SYLLABUS: DYNAMICS PHYS—UA120.001 FALL 2003

Instructor: E. L. Schucking. Office 522 Meyer. Tel. 212-998-7715. Email: elschucking@msn.com. Home phone 212-533-7522, no calls after 10 pm. Office Hour Th 11-12 a.m.

Classes: T/T 9:30-10:45 a.m. in Room 421 Meyer.

Recitation M 3:30-4:45 p.m. in Room 421 Meyer. Instructor: D. Karagyozov. dpk257@nyu.edu. Office 639 Meyer. Phone (212) 998-3627.


Week 1: 9/3 study CM p. 1-15. HW: Do problems 1,2,4,5,6,10 of chapter 1 CM. Due 9/10.
Week 2: 9/10 study CM p.16-48.. HW: Do problems 13, 15, 24, 30, 32 of second chapter CM. Problems are due on 9/17
Week 4: 9/24 study CM p. 73-103.
Week 5: 10/1 study CM p. 105-128.
Week 6: 10/8 study CM p. 159-176.
Week 7: 10/14 &15 Fall Recess. No Classes. 10/17 MIDTERM EXAM..
Week 8: 10/22 study CM p. 177-196.
Week 9: 10/29 study CM p. 197-229.
Week 10: 11/5 study CM p. 231-251.
Week 11: 11/12 study CM 253-275.
Week 12: 11/19 study CM 277-305.11/21 Thanksgiving.
Week 14: 12/3 study Special Relativity.
Week 15: 12/10 study Continuum Mechanics. 12/12 last day of classes.
Final Exam: Tuesday 12/17 at 8:00—9:50 a.m. Lecture instead of Final.

TERM PAPER
THE FEIGENBAUM NUMBER
The following items should be covered: 1. History. 2. The Logistics Map. 3. Strange Attractors. 4. Period Doubling. 5. The Feigenbaum Number \( \delta = 4.669\ldots \) 6. Application to Physics.
Your paper should not be a popular account with a minimum of formulae like Stewart’s book. It should be aimed to the level of a Junior Physics Major who had never heard of the subject. Your paper should give your own understanding of the topic expressed in your own words and as a result of your own studies. The use of sources should be referenced.
Papers should be submitted electronically to elschucking@msn.com and as hard copy by 12/17/2012.
Grades are assigned as follows: Midterm 30%, Homework 30%, Term Paper 40%.