Spring 2015 MAT 460 - Numerical Differential Equations (hybrid)

- Planetary motion
  Simulation of a Motorbike
  Liquid crystals
  Oscillation of a Bridge/Tower
  Cooling of a Cafe Latte
  Smog over Los Angelos
  Simulation of Chemical Reactions

- Modeling and Numerical Solution of Ordinary and Partial Differential Eqns

- Standard and newly developed methods

- Linear equation solver, Runge-Kutta methods, Finite Difference Methods, Finite Element Methods

- Convergence, Error Estimation, Accuracy

- with Matlab, C, Python, Gmesh, Fenics

Pre-Req: MAT 253, MAT 260, familiarity with a programming language
Questions? Please ask Andrea Dziubek, DON 2269, dziubea@sunyit.edu