**ENGR 2011: Engineering Analysis and Applications**

**Homework No. 8: System of Differential Equations, Vectors and Lines**

**Goal:** Demonstrate that you understand how to solve systems of differential equations both analytically and numerically.

**Textbook Problems:**  3.5.1(b,d), 3.5.4, 4.1.1, 4.1.2, 4.1.4, 4.1.7

**Computer Problems:**

For 3.5.1(b,d), you can use Python to find eigenvalues and eigenvectors. Also solve 3.5.1 and 3.5.4 numerically using Python to verify your analytic solutions. Use Python to verify your answers for 4.1.1, 4.1.2, 4.14, and 4.1.7.