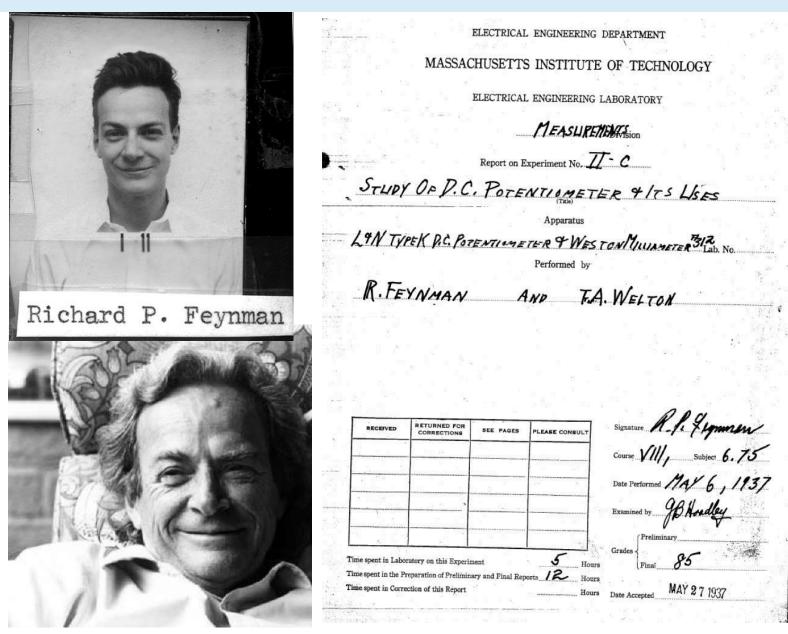
Great Scientists Take Lab Courses at MIT



8.S10 Techniques in Experimental Physics

- Foundational techniques and practices
- Key instrumentation
- Basic data and analysis techniques
- Best safety practices
- Real lab visits and UROP opportunities
- Be prepared to enjoy and ace Junior Lab
- First year students welcome!

8.S10: Techniques of Experimental Physics

Prereq: 8.01, 18.01

U (Spring) 3-3-3 units.

Introduces foundational techniques and practices for experimental physics. Material and mechanics; heat; vacuum; cryogenics; magnetic systems; high voltage; charged particle beam manipulation; detectors; electronics; data acquisition; signal-to-noise. There are weekly laboratories where student groups learn how to use basic experimental equipment. Best safety practices in the laboratory are taught. Key instrumentation, e.g. oscilloscope, laser, lock-in amplifier, analog-to-digital converter, are introduced. Use of computation in experimental design is introduced. Late in the semester students visit campus laboratories providing summer research opportunities. Freshmen in good standing welcome.

R. Milner, C. Paus