

MATH HISTORY/ FOUNDATIONS (MHF)

MHF 2191 - Mathematical Foundations (3 Credits)

Introduction to axiomatic systems and techniques of proof, in preparation for upper-level study in mathematics. Topics include: symbolic logic, boolean algebra, set theory, countable and uncountable sets, techniques of proof, functions and relations, mathematical induction, group axioms. Emphasis is on preparing the student to read and write mathematical proofs, and to work with abstract definition and axioms.

Prerequisite(s): MAC 2312

MHF 2310 - Symbolic Logic (3 Credits)

Introduction to symbolic logic and logical proof methods.

Prerequisite(s): MAC 1105 or (Accuplacer Coll. Math Subscore with a score of 066 or Mobius Alg&Pre-Calc Readiness Test with a score of 18) or ACT Math with a score of 26 or SAT Math Score with a score of 600 or MATH SECTION SCORE with a score of 620

Attribute(s): GE Quan Reasoning Competency, GEMA - Gen. Ed -Math, GRMT - Computation Skills, Gen. Ed -Math, QUAN - GE Quan Reasoning Competency

MHF 4404 - History of Mathematics (3 Credits)

The evolution of mathematical thought and methods from antiquity through the Renaissance. Topics include development of the concepts of number, quantity, and magnitude, algebraic techniques and symbolic notation, solution of polynomial equations, the evolution of the concept of proof, development of numeration systems, history of number theory and congruences, and notions of infinity and infinitesimals. Mathematical ideas and practice in European, African, Mesoamerican, and Asian cultures will be considered.

Prerequisite(s): MAC 2312

Attribute(s): SUSC - Sustainability Component

MHF 5107 - Set Theory (3 Credits)

Introduction to modern set theory. Topics include the Zermelo-Fraenkel axiom system, cardinal and ordinal numbers, the Axiom of Choice, and related topics.

MHF 5306 - Mathematical Logic (3 Credits)

Introduction to Logic & Language, Arguments with Compound Statements, Method of Deduction, Propositional Functions and Quantifiers, The Logic of Relations, and Deductive Systems.