MATHEMATICS (MATH)

MATH 1XX: Mathematics Placeholder
Credits: 3
College: Jefferson College of Humanities & Sciences
Schedule Type: Lecture

MATH 2XX: Mathematics Placeholder
Credits: 3
College: Jefferson College of Humanities & Sciences
Schedule Type: Lecture

MATH 100: College Algebra
While the content of MATH-100 is identical to that of MATH-101, more time is devoted during the semester to the review and use of elementary mathematical operations. See MATH-101 for content.
Credits: 3
College: Jefferson College of Humanities & Sciences
Prerequisites: MATH 099 or Math Placement (Non-Science) with a score of 5 or Math Placement (Science) with a score of 6 [Min Grade: D]
Schedule Type: Lecture, On-Line

MATH 101: College Algebra
MATH-101 is a concentrated study of the topics traditionally found in College Algebra. Topics of study include algebraic equations and inequalities, absolute value, polynomial, rational, exponential and logarithmic functions, systems of equations and inequalities, matrices and determinants. Emphasis is place on applications in business and economics. Additional topics may include conic sections, sequences and series, combinatorics, probability, modeling with functions, and mathematical induction.
Credits: 3
College: Jefferson College of Humanities & Sciences
Prerequisites: Math Placement (Non-Science) with a score of 10 or MATH 099 [Min Grade: D]
Schedule Type: Lecture, On-Line

MATH 102: Pre-Calculus
The fundamentals of college algebra, analytic geometry and trigonometry will be covered, with particular emphasis on those topics necessary for the calculus sequence.
Credits: 3
College: Jefferson College of Humanities & Sciences
Prerequisites: MATH 100 or MATH 101 or Math Placement (Non-Science) with a score of 10 [Min Grade: D]
Schedule Type: Lecture, On-Line

MATH 103: Applied Calculus
An introduction to the differential and integral calculus of polynomials, rational functions, exponentials and logarithms. Emphasis is placed on the use of calculus in the study of rate of change, determination of extrema and area under the curve.
Credits: 3
College: Jefferson College of Humanities & Sciences
Prerequisites: MATH 102 or Math Placement (Non-Science) with a score of 15 [Min Grade: D]
Schedule Type: Lecture, On-Line

MATH 104: Analytical Geometry
Credits: 3
College: Jefferson College of Humanities & Sciences
Schedule Type: Lecture

MATH 110: Pre-Calculus for Sci & Engrs
The fundamentals of college algebra, analytic geometry and trigonometry will be covered, with particular emphasis on those topics necessary for the calculus sequence.
Credits: 4
College: Jefferson College of Humanities & Sciences
Prerequisites: MATH 100 or MATH 101 or Math Placement (Science) with a score of 10 or MATH 102 [Min Grade: D]
Schedule Type: Lecture, On-Line

MATH 111: Calculus I
Functions, slope and rate of change, limits, derivations of algebraic functions, maxima and minima applications, indefinite integration, integration by substitution, sigma notation, area between two curves. Knowledge of algebra, geometry and trigonometric functions is assumed.
Credits: 4
College: Jefferson College of Humanities & Sciences
Prerequisites: MATH 110 or Math Placement (Science) with a score of 14 [Min Grade: D]
Schedule Type: Lecture, On-Line

MATH 112: Calculus II
Differentiation and integration of transcendental functions. Theory and methods of integration and applications. Infinite series, convergent tests, Maclaurin and Taylor series. Convergence of Taylor series.
Credits: 4
College: Jefferson College of Humanities & Sciences
Prerequisites: MATH 111 [Min Grade: D]
Schedule Type: Lecture, On-Line

MATH 120: College Algebra
Credits: 3
College: Jefferson College of Humanities & Sciences
Schedule Type: Lecture, On-Line

MATH 152: College Algebra
Credits: 3
College: Jefferson College of Humanities & Sciences
Schedule Type: Lecture, Lecture/On-Line, On-Line

MATH 198: Mathematics I
Credits: 3
College: Jefferson College of Humanities & Sciences
Schedule Type: Lecture

MATH 205: Theory of Computation
Credits: 3
College: Jefferson College of Humanities & Sciences
Schedule Type: Lecture

MATH 213: Calculus III
Study of analytic geometry in 3D-space; algebra of vectors, differentiation and integration of vectors; partial differentiation, multiple integrals; infinite series.
Credits: 4
College: Jefferson College of Humanities & Sciences
Prerequisites: MATH 112 [Min Grade: D]
Schedule Type: By Appointment, Lecture

MATH 214: Linear Algebra
Credits: 3
College: Jefferson College of Humanities & Sciences
Prerequisites: MATH 112 [Min Grade: D]
Schedule Type: Lecture

MATH 215: College Algebra
Heavy emphasis will be placed on applications and mathematical modeling. Topics covered include those in a traditional College Algebra course. Students will gain knowledge and skills in problem solving and modeling using graphing calculators and computer software
Credits: 3
College: Jefferson College of Humanities & Sciences
Schedule Type: By Appointment - 1 student, By Appointment - 3 students, By Appointment - 4 students, Lecture, On-Line

MATH 225: Differential Equations
First-order equations; constant-coefficient, nth-order homogeneous and non-homogeneous equations; special nonlinear equations; elementary applications; power series solutions. May also include elementary numerical techniques for solutions of ordinary differential equations and other computer topics.
Credits: 3
College: Jefferson College of Humanities & Sciences
Prerequisites: MATH 112 [Min Grade: D]
Schedule Type: Lecture

MATH 301: Data Visualization
This course introduces techniques and methodologies for creating effective visualizations based on principles from graphic design, visual art, perceptual psychology, and cognitive science. Topics include:data and image models, color, graph layout, communication design, inforgraphics, identification of "chart junk", matters of scientificintegrity, and optimization of data-ink in multivariate data sets. Although there is no pre-requisite for this course, basic working knowledge of, or willingness to learn, data analysis tools (e.g., R, Excel, Matlab/Octave) will be useful.
Credits: 3
College: Jefferson College of Humanities & Sciences
Prerequisites: MATH 101
Schedule Type: Lab, Lecture, Lecture/Lab, Lecture/On-Line, On-Line

MATH 316: Partial Differential Equations
Credits: 3
College: Jefferson College of Humanities & Sciences
Prerequisites: MATH 225 [Min Grade: D]
Schedule Type: Lecture

MATH 317: Real Variables
Credits: 3
College: Jefferson College of Humanities & Sciences
Prerequisites: MATH 225 [Min Grade: D]
Schedule Type: Lecture

MATH 318: Complex Variables
Credits: 3
College: Jefferson College of Humanities & Sciences
Prerequisites: MATH 225 [Min Grade: D]
Schedule Type: Lecture

MATH 321: Probability and Statistics
Credits: 3
College: Jefferson College of Humanities & Sciences
Prerequisites: MATH 112 [Min Grade: D]
Schedule Type: Lecture

MATH 323: Mathematical Statistics
Credits: 3
College: Jefferson College of Humanities & Sciences
Prerequisites: MATH 321 [Min Grade: D]
Schedule Type: Lecture

MATH 326: Modern Algebra
Credits: 3
College: Jefferson College of Humanities & Sciences
Prerequisites: MATH 214 [Min Grade: D]
Schedule Type: Lecture

MATH 331: Math Methods in Chem,Phys&Eng
Credits: 3
College: Jefferson College of Humanities & Sciences
Prerequisites: MATH 112 [Min Grade: D]
Schedule Type: Lecture