

How to Study Physics

By Seville Chapman

A proper mental attitude toward the material to be studied is the primary requirement. Resolutions alone will not help, for learning physics takes work. There are no short cuts, but there are ways of learning to work effectively if you seriously want to learn. You, the science student, are expected to know the following.

1. The facts of physics
2. The principles of physics
3. Analytic methods of attacking problems
4. Laboratory techniques for attacking problems.
5. Procedures for applying the preceding items to new problems

When you study or work in the physics lab., train yourself to ask yourself these basic questions:

1. What is the fact precisely? (Don't be vague.)
2. Why is it so? What is the evidence? (This is important!)
3. How does it tie in with other ideas in physics?
4. What is a typical problem concerning it?
5. Have I only memorized it, or do I know what to do with it? (Find out by trying to apply the fact to new situations.)
6. What was its importance when it was discovered and how did it affect the development of physics?
7. In relation to what is it important now? How? Why?

Developing precise answers to these questions may be difficult and time-consuming, but this practice is a valuable part of your training in physics.

General Study Hints

1. Develop an interest in the subject by learning more about it through outside reading in magazines, newspapers, etc. Try to relate it to other courses. Discuss the subject with other students.
2. Be alert in class; make a serious effort to stay with lecture.
3. Adopt a receptive, cooperative attitude. Perhaps sitting in one of the front rows may help.
4. Find a quiet place to study and keep with your work. Reject interruptions. The time you save will enable you to enjoy occasional bull sessions without feeling guilty about not studying.
5. Budget your time. Get enough sleep, some regular exercise, and some recreation. You learn more physics by studying it for an hour a day than by studying for 10 hours over the weekend. This enables you to keep-up with your work and helps to make some assignments less overwhelming. Also regular practice reduces exam panic and anxiety.
6. Plan to study physics as soon after class as possible while the material from lecture is still fresh.
7. When you study, really study, instead of day-dreaming or loafing. Keep your personal worries off your mind when you plan to work on physics. IF you have a problem, get

some good advice think it over and make a decision. Do this before you study, if possible; if not, make the necessary arrangements and put the problem out of your mind so that you can concentrate on your work.

8. Spend a few minutes before class reading (or re-reading) the main paragraph headings on the subject to be covered. Experiment to find out how much of your reading on a subject should be done before the lecture and how much after class.