PHYSICS 100

Introduction to Physics

- Bridges the gap between school science and Physics 101, Physics 120, Physics 125 or Physics 140

- Only for those WITHOUT Physics 12 or equiv. (C+ or better). If you have Physics 12 (C+ or better) you’ll be dropped from the course sooner or later. The computer system doesn’t do this automatically.

- Can also serve as a science elective but is not Q or B

  Physics 190 (Astronomy), Physics 192 (Physics of Music) might be better.
Lectures

Neil Alberding, Senior Lecturer

Mon, We, Fri. 9:30 — 10:20, B9201

- Please come on time, stay until the end
- Be quiet, turn off phones, close laptops
- For a better view, sit in front
- During lectures there will be occasional iClicker questions
- Homework credit for participation
Web Site

http://www.sfu.ca/phys/100

Course info, Lecture notes, review material...

Course schedule:

http://www.sfu.ca/phys/100/1104/Schedule.pdf
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Supplementary Material

- Readings
- In-class worksheets (on-line, print yourself)
- Active Learning Labs

* You need to print these and take them to the lab
Textbooks

Knight, Jones and Field, College Physics Custom Edition

Useful to consult other textbooks

Library

Used

Giancoli — Walker — Halliday & Resnick

“College Physics” — algebra only

“University Physics” or “Physics for Scientists and Engineers” — some calculus (that’s ok)
Active Learning Labs

- Scheduled in the tutorial session, P9412
- Graded pass/fail
- All labs must be passed to complete the course
- Start next Tuesday or Wednesday!
- Every Tuesday or Wednesday
Homework

One assignment each week, usually

1. Mastering Physics online physics homework

2. Written Problems to be handed in to the Physics 100 box

✓ Due Tuesday at 5:30 pm (to be confirmed)
✓ (no late submissions)

Problems graded at random.

Solutions to be posted after due date

20 % of mark
Physics Help

“Open Lab”

Place: RCB6125

Times: Tuesday 12:30–5:20

We will explain concepts and give some guidance for doing the homework.

My Office hours: P9444, Mon & Wed 11–12
Quizzes

- One quiz every second week: 6 in all
- Fridays
- Length: about 25 min
- 2 written problems or 10 multiple choice
  - Similar to assignment questions
- No midterms
- 30% of total mark
Final Exam

- Thursday, Aug. 16
- Location: TBA
- 3:30 — 6:30 pm
- 1/2 written problems, 1/2 multiple choice
- Similar to quizzes
- 50% of grade (at least)
Grading

- Labs: all must be done with a passing grade
- Homework: 20%
  - iClicker questions = 1 assignment
- Quizzes: 30% (5% for each one)
- Final Exam: 50%
Missed term work

Any term marks missed (for whatever reason) will be added to the value of the final exam.

If you miss a quiz, then the final exam is worth 55% for you.

If you take the quiz but get it 1/2 right, the final exam is worth 52.5% for you.

This goes for all quizzes and homework.

If you don’t get any term work marks, your grade is based 100% on the final exam.
Grade Formula

\[ G = T + \frac{(100\%-T)F}{50\%} \]

- **G** is the final grade
- **T** is your term work grade, max 50%
- **F** is your final exam grade, max 50%
You get 40% out of 50% on quizzes and homework.

You get 30% out of 50% on the final exam.

\[ G = 40\% + (100\%-40\%)(30\%/50\%) = 76\% \]

instead of 70%
Letter Grades

A+ 90% - 100%
A  85% - 89%
A– 80% - 84%
B+ 76% - 79%
B  72% - 75%
B– 68% - 71%
C+ 64% - 67%
C  60% - 63%
C– 55% - 59%
D  50% - 54%
F   0% - 49%
Topics

1. Dealing with space and time mathematically (1 wk)
2. Kinematics: measurement of motion (2 wks)
3. Vectors: describing 3-d space (1 wk)
4. Dynamics: How forces cause motion to change (2 wks)
5. Circular Motion & Gravitation (1 wk)
6. Momentum and Mechanical Energy (2 wks)
7. Optics (geometrical) (1 wk)
8. Electricity (static) (1 wk)