MATH - Mathematics

Global Citizenship Program Knowledge Areas **(....)**	
ARTS	Arts Appreciation
GLBL	

MATH - Mathematics

MATH 2440 Calculus III (5)

This course includes differential and integral calculus of several variables. Only offered in a 16-week format. **Prerequisite**: MATH 1620 with a grade of B- or better.

MATH 2450 Introduction to Abstract Mathematics (3)

This course serves as a transition course from calculus to abstract mathematics. The emphasis is on understanding and writing mathematical proofs. Topics include logic, set theory, relations, functions and elementary number theory. **Prerequisite**: MATH 1620.

MATH 2800 Differential Equations (3)

This course studies techniques for solving ordinary differential equations and considers a variety of applications. **Prerequisite**: MATH 2440.

MATH 2820 Numerical Analysis (3)

This course uses numerical methods to analyze a variety of problems. Emphasis is on understanding why these methods work and their limitations. **Prerequisite**: MATH 2440.

MATH 2850 History of Mathematics (3)

This course is a survey of the history of mathematics. Topics include the history of numbers, numeration systems, arithmetic, algebra, geometry, and calculus. **Prerequisite**: 2440..

MATH 3130 Real Number System (3)

Topics include rational and irrational numbers, algebraic and transcendental numbers, and sequences and their limits. Considers the real number system as a complete ordered field. **Prerequisite**: MATH 2450

MATH 3160 Linear Algebra (3)

This course covers matrices, systems of linear equations, vector spaces, and linear transformations. **Prerequisite**: MATH 2440.

MATH 3210 Data Mining Foundations (3)

This course explores the core concepts of data mining including the research methodology and process, data sources, messy data and data cleansing. It also examines algorithms in each of the main data mining groupings of classification, categorization and association rules. The course emphasizes the use of data mining concepts in real-world applications with database components. Students will present their findings and recommendations in written and oral project reports. **Prerequisite**: Junior standing.

MATH 3220 Data Mining Methods (3)