UM Taubman College
Metals Lab Handbook

Version 1.0

Issued September 8, 2008
Lab Policies

Any announcements or changes in schedule will be posted on the door outside room 1224. For Fall Semester 2008 the lab will be open with the following schedule. Lab hours are subject to change.

Monday: 7:00 pm – 10:00 pm
Tuesday: Afternoon Hours by Appointment
Wednesday: 10:00 am – 1:00 pm
Thursday: 7:00 pm – 10:00 pm
Friday: 10:00 am – 1:00 pm
Saturday: 1:00 pm – 5:00 pm
Sunday: Closed

Lab Coordinator:

Mick Kennedy  1224 A+A
mickk@umich.edu

Access

It is highly recommended that you speak with the lab coordinator in the planning stage of projects involving the Metals Lab equipment or materials. This will allow for input on issues you may not have considered such as material limitations, procedures, jig-making and scheduling. Please inform the coordinator in advance of your planned work-session in order to best guarantee dedicated consultation and help.

The Metals Lab has workstations and work tables and areas for use on a collective and cooperative basis. Please be respectful of the work area, tools as well as the work of others. Personal safety in the lab area is a collective concern and effort. Be aware of others and look out for each other’s safety. You are expected to clean up your work area completely after your work session.

Metals Lab Working Attire

While not inherently dangerous welding can be hot and dirty work. You are required to wear long pants and leather boots or shoe. Loose fitting, work clothing is highly recommended. **No-one wearing sneakers, open toed shoes or sandals will be allowed to work in the lab.** This requirement will be strictly enforced out of real concerns for safety.
Welding Tutorials and Tool Introductions

A major goal of the Metals Lab is to empower and encourage all students and faculty to incorporate metalworking and fabrication into their basic repertoire of design exploration, model making, and construction activity. A key component of the coordinator’s role is in teaching, assisting and facilitating the adoption of the necessary skills and confidence to work with these areas.

Introductory tutorials on MIG welding will be held according to the following schedule:

**Tutorials in September and October**

<table>
<thead>
<tr>
<th>Days</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wednesdays</td>
<td>10:00 am and 11:30 am</td>
</tr>
<tr>
<td>Thursdays</td>
<td>7:00 pm and 8:30 pm</td>
</tr>
<tr>
<td>Fridays</td>
<td>10:00 am and 11:30 am</td>
</tr>
<tr>
<td>Saturdays</td>
<td>1:30 pm and 3:00 pm</td>
</tr>
</tbody>
</table>

**Tutorials in November and December**

By appointment during regularly scheduled lab hours.

Tutorials are limited to four per session. Please contact me to schedule a tutorial session. If you cannot make your scheduled tutorial session, please contact the coordinator with as much lead time as possible as there may be another person waiting for a session.

Tutorials will cover MIG welding basics with hands on orientation and practice.

Faculty members are encouraged to make use of the lab for their courses. Those wishing to do so should meet with the coordinator at least two weeks in advance to discuss the project, relevant space requirements, work flows and general schedule constraints.
Material and Project Storage

Project materials can be stored in the overhead racks or sheet metal bin in the Metals Lab area. It should be clearly tagged with your name and uniquename for contact information. The Metals Lab cannot be responsible for materials stored in the lab. All scrap materials from your work should be removed from the lab or placed in the scrap bins for use by others.

The collective and cooperative ambitions of the High Bay work area seeks to allow areas for larger scale student and faculty projects to take place. This goal will only be as successful as the level of responsibility and cooperation of the all working in the High Bay. Everyone working in the High Bay should consider themselves individually and collectively responsible for keeping the area clean, uncluttered and safe. *Watch out for yourselves and each other. Clean up after yourselves and each other.*

All work-in-progress left in the Metals Lab area must be cleared first with the coordinator. **All project work should be clearly labeled with the date, contact name and uniquename.**

Be responsible about your work and communicate your intentions. Work left untouched for more than one week will be relocated at the discretion of the coordinator. Work left untouched for more than two weeks will be recycled at the discretion of the coordinator.
Lab Resources

2 Miller 110v MIG welding workstations
1 Miller 380v MIG welding mobile workstation

3’ Shear 16g capacity
3’ Break  16g capacity
6’ Break  12g capacity

Various and sundry grinding and finishing tools, saws and associated power tools for jig making, fabricating etc.

Drill Press

Horizontal and Vertical Metal Bandsaws

more toys to come…..

If you are interested in acquiring any personal welding equipment, tools or attire check with:

Lessors Welding Supply
4105 Jackson Rd.
Ann Arbor, MI 48103
734 761-9100

Ann Arbor Welding Supply
4811 Carpenter Rd.
Ypsilanti, MI 48197
734-572-0444

Friendly and helpful folks at both locations.
Material Resources

Alro Metals Plus
2466 S. Industrial Hwy
Ann Arbor, MI 48104
(734) 213-2727

Alro carries a wide assortment of structural shapes, rods and sheet metal at reasonable prices on a cash-and-carry basis. Larger orders, better prices and deliveries can be arranged through their home office in Jackson, MI.

Alro Steel
3100 E. High St.
Jackson, MI 49204-0927
(517) 787-5500

Factory Steel and Metal Supply
14020 Oakland Ave.
Detroit, Michigan 48203
313-883-6300

Factory steel carries a wide range of high strength tubing, bars and other precision metal stock. A particular wide range of non-ferrous metals. Worth the drive to Detroit.

McNichols
www.mcnichols.com/

McNichols carries a wide range of perforated, stamped and embossed sheet metals as well as an array of expanded metal lathe, gratings etc.

Scrap and Recycled Metals

No surprise that Detroit is well stocked with scrap metal yards. Most are willing to sell you metal on a per pound basis. Who knows what treasures you might find? Don’t expect special service or attention.

Try:

Kimmel Scrap Iron and Metal
10571 Grand River, Detroit, MI 48204
313 934-2141

or check at www.detroitscrapmetal.com
More Material Resources

Fastenal Ann Arbor  
1776 E Ellsworth Rd  
Ann Arbor, MI 48108  
734-665-9060

A great local source for a wide variety of nuts, bolts, fasteners, clips, etc. etc. in a huge array of sizes, finishes and metals. Very good prices and helpful staff.

McMaster-Carr  
www.mcmaster.com/

McMaster-Carr is a huge distributor of industrial products large and small: from soup to nuts. Everything under the sun. Helpful staff, usually next day shipping at no extra cost. A great, great resource.

Grainger Industrial Supply  
www.grainger.com

Similar range of products as McMaster Carr. They do have a supply house in Ann Arbor, though they can be prissy about selling directly.

2915 Boardwalk St.  
Ann Arbor, MI 48104-6765  
734-662-1060

Haefele  
www.hafele.com/us/

The US branch of the great German architectural hardware company. All types of amazing hardware for furniture, cabinetry, kitchens, industrial uses, showcases etc.

Sugatsune  
www.sugatsune.com/

If anyone makes nicer hardware than Haefele it is Sugatsune. Get one of their catalogs.