

David Shuster: Math & Related Coursework

Course	Description	Grade
Multivariable Calculus		A
Linear Algebra	vector spaces, subspaces, linear independence, basis, and dimension; systems of linear equations and Gaussian elimination, matrix operations; linear transformations as matrices; eigenvalues and eigenvectors; inner product spaces	A
Intro Computer Science I		A
Groups, Rings and Fields	theory of groups and rings including the principal theorems on homomorphisms and the related quotient structures; integral domains, fields, polynomial rings	A
Intro to Stat Modeling		A+
Intro to Analysis	Completeness of the real numbers; topology of n -space including the Bolzano-Weierstrass and Heine-Borel theorems; sequences, properties of continuous functions on sets; infinite series, uniform convergence	A+
Mathematical Logic	propositional and predicate calculi, completeness, compactness, and decidability; Gödel's Incompleteness Theorems	A+
Intro Comp Science II	data abstraction, inheritance, and polymorphism; stacks, queues, linked lists, programming for graphical user interfaces, and basic topics in probability	A+
Mathematics of Public-Key Cryptography	Several topics from number theory, abstract algebra, and algorithms, including discrete logarithms, integer factorization algorithms, and elliptic curves	A+
Game Theory & Applicatn	upper-level Economics Department course; applications-focused	A
Voting and Elections: A Mathematical Perspective	majority rule, plurality rule, Borda count, and approval voting; Banzhaf power index; Arrow's Theorem	A+
Topology	the topology of Euclidean, metric and abstract spaces, with emphasis on such notions as continuous mappings, compactness, connectedness, completeness, separable spaces, separation axioms, and metrizable spaces	A+
Intermediate Statistics	parametric and nonparametric methods, resampling approaches, analysis of variance models, multiple regression, model selection, and logistic regression	A