

## CE 8930

### Group Assignment #6

---

---

Assigned: Thursday, February 20, 2014  
Due: Thursday, February 27, 2014 (midnight)

In this assignment, students are asked to extract six different response features from the experimental data collected from the plate structure in group assignment #4. All decisions regarding the execution of the experiments and selection of features are left to the discretion of the student groups. However, students should bear in mind that these extracted response features will be used to:

- a. compare the numerical model of the plate with the measurements.
- b. detect damage that will be introduced to the plate

in later group assignments.

Students are expected to write a brief paragraph explaining the feature selection and extraction process (including equations, references and etc.). Any MATLAB scripts developed to extract features must be included in the appendix of the document.

In the written discussion, students are expected to answer the following questions:

- Is the selected response feature sensitive to measurement noise?
- Is the selected feature relevant to the underlying dynamics of the structure?
- What are the computational requirements of the feature? Is it feasible for real time monitoring?
- Can the selected features be successfully used for the aforementioned purposes?

The assignment report should NOT exceed a total of 3 pages (excluding appendices); 10/ 100 points will be taken for each extra page. Please use Times New Roman 11 font with normal margins.