B.S. in Mathematics and Computer Science

Learning Outcomes

Mathematics is simultaneously a fundamental language and tool set for innumerable academic disciplines. It is a set of skills that is increasingly necessary for modern life and employment, and a beautiful self-contained theory. While each of our courses is designed to teach our students a core set of mathematical tools, students are also expected to gain an appreciation of the power, generality, and beauty of mathematics. With this in mind, students upon graduation with a B.A. or B.S. in Mathematics will:

• Be able to apply both abstract and quantitative reasoning to understand the relationships between quantities in problem situations, and to solve problems.

• Be able to construct correct logical arguments and be able to understand and critique the reasoning of others.

• Be able to use relevant mathematical tools or computer algorithms to answer questions in the natural, social, and computer sciences, as well as other academic disciplines.

• Be able to identify, formulate, abstract, and solve mathematical problems using tools from a variety of mathematical and computer science areas including calculus, linear algebra, geometry, abstract algebra, analysis, number theory, probability, statistics, and computer science.

• Be able to communicate mathematical ideas clearly, in oral or written form, by using appropriate mathematical terminology and notation.

• Be able to critically interpret numerical and graphical data and use computer technology and algorithms appropriately to solve problems and to promote understanding.

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