

Mathematics and Statistics

Core Performance Standards for Students in Mathematics and Statistics

The St. Ambrose University mathematics and statistics program is committed to promoting the sciences of mathematics and statistics through the use of quantitative inquiry and deductive reasoning as a means to discover knowledge about the natural world. Students develop an understanding of discrete and continuous models that attempt to explain real physical, chemical, and biological processes through a quantitative perspective. The program also trains students in understanding the rigorous justification for these models, and the collection, transformation, and explanation of data using statistical techniques.

All mathematics and statistics students are expected to meet the academic standards of the curricular activities, with or without reasonable accommodations. A reasonable accommodation is intended to reduce the effects that a disability might have on student performance; accommodations do not lower course standards or alter course or degree requirements. In addition to understanding mathematical and statistical concepts, students are expected to develop competencies in performance standards to better prepare them to practice mathematics and statistics in diverse working communities with collaborators who possess different perspectives and skills.

Issue	Standard	Examples of necessary activities (not inclusive)
Behavioral, Social, and Interpersonal Interactions	Interpersonal abilities sufficient to interact with peers, faculty and community members in a respectful and ethical manner	Function in groups. Work collaboratively and respectfully with peers and faculty to address challenges. Exhibit professional behavior and maintain professional boundaries.
Communication	Written, oral, and aural communication abilities sufficient for interaction with others	Express ideas/thoughts and receive those of others in the classroom and laboratory setting. Explain scientific findings to faculty and peers. Computer literacy.
Critical thinking	Critical thinking ability sufficient for analysis of ideas and complex data sets	Use deductive and quantitative reasoning to solve problems. Comment constructively on work from published readings and student peers.
Emotional stability	Emotional stability sufficient to assume responsibility/accountability for actions	Consider unfamiliar ideas. Provide and accept constructive criticism. Consider and tolerate contradictory sets of ideas.
Observation	Observation abilities sufficient to read and interpret mathematical	Read mathematical notation, equations, and functions written on a chalkboard. Be able to

	results and equations presented visually written on a board or in slide presentations.	distinguish between distinct symbols and definitions.
Mobility	Gross motor abilities to maneuver safely in the classroom and computer lab.	Possess sufficient mobility to participate in computer labs and classrooms.
Motor function	Coordination and manual dexterity sufficient to work safely in a computer lab setting.	Use eye/hand coordination and fine motor skills associated with typing computer commands, computer programs, and recording computations carried out in class.

[Back to top](#)