

Basic Machine Shop Orientation and Safety Instruction

Course instructor: Art Larsen

Dear Physics Faculty,

I am offering a machine shop orientation course in order to provide instruction for Physics graduate students who are working for research faculty. I will provide instruction for the course during the week of June 19th (Session 1) and, if necessary, the week of June 26th (Session 2), Tuesday -Friday from 1pm to 3:30pm. Each session is limited to 5 students.

Each student will receive 10 hours of instruction (2.5 hrs/Day, 10 hrs/Wk) on Tuesday, Wednesday, Thursday and Friday. Students will need to contact me to enroll in the course. Enrollment is on a first come, first served basis, but can be adjusted if necessary.

The instruction will consist of the following:

- Shop Safety, shop layout and orientation
- Planning a project/basic drawings (layout / design)
- Introduction to hand tools
- Work-holding techniques
- Band saw and belt sanding operations
- Introduction to the drill press(es) and associated tooling
- Introduction to lathe operations and associated tooling
- Introduction to milling operations and associated tooling

All students will be provided general instruction on the above bullets and then given the opportunity to put their newly learned, basic skills to practical use in a safe, supervised environment during the course of instruction. I will work with students over the remainder of the summer on any projects they may have in relation to their research. I will make myself available to them, as my schedule will allow, facilitating and assisting them with their endeavors.

Based on the physical size of the machine shop and the need for all students to be able to see and understand the instruction in a safe manner, *each session size is limited to 5 students maximum.* **As always, Physics graduate students (working in research labs) will take priority for enrollment fills** and then, space permitting, I will enroll Physics undergraduates (majors). If there is a higher than usual enrollment, we can then discuss options for student training on an individual or project driven basis.

Please understand: The instruction students receive will not make them machinists, nor will it give them unlimited, unsupervised access to the machine shop. It will however, provide them a better understanding of the machine shop's capabilities, a healthy respect for the machinery and tools in the shop, more confidence in their abilities to use the machinery, realize their limitations and generally give them a good base from which to work.

If you have graduate students you think will benefit from this instruction, please let me know as soon as possible. When responding, please note whether the student is a graduate or an undergraduate.

Questions and/or concerns can be directed to me.

Thank you,
Art Larsen