

**Computational Fluid Dynamics (AE/ME 339)**  
**MAE Dept., UMR**

**Home Work Problem 01**

Write a computer program to solve the following ordinary differential equation using the Runge-Kutta method between limits (0,4) for step sizes 0.1 and 0.01. Compare the results to the exact solution. Graph all results on one plot, and discuss.

$$\frac{dy}{dx} = y$$

Boundary condition

$$y(0) = 1$$