

Deadline for applying is October 25!

WORKSHOP SCHEDULE

Friday, December 6

Participants arrive in Portland

Saturday, December 7

Breakfast at the hotel

7:30 a.m.	Hotel pick-up
8–8:30 a.m.	Introduction
8:30–10:30 a.m.	Lab work
10:30–11 a.m.	Break
11 a.m.–12:30 p.m.	Lab work
12:30–1:30 p.m.	Lunch, Q&A time
1:30–3 p.m.	Lab work
3–3:30 p.m.	Break
3:30–5 p.m.	Lab work
5–7 p.m.	Dinner
7 p.m.	Return to hotel

Sunday, December 8

Breakfast at the hotel

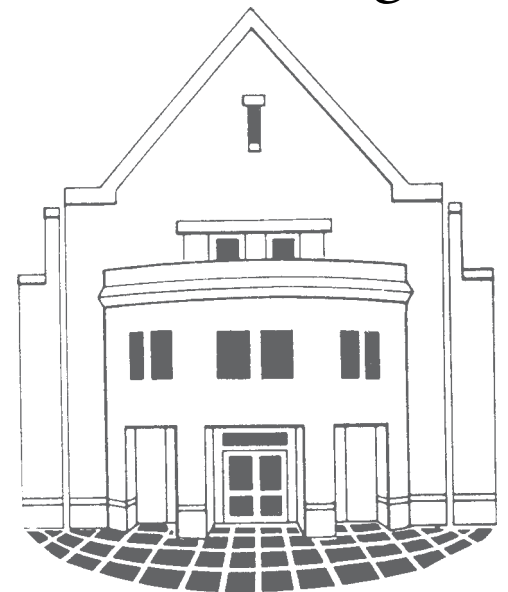
7:30 a.m.	Hotel pick-up
8–10 a.m.	Lab work
10–10:30 a.m.	Break
10:30–noon	Lab Work
Noon–1 p.m.	Lunch, Q&A time
1 p.m.	Workshop ends

Department of Physics
REED COLLEGE
3203 SE Woodstock Blvd
Portland OR 97202-8199

Want to provide your **advanced laboratory students**
with **computer-based experimentation skills**?

ADVANCED PHYSICS LAB WORKSHOP

December 7–8, 2002
Reed College
Portland, Oregon



Over the past nine years, computer-based data acquisition and analysis skills have been taught successfully to advanced laboratory students in the Reed College physics department. The instructional materials developed for this course first teach students the LabVIEW programming language, then guide them in using it to create computer-controlled experiments with data acquisition and general purpose interface bus (GPIB) boards plugged into the expansion slots of their computers.

In this workshop, physics professors from throughout the Northwest will be provided experience with these course materials. No prior knowledge of LabVIEW is necessary. In advance of the workshop, each participant will receive the course materials and is asked to devote 15 to 20 hours of self-study of the guided exercises to learn the LabVIEW programming language. Then, during the workshop, participants will use their programming skills to build several computer-based instruments (digital thermometer, oscilloscope, spectrum analyzer, temperature controller) and explore GPIB control of instrumentation on Reed's hardware systems. By the workshop's end, each professor will have the course materials and experience necessary to create a similar instructional lab at his or her own institution. The requirements for developing such a lab will be discussed during the workshop, and suggestions will be provided for adapting the material into a teaching unit ranging from four weeks to a full semester.

The Reed workshop is supported by the M.J. Murdock Charitable Trust.

The workshop will provide the following free of charge to each participant:

- Course materials, including the *Advanced LabVIEW Labs* text and the *LabVIEW Student Edition* software
- Access to two Reed professors, each with experience in teaching the advanced laboratory course
- Two nights lodging at a first-rate hotel in downtown Portland (nights of December 6 and 7)
- Five meals during workshop
- Transportation between Reed College and hotel during workshop

Each participant will provide

- Transportation between Portland and home (arrive evening of December 6 and depart after 1 p.m. on December 8)
- Commitment to complete self-guided course materials (approximately 15 to 20 hours of work) during the month before the workshop



Questions?

Write to John Essick at jessick@reed.edu
or Johnny Powell at dna@reed.edu

To apply for the Reed workshop, please submit your application by **October 25, 2002**, to:

John Essick
Department of Physics
Reed College
3203 SE Woodstock Blvd.
Portland OR 97202-8199

Space is limited to 16 participants. Notification of acceptance by November 1.

APPLICATION FOR WORKSHOP

Briefly answer the following three questions:

- Describe your past experience with computer-based data acquisition and analysis. (Do you have experience with LabVIEW or other programming languages, with which platforms are you comfortable, do you have experience with GPIB control of instruments?)
- Describe your department's upper-division instructional laboratory program. (Include number of majors, level of sophistication of required labs, inclusion of independent projects, degree of computer-based data acquisition and analysis)
- What outcome do you hope for by participating in the Reed workshop (what do you wish to obtain personally, what are possible implementation scenarios)?

Visit our web page at <http://academic.reed.edu/physics/workshop/workshop.html>