

Student Learning Goal 1: Mathematics majors will perform tasks requiring logical reasoning.

Students will:

- Objective A: Demonstrate an understanding of the concept of definition;
- Objective B: Demonstrate an understanding of the nature of a statement (axiom, assumption, conclusion, theorem, conjecture);
- Objective C: Demonstrate an understanding of methods of proof;
- Objective D: Demonstrate an understanding of counter examples.

Student Learning Goal 2: Mathematics majors will discern patterns, coherence and significance of central mathematical topics and concepts.

Students will:

- Objective A: Map problems to different branches of mathematics;
- Objective B: Demonstrate an understanding of central/fundamental concepts in different branches of mathematics;
- Objective C: See relationships between different mathematical disciplines.

Student Learning Goal 3: Mathematics majors will persist through complex reasoning with enthusiasm and curiosity as they explore new mathematical areas.

Students will:

- Objective A: Use basic skills to manipulate complex mathematical expressions;
- Objective B: Break down complex problems into simpler components;
- Objective C: Solve problems in multiple ways.

Student Learning Goal 4: Mathematics majors will learn mathematical content and analyze relevant information.

Students will:

Objective A: use texts, lectures and internet for research;

Objective B: Read and report an original math paper;

Objective C: apply mathematical ideas and knowledge to real world problems.

Student Learning Goal 5: Mathematics majors will communicate mathematical ideas with precision and clarity.

Students will:

Objective A: present orally mathematical material;

Objective B: present in writing mathematical material;

Objective C: Work cooperatively with others.