

**In Math 1080, students learn how to:**

- Graph polynomial, rational, radical, exponential, logarithmic, and piecewise functions and describe their attributes. Determine algebraic formula for functions given their graphs or verbal descriptions.
- Compose and do other operations on functions, being mindful of the domain.
- Find the inverses of functions algebraically and graphically.
- Solve polynomial, rational, exponential, and logarithmic equations and inequalities. Polynomial may have real or complex solutions.
- Use exponential and logarithmic functions to model real world situations.
- Graph conic equations and write equations for conics given their graphs.
- Understand sequence and series notation. Find formulas for arithmetic, geometric, Fibonacci, and other sequences. Calculate series using formula.
- Understand right-triangle and unit-circle definitions of trig functions.
- Graph trigonometric functions and describe their attributes. Determine algebraic formula for functions given their graphs or verbal descriptions.
- Verify and use trigonometric identities.
- Use trigonometric inverses, understanding the domain/range restrictions.
- Solve trigonometric equations.
- Use right triangle trigonometry, the Law of Sines and the Law of Cosines to solve for all measurements in a triangle. Answer application problems using these tools.
- Convert between rectangular and polar coordinates and equations.
- Understand vector notation and do computations with vectors