

# COURSES

## MATHEMATICS

### MATH 1314 COLLEGE ALGEBRA

3 lec (3 Cr.) Topics include and in-depth study and applications of polynomial rational radical exponential and logarithmic functions and systems of equations using matrices. Additional topics such as sequences series probability and conics may be included. Prerequisite: MTH 0306, meeting college algebra standard on the TSI exam or equivalent exam, or concurrent enrollment in the appropriate co-requisite developmental course.

Credits

3

Distribution

MATH

Course Fee

Internet course fee (if applicable): \$43

### MATH 1316 PLANE TRIGONOMETRY

3 lec (3 Cr.) Topics Include an in-depth study and applications of trigonometry including definitions identities inverse functions solutions of equations graphing and solving triangles. Additional topics such as vectors polar coordinates and parametric equations may be included. Prerequisite: MATH 1314 or a satisfactory score on the TSI exam or equivalent exam.

Credits

3

Distribution

MATH

Course Fee

Internet course fee (if applicable): \$43

### MATH 1324 MATHEMATICS FOR BUSINESS AND SOCIAL SCIENCES

3 lec (3 Cr.) The application of common algebraic functions including polynomial, exponential, logarithmic, and rational, to problems in business, economics, and the social sciences are addressed. The applications include mathematics of finance, including simple and compound interest and annuities; systems of linear equations; matrices; linear programming; and probability, including expected value. Prerequisite: MTH 0306, meeting college algebra standard on the TSI exam or equivalent exam, or concurrent enrollment in the appropriate co-requisite developmental course.

Credits

3

Distribution

MATH

### MATH 1325 CALCULUS FOR BUSINESS AND SOCIAL SCIENCE

3 lec (3 Cr.) This course is the basic study of limits and continuity differentiation optimization and graphing and integration of elementary functions with emphasis on applications in business economics and social sciences. This course is not a substitute for MATH 2413 Calculus I. Prerequisite: MATH 1314 - College Algebra or MATH 1324 - Mathematics for Business and Social Sciences

Credits

3

Distribution

MATH

Course Fee

Internet course fee (if applicable): \$43

### MATH 1332 CONTEMPORARY MATHEMATICS (QUANTITATIVE REASONING)

3 lec (3 Cr.) Intended for Non Stem (Science, Technology, Engineering and Mathematics) Majors. Topics include introductory treatments of sets and logic, financial mathematics, probability and statistics with appropriate applications. Number sense, proportional reasoning, estimation, technology, and communication should be embedded throughout the course. Prerequisite: MTH 0305, or satisfactory score on the TSI exam or equivalent exam, or concurrent enrollment in the appropriate co-requisite developmental course. Students planning on transferring to senior institutions should check the transferability of this course.

Credits

3

Distribution  
MATH

Course Fee  
Internet course fee (if applicable): \$43

## MATH 1342 ELEMENTARY STATISTICAL METHODS

3 lec (3 Cr.) Collection analysis presentation and interpretation of data and probability. Analysis includes descriptive statistics correlation and regression confidence intervals and hypothesis testing. Use of appropriate technology is recommended. Prerequisite: MTH 0305, or satisfactory score on the TSI exam or equivalent exam, or concurrent enrollment in the appropriate co-requisite developmental course.

Credits  
3

Distribution  
MATH

Course Fee  
Internet course fee (if applicable): \$43

## MATH 1350 MATHEMATICS FOR TEACHERS I

3 lec (3 Cr.) This course is intended to build or reinforce a foundation in fundamental mathematics concepts and skills. It includes the conceptual development of the following: sets, functions, numeration systems, number theory, and properties of the various number systems with an emphasis on problem solving and critical thinking. Prerequisite: MATH 1314 College Algebra or the equivalent.

Credits  
3

Distribution  
MATH

Course Fee  
Internet course fee (if applicable): \$43

## MATH 1351 MATHEMATICS FOR TEACHERS II

3 lec (3 Cr.) This course is intended to build or reinforce a foundation in fundamental mathematics concepts and skills. It includes the concepts of geometry, measurement, probability, and statistics with an emphasis on problem solving and critical thinking. Prerequisite: MATH 1350 and College Algebra or the equivalent.

Credits  
3

Distribution  
MATH

Course Fee  
Internet course fee (if applicable): \$43

## MATH 2313 CALCULUS I

3 lec (3 Cr.) Topics include limits and continuity; the Fundamental Theorem of Calculus; definition of the derivative of a function and techniques of differentiation; applications of the derivative to maximizing or minimizing a function; the chain rule, mean value theorem, and rate of change problems; curve sketching; definite and indefinite integration of algebraic, trigonometric, and transcendental functions, with an application to calculation of areas. Prerequisite: MATH 2412-Pre-Calculus Math or equivalent preparation.

Credits  
3

Distribution  
MATH

## MATH 2315 CALCULUS III

3 lec (3 Cr.) Advanced topics in calculus including vectors and vector-valued functions, partial differentiation, Lagrange multipliers, multiple integrals, and Jacobian's application of the line integral, including Green's Theorem, the Divergence Theorem, and Stokes' Theorem. Prerequisite: MATH 2414-Calculus II.

Credits  
3

Distribution

MATH

Course Fee

Internet course fee (if applicable): \$43

## MATH 2318 LINEAR ALGEBRA

3 lec (3 Cr.) Introduces and provides models for application of the concepts of vector algebra. Topics finite dimensional vector spaces and their geometric significance; representing and solving systems of linear equations using multiple methods including Gaussian elimination and matrix Inversion; matrices; determinants; linear transformations; quadratic forms; eigenvalues and eigenvector; and applications in science and engineering. Prerequisite: MATH 2414-Calculus II.

Credits

3

Distribution

MATH

Offered

Spring

Course Fee

Internet course fee (if applicable): \$43

## MATH 2320 DIFFERENTIAL EQUATIONS

3 lec (3 Cr.) Ordinary differential equations including linear equations systems of equations equations with variable coefficients existence and uniqueness of solutions series solutions singular points transform methods and boundary value problems; application of differential equations to real-world problems. Prerequisite: MATH 2414-Calculus II.

Credits

3

Distribution

MATH

Offered

Spring

Course Fee

Internet course fee (if applicable): \$43

## MATH 2412 PRE-CALCULUS MATH

4 lec (4 Cr.) Topics include an in-depth combined study of algebra, trigonometry, and other topics for calculus readiness. Prerequisite: MATH 1314-College Algebra or meeting Pre-Calculus standard on the TSI or equivalent exam.

Credits

4

Distribution

MATH

Course Fee

Internet course fee (if applicable): \$43

## MATH 2413 CALCULUS I

4 lec (4 Cr.) Topics include limits and continuity; the Fundamental Theorem of Calculus; definition of the derivative of a function and techniques of differentiation; applications of the derivative to maximizing or minimizing a function; the chain rule mean value theorem and rate of change problems; curve sketching; definite and indefinite integration of algebraic trigonometric and transcendental functions with an application to calculation of areas. Prerequisite: MATH 2412-Pre-Calculus Math or equivalent preparation.

Credits

4

Distribution

MATH

Course Fee

Internet course fee (if applicable): \$43

## MATH 2414 CALCULUS II

4 lec (4 Cr.) Topics include differentiation and integration of transcendental functions; parametric equations and polar coordinates; techniques of integration; sequences and series; improper integrals. Prerequisite: MATH 2413-Calculus I.

Credits

4

Distribution

MATH

Course Fee

Internet course fee (if applicable): \$43

## MATH 2415 CALCULUS III

4 lec (4 Cr.) Advanced topics in Calculus, including vectors and vector-valued functions, partial differentiation, Lagrange multipliers, multiple integrals, and Jacobian's; application of the line integral, including Green's Theorem, the Divergence Theorem, and Stokes' Theorem. Prerequisite: Math 2414 Calculus II

Credits

4

Distribution

MATH

Course Fee

Internet course fee (if applicable): \$43

Navarro College is accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) to award associate and baccalaureate degrees. Navarro College also may offer credentials such as certificates and diplomas at approved degree levels. Questions about the accreditation of Navarro College may be directed in writing to the Southern Association of Colleges and Schools Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097, by calling (404) 679-4500, or by using information available on SACSCOC's website ([www.sacscoc.org](http://www.sacscoc.org)).