”(i.e., LiveText) NBPTS Standard 9	<a href="#">Final portfolio</a> End of program	2.1	
<b>Professionalism (not a PSC domain)</b>	Embedded in <a href="#">portfolio rubric</a> for “Overall Assessment of Professionalism”(i.e., LiveText) NBPTS Standard 9	<a href="#">Final portfolio</a> End of program	3.1, 3.2	
<b>Dispositions – Faculty evaluation of students</b>	<a href="#">Unit-wide dispositions rubric</a>	Exit portfolio Defense	1.4, 2.1., 2.2, 2.3, 3.1	<b>Dispositions – Faculty evaluation of students</b>
<b>Student Self-Evaluation</b>	Unit-wide Student Self-Evaluation rubric (TBA)	Exit portfolio Defense	1.1, 1.2, 1.3, 1.4 2.1, 2.2, 2.3 3.1,3.2, 3.3	<b>Student Self-Evaluation</b>

## RUBRIC FOR LIVETEXT-PORTFOLIO

	Exceeds (3 pts)	Meets (2 pts)	Falls Below Expectations (1 pt)
<b>Standard Evidence NBPTS (1,2,3,4,5,6,7,8,9,10,11,12) (50%)</b>	Student fully completes the 12 Standard sections, providing a comprehensive REFLECTION of her or his development as a member of the mathematics education community throughout the program	Student attempts all 12 Standard sections, but fully completes only 10 Standard sections, providing a comprehensive REFLECTION of her or his development as a member of the mathematics education community throughout the program	Student attempts 10 Standard sections, but fully completes only 8 Standard sections, providing only a partial REFLECTION of her or his development as a member of the mathematics education community throughout the program
<b>Philosophy of Mathematics Teaching and Learning (20%)</b>	A scholarly essay that clearly outlines her or his beliefs regarding mathematics teaching and learning, no-to-few grammatical/spelling errors, meets APA 5th-edition formatting and writing criteria	A scholarly essay that clearly outlines her or his beliefs regarding mathematics teaching and learning, few-to-several grammatical/spelling errors, most often meets APA 5th-edition formatting and writing criteria	A philosophy is included; however, it does not clearly outline her or his beliefs regarding mathematics teaching and learning, several-to-many grammatical/spelling errors, no attempt to meet APA 5th-edition formatting and writing criteria
<b>Personal History &amp; Chronological Professional Resume (20%)</b>	Brief history and chronological professional resume included, no-to-few grammatical/spelling errors, meets APA 5th-edition formatting and writing criteria	Brief history and chronological professional resume included, few-to-several grammatical/spelling errors, most often meets APA 5th-edition formatting and writing criteria	Brief history and chronological professional resume included, several-to-many grammatical/spelling errors, no attempt to meet APA 5th-edition formatting and writing criteria
<b>Presentation Style (10%) Note: LiveText portfolio is orally presented to advisor/students</b>	<p>Poised, clear articulation, suitable volume, good posture, enthusiasm and confidence noted</p> <p>Involved the audience/reader in the presentation and held her or his attention throughout, conveyed enthusiasm</p> <p>Presentation well organized and transitions are clear, meets APA 5th-edition throughout</p>	<p>Clear articulation, volume needs adjustment, enthusiasm not evident</p> <p>Presented evidence in an engaging manner and held audience's/reader's attention most of the time</p> <p>Some transitions are abrupt and leave questions about how some ideas are related, most often meets APA 5th-edition throughout</p>	<p>Some mumbling or inarticulate talk, the point of the presentation is not entirely clear</p> <p>Some related facts but went off the topic or presented with no enthusiasm, and lost the audience's/reader's attention most of the time</p> <p>Great deal of information that is not clearly connected, poor transitions, and work has little logical order, does not meet APA 5th-edition throughout</p>

**NATIONAL BOARD FOR PROFESSIONAL TEACHING STANDARDS**

**Instructions:** Please read each of the items below and provide a self-rating for this time in your professional development. Please note that some items relate to professional knowledge and performance and should be rated according to the (KP) rubric. Other items relate to professional dispositions and should be rated according to the (D) rubric.

**Rating Scale:** Refer to the NBPTS scoring rubric on the last page of this survey.

The educator ...	Not Introduced Not Assessed	Not Demonstrated	Novice, with Support/Guidance	Novice, Independent	Intermediate	Advanced
1.1 Recognizes individual differences in his/her students and can adjust practice accordingly. (KP)						
1.2 Has an understanding of how students develop and learn. (K)						
1.3 Treats students equitably. (P)						
1.4 Values the development of the whole student (e.g., social, emotional, physical) (D).						
2.1 Appreciates how knowledge in his/her field is created, organized and linked to other disciplines. (D)						
2.2 Uses specialized knowledge to promote learning/development. (KP)						
2.3 Generates multiple paths toward learning/development. (KP)						
3.1 Uses multiple methods to promote learning/development. (KP)						
3.2 Can promote learning/development in group settings. (KP)						
3.3 Places a premium on student involvement in the process of learning/development. (D)						
3.4 Regularly assesses student progress. (KP)						
3.5 Is mindful of the principle objectives of learning/development						
4.1 Seeks the advice of others and draws on relevant research to improve his/her practice. (KP)						
4.2 Values personal reflection in his/her professional development. (D)						
5.1 Values the importance of collaborating with other professionals in the school. (D)						
5.2 Works collaboratively with parents (P)						
5.3 Takes advantage of community resources (KP)						

**Scoring Rubrics and Levels for NBPTS  
(Approved 2/13/04)**

Level 0: Not Introduced/Not assessed: The educator **has not been introduced** to this standard/disposition at this time in the program, or this standard/disposition **has not been assessed yet**.

Level 1: Not Demonstrated:

(KP): The educator **does not demonstrate** a basic level of knowledge, performance or other professional skills on this standard.

(D): The educator has been introduced to the knowledge and pedagogy appropriate to the disposition **but does not demonstrate the holding of the disposition** about the standard.

Level 2: Novice, with Support/Guidance.

(KP): The educator **demonstrates the basic knowledge and skill** needed to achieve this standard **but only with support** from others.

(D): The educator **demonstrates a basic level** of holding the disposition, **but only when provided guidance** from a professor and/or mentor.

Level 3: Novice, Independent.

(KP): The educator **demonstrates the basic knowledge and skill** needed to achieve this standard through independent and autonomous planning and action.

(D): The educator **demonstrates a basic level** of holding the disposition through independent and autonomous decision-making and action.

Level 4: Intermediate.

(KP): The educator demonstrates **an intermediate level of knowledge and skill** needed to achieve this standard through independent and autonomous planning and action.

(D): The educator has the ability to place his/her values in relation to the values of others and to organize in order to make judgments and choices regarding the standard. His/her **independent actions** in the classroom and other field settings **demonstrate this disposition regularly**.

Level 5: Advanced.

(KP): The educator **demonstrates exemplary levels of knowledge and skill** on this standard through independent, effective, and innovative planning and action.

(D): The educator has **internalized values relative to the standard, demonstrated in his/her decision making, actions, and other professional behavior**. Others can identify these values from having been associated professionally with the teacher/educator. This disposition is evident in his/her work in the classroom, the school and the community.

## STUDENT INFORMATION SHEET

Name:

GSU Email:

Other Email:

Phone (Home):

Phone (Cell):

Phone (School):

Home Address:

School Address:

Entered Program  
(semester/year):

Expected  
Completion  
(semester/year):

Undergraduate  
University:

Degree:

Course	Professor	Semester	NBPTS Completed (Yes/No)
LT 7360			N/A
EDMT 7360			
EDMT 8820			
EDMT 8430			
EPY 7080			N/A
EPSF 7100/7110/7120			N/A
EPRS 7900/7910			N/A
MATH 6000-level or higher	CN:		N/A
MATH 6000-level or higher	CN:		N/A
MATH 6000-level or higher	CN:		N/A
MATH 6000-level or higher	CN:		N/A
MATH 6000-level or higher	CN:		N/A

Program Evaluation	Date	Professor
Initial Orientation		
Mid-Point LiveText Presentation		
Exit LiveText Presentation		

STARS Evaluation	STARS 1/3-Point	STARS Exit
Student/Date		
Professor/Date		