

Student Learning Outcomes

Program Goals	Student Learning Outcomes
<p>MS1: Content The Master's program will deepen and broaden teachers' understanding of mathematical content.</p>	<ol style="list-style-type: none"> 1. Students will develop deductive reasoning skills, including the ability to construct formal proofs. 2. Students will develop the ability to identify mathematical relationships and develop conjectures. 3. Students will be able to communicate their mathematical reasoning in a logical, precise, and understandable way. 4. Students will gain a deep and rigorous understanding of the mathematical concepts that they will eventually teach. 5. Students will gain a broad understanding of mathematical concepts, and an appreciation of a variety of fields of mathematics.
<p>MS2: Research The Master's program will develop teachers' understanding of mathematics education research in relationship to practice.</p>	<ol style="list-style-type: none"> 1. Students will develop an awareness of educational research in a particular area of secondary mathematics education. 2. Students will be able to read, assess, and discuss peer-reviewed research papers in secondary mathematics education. 3. Students will gain knowledge of how educational research uses evidence-based methods to assess the efficacy of teaching practices. 4. Students will gain knowledge about current mathematics research focused on equitable mathematical practices.
<p>MS3: Leadership The Master's program will develop teachers' skills as teacher-leaders in mathematics education.</p>	<ol style="list-style-type: none"> 1. Students will be exposed to a variety of strategies to engage in leadership and will implement multiple projects exhibiting their leadership interests. 2. Students will participate in action research in their classrooms and share what they learn in a public forum. 3. Students will gain experience in cooperating with colleagues in developing creative and effective lessons.
<p>MS4: Equity The Master's program will develop teachers' abilities to address access and equity issues in the classroom.</p>	<ol style="list-style-type: none"> 1. Students will develop knowledge of equitable, rigorous, and coherent mathematics, and will gain the ability to implement these ideas in the classroom. 2. Students will develop an understanding of the roles language and culture play in teaching and learning mathematics, with an emphasis on the concepts of equity, rigor, and coherence. 3. Students will develop an understanding of how to implement the eight effective mathematics teaching practices (see appendix). 4. Students will develop an understanding of how to support learners from diverse backgrounds and with diverse needs. 5. Students will develop an understanding of how to create dynamic learning environments in which learners are able to realize their full potentials.