Master of Arts in Teaching-Mathematics

Not offered in the 2017-18 Academic Year

Requirements (48 units)

Program Code: MATM

The Master of Arts in Teaching Mathematics (M.A.T.) program is designed for single subject credential teachers who wish to obtain a deeper understanding of mathematics and the teaching of mathematics as it applies to the secondary level.

Admission to the Program

In addition to the general requirements of the university, which include a baccalaureate degree from an accredited college, specific requirements for classification in the program are:

1. Successful completion with a grade of "B" (3.0) or better in course work deemed equivalent to the following courses at California State University, San Bernardino:
   - MATH 211 Basic Concepts of Calculus 4
   - MATH 212 Calculus II 4
   - MATH 213 Calculus III 4
   - MATH 251 Multivariable Calculus I 4
   - MATH 329 Transformation Geometry 4
   - MATH 345 Number Theory and Proof 4
   - MATH 372 Combinatorics 4
2. A teaching credential;
3. Submission of a completed Master of Arts in Teaching with a major in Mathematics (MAT) application form;
4. Completion of the graduate entrance writing requirement;
5. Three letters of recommendation;
6. Submission of a one- or two-page typed statement of the student's area of interest, preparation for study in this program and professional goals;
7. Approval by the Graduate Coordinator.

Students who do not meet these criteria may be admitted as conditionally classified graduate students following review by the Department of Mathematics and the College of Education.

Advising

Each graduate student must be advised by the graduate coordinator or other MAT faculty before enrolling in the program. Students will develop an appropriate course of study based on their preparation and interests in consultation with an advisor. The specific program must be approved by the MAT Graduate Committee prior to advancement to candidacy.

In the latter part of the program, a student will need a project advisor and two additional members of a project committee, at least one committee member from the department of mathematics and at least one from the College of Education. The student will enroll in EDUC 600 or MATH 699 depending on the affiliation of the project advisor. Members of the project committee should be selected as early as possible in the program, and at least two or three quarters before enrolling in the graduate project course.

Advancement to Candidacy

In order to be advanced to candidacy, the student must:

1. Achieve classified status;
2. Submit a formal program of graduate work prepared in consultation with an advisor and approved by the MAT Graduate Committee;
3. Complete at least 15 quarter units and not more than 20 units of applicable work as a graduate student at this university, with a grade point average of at least 3.0 ("B");
4. Gain final approval of the program and of the candidacy itself by the Dean of Graduate Students.

Requirements for Graduation

1. Advancement to candidacy for the degree;
2. A minimum of 48 quarter units of acceptable graduate level work as specified below in the formal program;
3. No fewer than 34 units completed in residence at this university;
4. Completion of a graduate thesis. A thesis proposal must be approved by the MAT Graduate Committee no later than the quarter preceding enrollment in EDUC 600 or MATH 699. The written thesis satisfies the graduation writing requirement. Successful completion of the thesis includes an oral presentation of the thesis to the faculty. Guidelines for submitting a thesis proposal and for the thesis itself are available from the offices of the Department of Mathematics;
5. Submission and approval of a student portfolio assessing and documenting academic progress. Portfolio guidelines are available from the Department of Mathematics;
6. A grade point average of at least 3.0 ("B") in the core courses as well as an overall grade point average of 3.0 ("B") in the program, with no course grade being less than "B-;"
7. Any additional general requirements not cited above and listed in Graduate Degree and Program Requirements (http://bulletin.csusb.edu/graduate-degree-programs/graduate-degree-program-requirements).

Degree Requirements (48 units)

Core courses (44)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 631</td>
<td>Algebra from a Teaching and Problem Solving</td>
<td>6</td>
</tr>
<tr>
<td>MATH 632</td>
<td>Geometry from a Teaching and Problem Solving</td>
<td>6</td>
</tr>
<tr>
<td>MATH 633</td>
<td>Trigonometry from a Teaching and Problem Solving</td>
<td>6</td>
</tr>
<tr>
<td>MATH 634</td>
<td>Calculus from a Teaching and Problem Solving</td>
<td>6</td>
</tr>
<tr>
<td>MATH 635</td>
<td>Statistics and Probability from a Teaching and</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Problem Solving</td>
<td></td>
</tr>
</tbody>
</table>

Four units chosen from the following based on department approval:

- ESEC 672 Educational Assessment in Mathematics Teaching 4
- EDSC 643 Assessment in the Science Classroom 4
- EDUC 607 Introduction to Educational Research 4
- EDUC 601B Advanced Independent Study Topics in Education 2
- MATH 695B Graduate Independent Study 4
- MATH 600 Masters Degree 4
- MATH 699 Master of Arts in Teaching Mathematics Thesis 4
- MATH 601 Assessment Portfolio 0
<table>
<thead>
<tr>
<th>Electives (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Four units of 400- to 600- level mathematics courses that are applicable to the B.A. or B.S. in mathematics (non-teaching track) or M.A. in Mathematics. Students are encouraged to take MATH 480 if not taken previously.</td>
</tr>
</tbody>
</table>

| Total Units | 48 |