Syllabus for ISP209, Spring 2002

Lecturer: Prof. Carl Bromberg, reach me by E-mail: bromberg@pa.msu.edu,
Office: Rm. 251/255PA, Phone: 353-1809. Note: Physics Dept., moves this spring!
Office hrs.: Tues. & Thurs., 10:30 - 12:00, or by appointment.

TA: TBA
Office hrs: TBA

Lectures:

- Tues. and Thurs., at 2:40-4:00 pm, room 118PA (see Course Schedule). Attendance is required. There are penalties for not attending lecture (see grading policies below).

Required Course Pack & Tools:

- The **required Course Pack,** "The Elastic Universe", Spring Semester 2002 (green cover), will be available **by Jan. 15**, **only** at the **Student Book Store (SBS), 421 E. Grand River**:; buy a 3-ring binder for it! For now, Ch. 1 & HW 1 are on the **web site**.
- A calculator with scientific notation may be needed. Algebra is required and trigonometry may be used. Review scientific notation in Ch. 1. Metric units of length (m) and mass (kg), are used in most cases. Review the algebra of units in Ch. 3.

Course Topics:

- Course covers the topics shown in the **Course Schedule** (on the next page).
- Lecture topics follow closely the Course Pack **Reading Assignments**. All topics, presented in the Course Pack and lecture, may appear on an exam.

Homework (HW):

- There are 13 homework assignments as indicated in the **Course Schedule**.
- Standardized **Homework Answer Sheets** are included at the back of the Course Pack and are due at 2:40 pm in 118PA on the dates shown (on Thurs.) Homework submissions (see below) must be on **these standardized sheets (reproductions not accepted)**.

Exams, in-class quizzes & Grades

- At the beginning of class, students must pick up **ONE (your own)** "bubble sheet", and return it at the end of class. During class, **quiz questions** (multiple choice, 1 point each) may be asked that are based on lecture, reading, or homework.
- Three, **30–minute exams** (20 points each) will be given in lecture on the dates indicated in the Course Schedule. Each exam covers the chapters indicated.
- There is a 2 hr. final exam (for a total of 180 points); see Course Schedule.
- Documented medical (or other) excuses for **one** exam, **one** quiz, and **one late** HW assignment (**all HW must be submitted**), will be accepted up to one week following the absence; the final exam score will be used to compensate for an *excused* absence.
- HW and grades: HW submitted on time will be graded. Unless excused, **late HW** will not be graded). Homework grades are weighted to contribute a maximum of 30 points to point total. **Before the final exam, all homework assignments must be submitted, or an I-grade for the course may be given**.
- Grades are "curved" with the mean point score (out of ~300) receiving a 3.0 grade.
- Check the **WEB** site, **http://www.pa.msu.edu/courses/isp209**, for Chap. 1 & HW 1, HW, exam, and quiz solutions, as well as scores and grades.

ISP209 Schedule
Spring 2002

W	D	Date	L	Title	HW Due	Read Ch.
1	T	Jan. 8	1	Introduction to forces		1
	TH	Jan. 10	2	"		
2	T	Jan. 15	3	Visit by Prof. Brian Greene: " the Ultimate Theory"		
	TH	Jan. 17	4	Spring forces	1	2
3	T	Jan. 22	5	"		
	TH	Jan. 24	6	Hooke's law	2	3
4	T	Jan. 29	7	"		
	TH	Jan. 31	8	Springs generate forces and store energy	3	4
5	T	Feb. 5	9	" and **30-min. Exam (Ch.1-3)**		
	TH	Feb. 7	10	Springs and gravity	4	5
6	T	Feb. 12	11	"		
	TH	Feb. 14	12	Gravity and the body	5	6
7	T	Feb. 19	13	"		
	TH	Feb. 21	14	Static torque and friction	6	7
8	T	Feb. 26	15	" and **30-min. Exam (Ch.1-6)**		
	TH	Feb. 28	16	"	7	
				Spring Break		
9	T	Mar. 12	17	Work, potential energy, and energy conservation		8
	TH	Mar. 14	18	"		
10	T	Mar. 19	19	Kinetic energy, potential and kinetic energy transfers		9
	TH	Mar. 21	20	"	8	
11	T	Mar. 26	21	"		
	TH	Mar. 28	22	Gravitational potential energy, *PE* and *KE* transfers	9	10
12	T	Apr. 2	23	"		
	TH	Apr. 4	24	Momentum, energy, and their conservation	10	11
13	T	Apr. 9	25	"		
	TH	Apr. 11	26	Changing speed or direction (a. k. a. acceleration)	11	12
14	T	Apr. 16	27	" **and 30-min. Exam (Ch.1-11)**		
	TH	Apr. 18	28	Accelerated environments	12	13
15	T	Apr. 23	29	"		
	TH	Apr. 25	30	"	13	
	T	Apr. 30		**Final Exam** 3:00 - 5:00 PM , 118PA		
				(Lec. 1-30, Ch. 1-13, HW 1-13)		

NOTE: There is NO alternate date or time for the Final Exam. Conflicts should be resolved in your other courses.