MECH 306 - Advanced Vibrations II

Catalog Description: Principle of virtual work and Lagrange’s equations. MDOF free, forced and damped vibrations. Random vibration and continuous systems.

Learning Outcomes:
- Students demonstrate their knowledge and depth of understanding of mechanical engineering in engineering practice and entry into rigorous graduate programs.
- Students design and lead development of components, systems, tests, or services that meet specification in the context of economic, environmental, and societal requirements.
- Students work in a team environment, share their knowledge and expertise, and lead.
- Students communicate effectively with colleagues, customers, subordinates, and managers.
- Students act ethically and professionally.
- Students continue to learn and grow professionally and personally.

Topics Covered:
- Multi degree of freedom systems.
- Numerical Methods, Virtual work and Lagrange’s equations.
- Random Vibration.


Grading: The course grade will be based on homework and exams.

Course Type: Graduate level mechanical engineers.

Prerequisites: MECH 305

Co-requisite: None

Engineering Honor Code: All students taking courses in the School of Engineering agree, individually and collectively, that they will not give or receive unpermitted aid in examinations or other course work that is to be used by the instructor as the basis of grading.

Disability Accommodation Procedure: To request academic accommodations for a disability, students must contact Disabilities Resources located on the second floor of Benson. Phone numbers are (408) 554-4111; TTY (408) 554-5445. Students must
register and provide documentation of a disability to Disabilities Resources prior to receiving academic accommodations.

*Prepared By:* Pete Woytowitz  
*Date:* 05/05/2010