**Computing Outcomes in the Mathematics Major**

1. **Students will be conversant with electronic computation as a mathematical technique.**

Specifically, students will:

1. use computation to perform complex tasks and solve complex problems from calculus and a selection of other branches of mathematics;
2. apply appropriate computational techniques, skills, tools, and strategies to solve problems;
3. use technology to deepen mathematical understanding and enhance problem solving.
4. **Students will use computing to develop a positive disposition towards mathematics, including the inclination to persist, explore, generalize, and make conjectures.**

Specifically, students will:

1. pose valuable questions and use computation to help to answer them in order to expand the boundaries of their knowledge of mathematics;
2. demonstrate determination and perseverance using computing as a tool, in order to improve understanding and learn new mathematics;
3. demonstrate positive self-perception as effective learners and practitioners of mathematics and computing.
4. **Students will use computing to help solve problems in pure and applied mathematics contexts and problems originating outside of the field.**

Specifically, students will:

1. use computing to see connections between mathematical patterns and techniques in order to make generalizations;
2. make connections between computing and different courses in mathematics, different areas of mathematics, and other disciplines;
3. use computing to help solve problems originating outside of the classroom or the field of mathematics.
4. **Students will use computing to help them write and speak about mathematics with understanding and clarity.**

Specifically, students will:

1. use mathematical and computing terminology and notation precisely and appropriately;
2. make oral and written presentations appropriate for an intended audience;
3. locate, analyze, synthesize, and evaluate information about the application of computing to a mathematical topic of interest.