CAN Course Descriptions for Mathematics (11-7-04)

CAN: MATH 10

Title: College Algebra

Description: `Polynomial, rational, exponential, and logarithmic functions;`
`matrices, and determinants;`
`theory of equations; analytic geometry, mathematical induction.`
`Prerequisites: Algebra I, Geometry, and Intermediate Algebra`
`(Algebra II). 3 semester`
`units or 4 quarter units.`

CAN: MATH 12

Title: Finite Mathematics

Description: `Sets, matrices, and systems of equations and inequalities; linear`
`programming;`
`combinatorial techniques, and introduction to probability;`
`mathematics of finance;`
`primarily for business, social, and behavioral science majors.`
`Prerequisites: Algebra I, Geometry, and Intermediate Algebra`
`(Algebra II). 3 semester`
`units or 4 quarter units.`

CAN: MATH 16

Title: Pre-Calculus

Description: `Preparation for calculus; polynomial, rational, exponential,`
`logarithmic, and`
`trigonometric functions; analytic geometry; mathematical`
`induction.`
`Prerequisites: Algebra I, Geometry, and Intermediate Algebra`
`(Algebra II). 4 semester`
`units or 5 quarter units.`

CAN: MATH 17

Title: Calculus, 1st quarter

Description: `Introduction to differential and integral calculus; functions,`
`limits, and continuity;`
`techniques and applications of differentiation. Primarily for`
`mathematics, physical`
`science, and engineering majors.`
`Prerequisite: CAN MATH 16 or equivalent. 4 quarter units.`

CAN: MATH 18

Title: Calculus, 1st semester

Description: Introduction to differential and integral calculus; functions,
limits, and continuity;
techniques and applications of differentiation; the Fundamental
Theorem of Calculus.
Primarily for mathematics, physical science, and engineering
majors.
Prerequisite: CAN MATH 16 or equivalent. 4 semester units.

CAN: MATH 19

Title: Calculus, 2nd quarter

Description: Continuation of differential and integral calculus with
applications; techniques of
integration. Primarily for mathematics, physical science, and
engineering majors.
Prerequisite: CAN MATH 17. 4 quarter units.

CAN: MATH 2

Title: Introduction to Mathematical Reasoning

Description: An elementary introduction to mathematics, emphasizing the
deductive process; concepts
of contemporary mathematics; primarily for liberal arts students.
Prerequisites: Algebra I, Geometry, and Intermediate Algebra
(Algebra II). 3 semester
units or 4 quarter units.

CAN: MATH 20

Title: Calculus, 2nd semester

Description: Continuation of differential and integral calculus with
applications; techniques of
integration; infinite series and sequences. Primarily for
mathematics, physical science,
and engineering majors.
Prerequisite: CAN MATH 18. 4 semester units

CAN: MATH 21

Title: Calculus, 3rd quarter

Description: Continuation of differential and integral calculus with
applications; infinite sequences
and series. Primarily for mathematics, physical science, and
engineering majors.
Prerequisite: CAN MATH 19. 4 quarter units.

CAN: MATH 22

Title: Calculus, 3rd semester

Description: Vector-valued functions; calculus of functions of more than one
variable, partial
derivatives, multiple integration; Green's theorem, Strokes'
theorem, and the
divergence theorem.
Prerequisite: CAN MATH 20. 4 semester units.

CAN: MATH 23

Title: Calculus, 4th quarter

Description: Vector-valued functions; calculus of functions of more than one
variable, partial
derivatives, multiple integration; Green's theorem, Strokes'
theorem, and the
divergence theorem. Primarily for mathematics, physical science,
and engineering
majors.
Prerequisite: CAN MATH 21. 4 semester units.

CAN: MATH 24

Title: Differential Equations

Description: First and second order ordinary differential equations; linear
differential equations;
Laplace transforms.
Prerequisite: CAN MATH 20/21. 3 semester units or 4 quarter units.

CAN: MATH 26

Title: Linear Algebra

Description: Matrices and linear transformations; vector spaces; determinants; eigenvalues and
eigenvectors.
Prerequisite: CAN MATH 17/18. 3 semester units or 4 quarter units.

CAN: MATH 29

Title: Calculus for the Life and Social Sciences, 1st quarter

Description: Concepts of function and limit; techniques of differentiation and integration with
applications.
Prerequisites: Algebra I, Geometry, and Intermediate Algebra (Algebra II). 3 quarter
units.

CAN: MATH 30

Title: Calculus for the Life and Social Sciences, 1st semester

Description: Concepts of function and limit; techniques of differentiation and integration with
applications.
Prerequisites: Algebra I, Geometry, and Intermediate Algebra (Algebra II). 3 semester
units.

CAN: MATH 31

Title: Calculus for the Life and Social Sciences, 2nd quarter

Description: Continuation of first quarter course; partial differentiation and extremum problems.
Prerequisite: CAN MATH 29. 3 quarter units.

CAN: MATH 32

Title: Calculus for the Life and Social Sciences, 2nd semester

Description: Continuation of first semester course; partial differentiation and extremum problems;
multiple integrals.
Prerequisite: CAN MATH 30. 3 semester units.

CAN: MATH 33

Title: Calculus for the Life and Social Sciences, 2nd semester

Description: Continuation of second quarter course; multiple integrals.
Prerequisite: CAN MATH 31. 3 quarter units.

CAN: MATH 34

Title: Calculus for Business

Description: Concepts of function and limit; applied calculus emphasizing
techniques of
differentiation and integration for business applications; partial
derivatives.
Prerequisites: Algebra I, Geometry, and Intermediate Algebra
(Algebra II). 3 semester
units or 4 quarter units.

CAN: MATH 4

Title: Mathematics for Elementary School Teaching

Description: Development and structure of the real number system and its
subsystems; elementary
concepts of set theory, relations, and operations; inductive
reasoning including patterns
and sequences; deductive reasoning; logic.
Prerequisites: Algebra I, Geometry, and Intermediate Algebra
(Algebra II). 3 semester
units or 4 quarter units.

CAN: MATH 8

Title: Trigonometry

Description: The trigonometric functions, their graphs and identities; laws of
sines and cosines;
solutions of triangles; trigonometric equations; inverse
trigonometric functions; polar
coordinates, DeMoivre's Theorem.
Prerequisites: Algebra I, Geometry, and Intermediate Algebra
(Algebra II). 3 semester
units or 4 quarter units

CAN: MATH SEQ B

Title: Sum of the content of CAN MATH 17+19+21 or CAN MATH 18+20

Description: Sum of the content of CAN MATH 17+19+21 or CAN MATH 18+20

CAN: MATH SEQ C

Title: Sum of the content of CAN MATH 17+19+21+23 or CAN MATH 18+20+22

Description: Sum of the content of CAN MATH 17+19+21+23 or CAN MATH 18+20+22

CAN: MATH SEQ D

Title: Sum of the content of CAN MATH 29+31+33 or CAN MATH 30+32

Description: Sum of the content of CAN MATH 29+31+33 or CAN MATH 30+32

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