

Course Administration

INSTRUCTORS: Ya Wang, 153 Light Engineering, (631) 632 8322
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OFFICE HOURS: Wed (9-11am, 1 pm - 3 pm) or by appointment.

TEXT: D.J. Inman, Engineering Vibration 4th Edition, 2013

PREREQUISITES: MEC 310, MEC 402, Knowledge of Matlab

LECTURE HOURS: Wed (4 pm -6:50 pm)

LECTURE LOCATION: PHYSICS P 117

HOMEWORK: Roughly 4 homework assignments
Each assignment is due one week after it is assigned.
Late homework will receive half credit before the solutions are posted and will not be accepted after that.

PROJECTS: One final project will be given.
A written report is required for the design project.

EXAMS: 2 Midterms (in class)
1 Final Exam
All Exams are scheduled in class, unless stated otherwise
NO makeup exams

GRADING: Semester letter grade is based upon your performance in the following categories, including exams, homework assignments and a design project.

Homework	20%
1 Project	20%
Midterm	40%
Final	20%

GRADING SCALE: NOT a curve – simple percentage of all course work, as follows:

A: $\geq 95\%$	A- : $\geq 90\%$	B+ : $\geq 86\%$
B: $\geq 82\%$	B- : $\geq 78\%$	C+ : $\geq 74\%$
C: $\geq 70\%$	C- : $\geq 66\%$	D+ : $\geq 63\%$
D: $\geq 60\%$	F : $< 60\%$	

Course objectives of MEC 532 course and assessment tools

COURSE LEARNING OBJECTIVES	ASSESSMENT TOOLS
1. Know the principles of mechanical vibration and control	Assignments, Exams, Project
2. Learned ordinary and partial differential equations of motion for vibration analysis	Assignments, Exams, Project
3. Understand free, forced, damped vibration and analysis for one-DOF and multiple DOF systems	Assignments, Exams, Project
4. Know how to obtain vibration responses: transient, steady-state responses, frequency responses	Assignments, Exams, Project
5. Understand algebraic eigenvalue problems and modal analysis	Assignments, Exams, Project
6. Understand how to convert dynamic equation of motion to state-space realization and the Canonical forms	Assignments, Exams, Project
7. Understand modern control theory (or <i>state-space control theory</i>): control law and estimator design	Assignments, Exams, Project
8. Know modal analysis and state-space control design of multiple dof systems	Assignments, Exams, Project
9. Understand how to perform vibration analysis of distributed of continuous systems	Assignments, Exams, Project
10. Know how to use software (MATLAD and Mathematica) for the analysis of vibration and control	Assignments, Exams, Project

Important calendar days for the Fall 2016 semester

Important calendar days	Dates for the Fall 2015 semester
Holidays (no classes held)	September 5 (Labor Day) November 23 – 27, 2016 (Thanksgiving Holiday)
Classes to be held	08/31/16, 09/07/16, 09/14/16, 09/21/16, 09/28/16, 10/05/16, 10/12/16, 10/19/16, 10/26/16, 11/2/16, 11/9/16, 11/16/16, 11/30/16, 12/07/16
First Day of Classes	Wed, Aug. 31, 2016
Last Day of Classes	Wed, December 7, 2016
Reading Day	Wed, December 14, 2016
Final Examinations	December 13 -21, 2016

BLACKBOARD: All homework assignments and solutions will be posted on the Blackboard course account (<http://blackboard.sunysb.edu>). For problems logging in, go to the helpdesk in the Main Library SINC Site or the Union SINC Site, you can also call: 631-632-9602 or e-mail: helpme@ic.stonybrook.edu

Please make sure that your email id is a current one on the blackboard system. I suggest that you use a university email id for this class; it is free and official. I am not responsible for the emails not delivered to your commercially available email accounts.

ACADEMIC INTEGRITY: The campus policies on academic INTEGRITY are available on the Web (http://www.stonybrook.edu/commcms/advising/_faculty/AcadIntegrity.html).

Intellectual honesty is a cornerstone of all academic and scholarly work. Therefore, the faculty view any form of academic dishonesty as a very serious matter. The Academic Judiciary Committee (AJC) and the College of Engineering and Applied Sciences Committee of Academic Standing and Appeals (CEAS-CASA) are responsible for the establishment of general guidelines for dealing with academic dishonesty in the colleges and for the consideration of individual complaints. Further information regarding functions of the committees is available from the Office of Undergraduate Academic Affairs and the Undergraduate Student Office in the College of Engineering and Applied Sciences.

CRITICAL INCIDENT MANAGEMENT: Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of University Community Standards any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn. Faculty in the HSC Schools and the School of Medicine are required to follow their school-specific procedures. Further information about most academic matters can be found in the Undergraduate Bulletin, the Undergraduate Class Schedule, and the Faculty-Employee Handbook.

SPECIAL NOTE ON ADA: If you have a physical, psychological, medical or learning disability that may impact your course work, please contact Disability Support Services, ECC (Educational Communications Center) Building, room 128, (631) 632-6748. They will determine with you what accommodations are necessary and appropriate. All information and documentation is confidential. Students requiring emergency evacuation are encouraged to discuss their needs with their professors and Disability Support Services.

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