Pomona Math Classes—Fall 2018

Math 30: Calculus I. Standard first course in the calculus of one variable, focusing on limits, derivatives, integrals, mean-value theorems and the Fundamental Theorem of Calculus.
Ami Radunskaya, MWF 10:00–10:50
Randy Swift, MWF 11:00–11:50

Math 31: Calculus II. Standard second course in the calculus of one variable, focusing on transcendental functions, techniques of integration, infinite series and related material.
Kim Ayers, MWF 9:00–9:50   *Prereq: Calculus I*
    "   , MWF 11:00–11:50

Math 31H: Honors Topics in Calculus II. Explores selected topics from Calculus II in greater depth than calculus II and relates these topics to other areas of mathematics. For students who have not taken Calculus II, or for those familiar with Calculus II but would like to see the material from a different point of view.
Adolfo Rumbos, MWF 10:00–10:50   *Prereq: Calculus I*

Math 31S: Calculus II with Applications to the Sciences. Core topics of Calculus II, plus an introduction to modeling, differential equations & computing, in the context of problems from the sciences. Excellent background for Calculus III or for use in other fields.
Blerta Shtylla, MWF 9:00–9:50   *Prereq: Calculus I*

Math 32: Calculus III. Standard course in the calculus of several variables, this course covers vectors and vector functions, partial derivatives and differentiability of functions of several variables, multiple integrals.
Ellie Dannenberg, MWF 10:00–10:00   *Prereq: Calculus II*
    "   , MWF 11:00–11:50

Math 58: Intro to Statistics with Lab. Methodology and tools vital to the researcher in both the sciences and social sciences. Applications to current data using statistical computer software.
Gabe Chandler, TR 9:35–10:50 and Lab F 11:00–11:50   *Not recommended after AP stats*

Math 60: Linear Algebra. Standard first course emphasizing vector spaces, linear transformations, and eigentheory, with proofs and applications. Required for many upper division math classes.
Ángel Chávez MWF 9:00–9:50   *Prereq: Calculus II*
Edray Goins, MWF 10:00–10:50
Edray Goins, MWF 11:00–11:50
Stephan Garcia, TR 1:15–2:30

Math 67: Vector Calculus. Multivariable differential and integral calculus with a linear algebraic perspective, with an introduction to differential forms. A more theoretical approach than Math 32.
Adolfo Rumbos, MWF 9:00–9:50   *Prereqs: Calculus II and Linear Algebra*

Math 101: Intro to Analysis. Workshop course on how to write rigorous proofs about sequences, limits and continuity. Satisfies the speaking intensive requirement.
Kim Ayers, MWF 10:00–10:50   *Prereq: Linear Algebra*

Math 102: Differential Equations. Qualitative study of differential equations via analytic methods or numerical techniques using standard mathematical software packages.
Blerta Shtylla, MWF 11:00–11:50   Prereqs: Multivariable Calculus and Linear Algebra

Math 103: Combinatorics. Intro to the techniques and ideas of combinatorics including counting methods, generating functions, Ramsey theory, graphs, networks and extremal combinatorics.
Ellie Dannenberg, MWF 9:00–9:50   *Prereq: Linear Algebra*

Math 113: Number Theory & Cryptography Properties of integers and modular arithmetic with applications to public key cryptosystems. Credit for only one of Math 113 and Math 175.
Ghassan Sarkis, TR 1:15–2:30   *Prereq: Linear Algebra*

Math 131: Principles of Real Analysis I. Countable sets, least upper bounds and metric space topology including compactness, completeness, connectivity and uniform convergence.
Stephan Garcia, TR 9:35–10:50   Prereq: Calculus III or Vector Calculus; and Linear Algebra. A proof-based course above 100 is strongly recommended.

Math 135: Functions of a Complex Variable Topics may include: Cauchy Riemann equations, harmonic functions, Cauchy's theorem, Liouville's theorem, Cauchy's Integral formula, maximum modulus principle, argument principle, Rouche's theorem, series expansions, isolated singularities, calculus of residues and conformal mapping.
Ángel Chávez, MWF 10:00-10:50   *Prereq: Math 101 or 131*

Math 151: Probability. Probability spaces, discrete and continuous random variables, conditional and marginal distributions, independence, expectation, generating functions, transformations, central limit theorem.
Ami Radunskaya, MWF 9:00–9:50   Prereqs: Multivariable Calculus and Linear Algebra

Math 152: Statistical Theory. Introduction to statistical inference, estimation of parameters, confidence intervals, Bayesian analysis and tests of hypotheses.
Jo Hardin, TR 9:35–10:50   *Prereqs: Probability*

Math 154: Computational Statistics. An introduction to computationally intensive statistical techniques. Theory and applications are both highlighted. Algorithms will be implemented using statistical software.
Gabe Chandler, TR 1:15–2:30   Prereqs: Calculus II or Calculus III; and Intro to Stats.

Math 174: Representation Theory. Topics include group rings, characters, orthogonality relations, induced representations, application of representation theory and other select topics from module theory.
Gizem Karaali, TR 2:45–4:00   *Prereq: Math 171*