

## Entry-Level Math Pathways Course Descriptions for Higher Education

Course	Description
<b>College Algebra</b>	College Algebra emphasizes the use of algebra and functions in problem solving and modeling, where solutions to problems in real-world situations are formulated, validated and analyzed. You will use mental, paper-and-pencil, algebraic and technology-based techniques and a variety of mathematical notation.
<b>Introduction to Statistics</b>	Introduction to Statistics introduces statistical methods to college students in all disciplines. It teaches statistical thinking focusing on conceptual understanding. Real data is integrated with a context and purpose through active learning. Technology is used to explore concepts and analyze data.
<b>Quantitative Reasoning</b>	A Quantitative Reasoning course is the application of basic mathematics skills, such as algebra to the analysis and interpretation of quantitative information (numbers and units) in a real-world context to make decisions relevant to daily life. Critical thinking is its primary objective and outcome. It emphasizes interpretation, representation, calculation, analysis/ synthesis, assumptions and communication.
<b>Data Science</b>	Data Science is a blend of various tools, algorithms and machine learning principles with the goal to discover hidden patterns from raw data. The difference between data science and statistics is that statistics focuses on explaining the data, while data science focuses on using data to make predictions and decisions. <a href="https://edureka.co/blog/what-is-data-science/">edureka.co/blog/what-is-data-science/</a>
<b>Discrete Math</b>	Discrete Math is the study of mathematical structures that are countable or otherwise distinct and separable (discrete compared to continuous structures). It is the language of computer science.
<b>Math for Elementary School Teachers</b>	Math for Elementary School Teachers engages students in activities and discussion focused on using, justifying and connecting mathematical concepts. The course integrates reasoning, flexibility, multiple explanations and number sense throughout the four content areas, while focusing on four general content areas: numbers; operations; algebraic thinking; and number theory.
<b>Technical Mathematics</b>	Technical Mathematics emphasizes the application of mathematics as a descriptive tool to situations relevant to scientific and engineering inquiry. Students model diverse problem-solving perspectives, where accuracy and precision are essential. Students accomplish this through reasoning and analysis via the appropriate implementation of mathematical structure, notation, calculation and communication.