ED.M. PROGRAM IN MATHEMATICS EDUCATION
Revised June, 2013 – For students admitted for Fall 2013 or later (excluding PEMS)

I. PROGRAM DESCRIPTION

The Master of Education degree program in Mathematics Education is designed for students with strong
dependent or technical backgrounds who are interested in mathematics learning and teaching. The program stresses the need for students to be familiar with the entire K-16 range of mathematics
learners, issues, and current developments. As such, it is appropriate for prospective researchers in
mathematics education, college-level mathematics instructors, secondary mathematics teachers, and,
in exceptional cases, elementary teachers with a strong interest and background in mathematics.

While New Jersey certification is not required for entry into the program, many of the students are
already certified and employed in New Jersey secondary or post-secondary schools. (One program
option, described in another document, serves the needs of students who are seeking New Jersey
teacher certification.)

The required and elective courses in the program deal with basic problems in the learning and teaching
of mathematics, techniques and strategies for studying children’s mathematical thinking, the uses of
technology in mathematics teaching, and with mathematics itself. Students in the program have
opportunities to engage in some independent studies, a good deal of small group work, and some fairly
traditional whole group class sessions. Students will also be involved in the ongoing research and
professional development activities of the faculty and doctoral students in mathematics education.

II. APPLICATION DEADLINES AND ADMINISTRATIVE INFORMATION

Fall admission - February 1 deadline
Spring admission - November 1 deadline

All applications are filed on-line (http://gradstudy.rutgers.edu).

Application support documentation is sent to:
Office of Graduate and Professional Admissions
Rutgers, The State University of New Jersey
56 College Ave., New Brunswick, NJ 08901-8530 USA
848/932-7711 Fax: 732/932-8231

Application packets should contain:
• Three letters of recommendation
• Current Graduate Record Exam (GRE) scores (no older than 5 years)
• Personal written statement
• All college transcripts
III. PROGRAM REQUIREMENTS

The following outline serves as a guide to the distribution of courses. Students are urged to maintain frequent contact with their advisors in order to construct a plan of study, select appropriate courses, and discuss changes that may be needed or desired. Please note that at least 15 of the 30 credits that comprise the full degree program must be taken at the 500 level or above.

<table>
<thead>
<tr>
<th>Course #</th>
<th>Title of Course</th>
<th>Crs</th>
<th>Graduate Credits</th>
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</thead>
<tbody>
<tr>
<td>Learning Strand</td>
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<tr>
<td>15:254:540</td>
<td>Introduction to Mathematics Education</td>
<td>3</td>
<td></td>
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<tr>
<td>15:254:644</td>
<td>Mathematics Education Practicum</td>
<td>3</td>
<td>6</td>
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<tr>
<td>Content Strand</td>
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<tr>
<td>15:254:550</td>
<td>Problem Solving Processes in Mathematics</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>15:254:551</td>
<td>Critical Thinking and Reasoning in Mathematics</td>
<td>3</td>
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<tr>
<td>Teaching Methods Strand</td>
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<td></td>
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<tr>
<td>15:254:541</td>
<td>Analysis of Mathematics Curricula*</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>15:254:548</td>
<td>Technology in Mathematics Teaching</td>
<td>3</td>
<td></td>
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<tr>
<td>Mathematics Education Electives</td>
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<tr>
<td>RECOMMENDED ELECTIVES**</td>
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<tr>
<td>05:300:341</td>
<td>Modern High School Mathematics</td>
<td>3</td>
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<tr>
<td>15:254:552</td>
<td>Foundations of Algebraic Reasoning</td>
<td>3</td>
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<tr>
<td>15:254:553</td>
<td>Lesson Study on Reasoning in Mathematics Learning</td>
<td>3</td>
<td>12</td>
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<tr>
<td>15:254:598</td>
<td>Topics in Math Ed: Seminar on Affect &amp; Motivation</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>15:254:649</td>
<td>Topics in Math Ed: Seminar in Math Ideas</td>
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<td>26:300:533</td>
<td>Collaboration &amp; Dynamic Mathematics in Middle &amp; High School</td>
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<tr>
<td>TOTAL CREDITS</td>
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<td>30</td>
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* A valid substitution is 05:300:443 Methods of Teaching Secondary Mathematics OR an approved equivalent methods course where a lesson plan must be submitted for evaluation.

** Students are required to complete four electives. At least three of these electives must be completed in the Graduate School of Education or be education-related courses in the mathematics department.
IV. PROGRAM FACULTY

Core Faculty:

Daniel Battey  Ph.D., University of California, Los Angeles
phone: 848-932-0800  email: dan.battey@gse.rutgers.edu  office: 229C
Research Interests: Transform mathematics teaching

Carolyn Maher  Ed.D., Rutgers
phone: 848-932-0802  email: carolyn.maher@gse.rutgers.edu  office: 231
Research Interests: Students' mathematical thinking

Juan Pablo Mejia-Ramos  Ph.D., University of Warwick
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Research Interests: Advanced mathematical thinking

Keith Weber  Ph.D., Carnegie Mellon
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Research Interests: Advanced mathematical thinking