

GROUP MEMBERS:

CE 8060 – STRUCTURAL DYNAMICS
Homework #13

Assigned: Tuesday, September 30, 2014
Due: Tuesday, October 7, 2014 (beginning of class)

Homework must be done neatly in pencil, on 8 ½”x 11” paper, stapled together. Each step must be easily followed; diagrams are useful. Your assumptions must be clearly stated.

Make Sure to Write Both Group Members' Names!

Develop a MATLAB script to obtain the dynamic response of undamped SDOF systems to a rectangular force. Replicate figures to demonstrate that the normalized deformation $u(t)/(u_{st})_0$ is a function of t_1/T , the ratio of the impulse duration to the natural vibration period of the system. You can assume your own stiffness and mass for the SDOF system, as well as the amplitude of applied force (the numbers in the x and y axis of your figures do not need to match those in Handout #19).