Syllabus: Physics 2325 - 001 – Spring 2006
MECHANICS

Lectures: Tuesday and Thursday, 11:00 p.m. – 12:15 p.m., FN 2.102

Instructor: Professor Mustapha Ishak-Boushaki,
Office: FN2.716B
Email: mishak@utdallas.edu
url1: http://www.utdallas.edu/nsm/physics/faculty/ishak-boushaki.html
url2: http://www.utdallas.edu/~mishak
Office hours: Tuesday and Thursday (during the one hour following class)
or at other times (if necessary) by appointment made using email above.
Location: FO2.716B.

Teaching assistant: Doug Vanesko
Email: vanesko@student.utdallas.edu
Office Hours: TBA in class

Supplemental instruction: TBA in class

Textbook: University Physics, 11th edition, by Young & Freedman
(It is very important to read before class the sections that will be covered)

Online resources and homework: http://www.masteringphysics.com
(Course ID: `MPISHAKBOUSHAKI0003`). Use this site for homework, practice exercises, and problems.

Course overview: Mechanics Calculus based. Basic physics including a study of space and time, kinematics, forces, energy and momentum, conservation laws, rotational motion, torques, and harmonic oscillation. Prerequisite: MATH 2417 (1st semester Calculus).

Grading: Online homework (20%), Quizzes (20%), 3 exams (20% each).

Homework:
Assignments are given for each chapter on the website http://www.masteringphysics.com and will be announced in class weekly. Student login information to this site is provided with the purchase of the textbook. If you have a used book, the login information kit can be purchase from the publisher (Addison-Wesley). Follow the instructions for students on the website and use the course ID `MPISHAKBOUSHAKI0003.` For your student ID use the first 3 letters of your first name + the first 3 letters of your last name. All homework assignments will be graded and no handwritten homework will be accepted. Homework must be done by the student and only the student. Any academic dishonesty in doing your homework will be reported to the dean and prosecuted.

Exams: Students must bring with them a valid picture ID to the exam. Scientific calculators that have trig functions will be allowed in the exam but graphing calculators and programmable calculators will not be allowed. Makeup exams will be offered only in the case of very good and documented medical reasons (or very exceptional and documented personal reasons.) All exams will be closed book and a formula sheet will be provided with the exam. Any student involved in cheating will be reported to the Dean and prosecuted.

Online web page for the course: a web page for the course will be maintained at http://www.utdallas.edu/~mishak/courses/phys2325. Announcements and updates will be posted there on a regular basis.

Tentative Class Schedule

		Contents	Reading chapters
	1	Introduction, Units, Physical Quantities	1
	2	Vectors	1
	3	1D Motion, Velocity, Acceleration	2
	4	1D Motion, non-constant acceleration	2
	5	2D Motion and 3D motion	3
	6	2D Motion and 3D motion	3
	7	Forces and Newton's Laws	4
	8	Forces and Newton's Laws	4
	9	Application of Newton's Laws	5
	10	Application of Newton's Laws	5
	11	Exam 1: (chapters 1-5)	
	12	Exam solution; Work and kinetic energy (introduction)	
	13	Work and kinetic energy	6
	14	Work and kinetic energy	6
	15	Potential energy and energy conservation	7
	16	Potential energy and energy conservation;	7
	17	Momentum, Impulse, and Collisions	8
	18	Momentum, Impulse, and Collisions	8
	19	Exam 2	
	20	Rotation and moment of inertia	9
	21	Dynamics of rotational motion (Torque, Rolling, angular momentum)	10
	22	Static equilibrium and Elasticity	11
	23	Gravitation	12
	24	Simple Harmonic Motion	13
	25	Fluid mechanics	14
	26	Waves, Sound	15,16
	27	Review	

	28	**Final Exam**	