## MATH 120 Elementary Statistics

3 hours lecture

**Prerequisite:** A minimum grade of 'C' in MATH 56 or MATH 60 or eligibility determined through the math placement process

**Transfer acceptability:** CSU; UC – MATH 120, and PSYC/SOC 205, combined: maximum credit, one course

Selected topics include tabular and graphical representation of data, counting principles, permutations, combinations, discrete and continuous probability distributions, sampling distributions, the Central Limit Theorem, an introduction to inferential statistics, and simple linear regression analysis. Applications from the fields of business, economics, life sciences, social sciences, and the physical sciences.

#### MATH 130 Calculus for the Social Sciences (4) 4 hours lecture

**Prerequisite:** A minimum grade of 'C' in MATH 110 or eligibility determined through the math placement process

Note: Not open to students with credit in MATH 140

**Transfer acceptability:** CSU; UC – MATH 130 and 140 combined: maximum credit, one course

Functions and their graphs including exponential and logarithmic functions, single variable calculus, limits, differentiation, integration and their applications, multivariable calculus, with application to business, social sciences and behavioral science.

#### MATH 135 Precalculus Mathematics (5) 5 hours lecture

**Prerequisite:** A minimum grade of 'C' in MATH 115 or eligibility determined through the math placement process

**Transfer acceptability:** CSU; UC – MATH 110 and 135 combined: maximum credit, one course.

Designed for students who intend to take calculus. Emphasizes study of the behavior and characteristics of functions from graphic, numerical, analytic, and applied perspectives. Includes trigonometric functions, general polynomial functions, rational functions, exponential functions, logarithmic functions, absolute value functions, functions with rational exponents, and sequences. Selected topics from analytic geometry and linear systems are also presented.

## MATH 140 Calculus With Analytic Geometry, First Course (5) 5 hours lecture

**Prerequisite:** A minimum grade of 'C' in MATH 135, or MATH 110 and MATH 115, or eligibility determined through the math placement process

**Transfer acceptability:** CSU; UC – MATH 130 and 140 combined: maximum credit, one course

An introduction to analytic geometry, differentiation and integration of algebraic and transcendental functions of a single variable, and applications of differentiation.

#### MATH 141 Calculus With Analytic Geometry, Second Course (4) 4 hours lecture

Prerequisite: A minimum grade of 'C' in MATH 140

Transfer acceptability: CSU; UC

Continuation of MATH 140. Topics include definite integrals and their applications; methods of integration (including the use of modern computational technology as appropriate); indeterminate forms; improper integrals; sequences; infinite series; Taylor series; conic sections; polar coordinate; and parametric equations from analytic, graphic, and numeric perspectives.

## MATH 146 Fortran-90 for Mathematics and Science (3)

2 hours lecture - 3 hours laboratory

**Prerequisite:** A minimum grade of 'C' in MATH 135 or MATH 110 and MATH 115, or a passing grade on the appropriate placement test

Note: Cross listed as CSCI 146

Transfer acceptability: CSU; UC

Programming in FORTRAN 90 to solve typical problems in mathematics, computer science, physical sciences, and engineering. Programming is done on a PC.

## MATH 197 Mathematics Topics

(.5 - 4)

(4)

(3)

(3)

Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture and/or laboratory may be scheduled by the department. Refer to Class Schedule.

**Prerequisite:** A minimum grade of 'C' in either MATH 56 or MATH 60, or eligibility determined through the math placement process

Note: May be taken 4 times

(3)

**Transfer acceptability:** CSU; UC – Credit determined by UC upon review of course syllabus

Topics in Mathematics. See Class Schedule for specific topic offered. Course title will designate subject covered.

<b>MATH 200</b>	Introduction to Linear Algebra	(3)
-----------------	--------------------------------	-----

3 hours lecture **Prerequisite:** A minimum grade of 'C' in MATH 141

Transfer acceptability: CSU; UC

Matrices, determinants, vectors, linear dependence and independence, basis and change of basis, linear transformations, and eigen values.

## MATH 205 Calculus With Analytic Geometry, Third Course (4) 4 hours lecture

Prerequisite: A minimum grade of 'C' in MATH 141

## Transfer acceptability: CSU; UC

Vectors in the plane and space, three-dimensional coordinate system and graphing, vector-valued functions and differential geometry, partial differentiation, multiple integration, and vector calculus.

# MATH 206 Calculus With Differential Equations 4 hours lecture

Prerequisite: A minimum grade of 'C' in MATH 205 Transfer acceptability: CSU: UC

A first course in ordinary differential equations from analytic, geometric, numeric and applied perspectives (including the use of modern computational technology as appropriate). Topics include exact, separable, and linear equations; initial value and boundary-value problems; systems of first-order equations; reduction of order; undetermined coefficients; variation of parameters; series solutions; and Laplace transforms.

#### MATH 245 Discrete Mathematics 3 hours lecture

Prerequisite: A minimum grade of 'C' in MATH 130 or MATH 140, or a passing score on the appropriate placement test

## Transfer acceptability: CSU; UC

The study of prepositional and predicate logic, number theory and methods of proof, elements of set theory, relations and functions, the Pigeonhole Principle, sequences, infinite sets, basic counting techniques, permutations, combinations, graphs and trees, and applications directed to the field of computer science.

## **Medical Assisting**

See Office Information Systems (OIS)

Medical Assisting Clinical not offered at Palomar College

## **Microbiology (MICR)**

Contact the Life Sciences Department for further information. (760) 744-1150, ext. 2275 Office: NS-207A

## **COURSE OFFERINGS**

## MICR 110 Microbiology and Foods

2 hours lecture - 3 hours laboratory Note: Cross listed as FCS 110

Transfer acceptability: CSU

Introduction to the principles of microbiology with an emphasis on foodborne pathogens. Students will explore biological factors and controls relating to reproduction of microorganisms and the effects on public health. This course does not meet microbiology requirement for pre-health students.