* PHY 210 (STL) P/D/F Only

Experimental Physics Seminar
Christopher G. Tully
This seminar introduces fundamental techniques of electronics and instrumentation. The course consists of weekly hands-on labs that introduce the students to the fascinating world of electronics. We begin with learning how to build circuits and probe their behavior and then explore what can be done to create instrumentation and make measurements. We start with analog electronics and then proceed with programmable digital logic with FPGAs. The final project involves Machine Learning implemented in FPGAs, a glimpse of what modern electronics can do.

Sample reading list:
Horowitz and Hayes, Art of Electronics 3rd edition

Reading/Writing assignments:
Weekly lab assignments. Mid-term and final electronics projects.

Requirements/Grading:
Lab Reports - 30%
Class/Precept Participation - 10%
Project Assignments - 60%

Other Requirements:
Open to Freshmen and Sophomores Only.

Prerequisites and Restrictions:
Juniors and seniors will be considered on request, please email Karen Kelly (kkaras@princeton.edu). No electronics experience is required, and no previous science or programming background is assumed. It should be possible for newcomers to achieve the main goals each week, while experts also get to explore more sophisticated, optional extensions. In addition to the main lab, there will be a 50min. precept scheduled according to the availability of the groups for additional instruction.

Schedule/Classroom assignment:

Section	Time	Days	Room		Enrollment	Status
S01	1:30PM-4:20PM	F	Jadwin Hall	468	Enrolled: Limit:24	
	P99 TBA					