

## MATHEMATICS & STATISTICS

### Mission Statement

*The Department of Mathematics and Statistics strives to provide quality undergraduate and graduate education in Mathematics and Statistics and its applications, and to contribute to the community, region and profession through research and service.*

### Student Learning Outcomes

UWF Mathematics and Statistics graduates should be able to do the following:

#### Content

- Recognize and apply principles of abstract mathematics.
- Describe and use principles of computational and applied mathematics.
- Recognize principles of theoretical and applied statistics.

#### Critical Thinking

- Analyze the essentials of problems logically.
- Select and apply appropriate mathematics or statistical tools and techniques.

#### Communication

- Write coherent and accurate reports of mathematical and statistical processes and problems.
- Deliver oral presentations that explain mathematical concepts and processes accurately and effectively.

#### Integrity/Values

- Demonstrate honesty and integrity in project work and research.

### Assessment of Student Learning Outcomes

Program SLOs will be assessed using selected student work in core courses and the Proseminar project. Selected core courses are Advanced Calculus I (MAA4211), Numerical Analysis (MAD4401), Mathematical Statistics I (STA4321), Applied Statistics (STA3162C), and Set Theory and Math Logic (MHF3202). Within these courses, exam questions and projects are used to assess program level outcomes.

All student work in Mathematics will culminate in a proseminar during the senior year. Students will conduct research under a faculty's guidance in one semester. The faculty will choose a topic for the student in mathematics or statistics. Students will meet with the faculty regularly to report progress and seek advice. By the end of the semester, students will give an oral presentation to students and faculty as well as submit a written report

based on research and findings. Both projects are intended to give opportunities to integrate the skills and knowledge from the program and to learn effective communication skills within mathematics and statistics.

## **Job Prospects for Mathematics & Statistics Majors**

Teaching:

Students can find teaching jobs easily in high schools/colleges since math teachers are needed all over the nation.

Service in government and military bases:

Government agencies and military bases employ mathematicians for programming, planning and development services in agriculture, labor, education, and the census.

Service in private sectors:

Private sectors hire mathematicians in management, marketing, engineering, insurance, computer programming, product quality, medicine and pharmaceutical research, medical device research, transportation, insurance, computer and data processing services, and risk assessment.

Supporting roles in the social, biological, and physical sciences