THE UNIVERSITY OF TEXAS AT AUSTIN

The Department of Aerospace Engineering & Engineering Mechanics

EM 381 - Advanced Dynamics, Spring 2015

SYLLABUS

Unique Number:	13835
Instructor:	Dr. Jayant Sirohi
Contact Info:	jayant.sirohi@mail.utexas.edu
	512 471 4186
Class Time:	TuTh 11am-1230pm
Class Location:	WRW 413
Office Hours:	Any time by prior appointment
Web Page:	Canvas website

Suggested Texts:

Analytical Mechanics by Torok

Principles of Dynamics by Greenwood.

Methods of Analytical Dynamics by Meirovitch.

Classical Mechanics by Goldstein.

Advanced Dynamics by Greenwood.

Catalog Description: Dynamics of systems of particles and rigid bodies; vibration theory; analytical dynamics, including Lagrangian and Hamiltonian formulations; dynamic stability; continuous systems.

Course Prerequisite: Graduate standing and Undergraduate course in dynamics or consent of the instructor.

Course Topics: Review of elementary dynamics, kinematics, analytical dynamics, Lagrange's, Hamilton's, Routh's equations, 3-D rigid body dynamics, dynamical stability, continuous systems, other topics.

Grading: Three quizzes (60%), final exam (40%). Grading will be relative. Homeworks will be assigned but not graded.

Policy on Academic Integrity: Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and/or dismissal from the University. Since such dishonesty harms the individual, all students, and the integrity of the University, policies on academic dishonesty will be strictly enforced. For further information please visit the Student Judicial Services web site:

http://deanofstudents.utexas.edu/sjs/

Prepared by: Dr. Jayant Sirohi **Date:** 19 January 2016