

PHYS OF HOW THINGS WORK

Phys 101

Session: 01/11-04/27' 10; April 27 Reading day

Final Exam: 5:50 pm, in class, 5 May 2010

Lecture Class: PSC 002, 4:00 pm-5:15 pm, Mon & Wednesdays.
HW-PSC 208, please see your individual class schedule.

Professor: T. Datta

Office: PSC 501/502 (777-7669) 2:30 pm -3:30 pm Wednesday or by appointment

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Topics & course description: The man made world is filled with gadgets. Most aspects of our lives happen as if by some magic. But none of this is magic, arguably even “magic is not magic” so no wonder the jet aircraft, CAT scanner or mobile phone did not fall out of the sky, grew in the fields or were dug up from the ground – no most certainly not! Each and every one of these gizmos is based on well understood logical principles. Physics of how things work is a beginner’s course to understand the basic principles of science that gives us the marvelous technology of the modern life.

Course goal: The goal is to learn some of the physical principals by studying the workings of items from everyday gadgets. This course will help you to anticipate and shape future progress and hopefully be an educated consumer & citizen.

Lecture class/notes: Large parts of this course will be lectures from my personal notes.

Companion Book: How Everything Works by Louis Bloomfield; ISBN 978-0-470-17066-3, John Wiley.

Home work: Charts, tables, graphs, figures, qualitative & quantitative compositions.

Tests & Exams: Four 1hr tests & Final

Grading: tests 50% + HW 30% & in-class work 20%

Scale: Standard 10 pt, viz., 100-90% = A, 89-80% = B, etc.

Calendar for Spring 2010

Weeks # 1- 3 Moving and mechanical things. **Test#1.**

Weeks # 4- 5 Rapid motion and relativity. **Test#2.**

Weeks # 6- 7 Fluids & heat.

Weeks # 8- 10 Power & electricity. **Test#3.**

Week # 11- 13 Space, atomic nuclear. **Test#4.**

Final in class May 5 @ 5:30pm