

## MATH 6B Introduction to College Mathematics for the Sciences II

Textbook: Sullivan: Precalculus. Tenth Edition.

### **Suggested number of 50-minute lectures:**

1.0 lecture – 5.3 Exponential functions.

1.0 lecture – 5.4 Logarithmic functions.

1.0 lecture – 5.5 Properties of logarithmic functions.

1.0 lecture – 5.6 Logarithmic and exponential equations.

1.0 lecture – 5.8 Exponential growth and decay. (Omit Logistical Models.)

1.0 lecture – 6.1 Angle and their measure. (Omit arc length and sector of a circle; omit angular velocity.)

1.0 lecture – 6.2 Trigonometric function: Unit Circle Approach.

1.0 lecture – 6.3 Properties of trigonometric functions.

1.5 lectures – 6.4 Graphs of sine and cosine functions.

1.5 lectures – 6.5 Graphs of tangent, cotangent, cosecant and secant functions. 6.6 Phase shift. (Omit modeling and curve fitting.)

1.5 lectures – 7.1 The inverse sine, cosine and tangent functions. 7.2 The inverse trigonometric functions (continued.)

1.0 lecture – 7.3 Trigonometric Equations. (Omit solving by using a graphing utility.)

1.5 lectures – 7.4 Trigonometric identities.

1.0 lecture – 7.5 Sum and Difference Formulas.

1.0 lecture – 7.6 Double-angle and half-angle formulas. 8.1 Right triangle trigonometry.

1.0 lecture – 9.4 Vectors.

1.0 lecture – 10.1 Conics. 10.2 The parabola.

1.0 lecture – 10.3 The ellipse.

1.0 lecture – 10.4 The hyperbola.

1.0 lecture – 11.1 System of linear equations.

1.0 lecture – 11.5 Partial fraction decomposition.

1.0 lecture – 11.6 System of nonlinear equations.

1.0 lecture – 11.7 System of inequalities.

2.0 lectures – 12.1 Sequences. 12.2 Arithmetic sequences and series. 12.3 Geometric sequences and series. (Omit Annuity.)