

**Gunsmithing Hand Tools**  
**(Benchmetal Hand Tools and Metallurgy)**  
**\$400 or 2 credit hours**  
**(core class for certificate)**

One of the greatest skills a gunsmith can have is the ability to do fine hand work. In Gunsmithing Hand Tools, we will be covering not only use of hand tools, but how to make your own high-quality tools, such as chisel and screwdrivers. We will also be working on basic metallurgy including steel identification, and selection, forging, soldering, brazing, and heat treating. The tools that we will be covering are based on what would be found in just about every gun shop across America, from major manufactures to home hobby shops. These tools include the use and care of files, vises, torches, hammers, pliers, and some power tools such as drill presses and belt sanders.

**Instructor: Fred Weisenborn**

**TOOL LIST**

(Please keep in mind that the tools suggested for each class are the minimum tools you should bring. Please feel free to bring any additional tools you feel you may need)

1. Safety glasses (required)
2. Pants (required)
3. Gloves
4. 1 lb to 3 lb hammer for forging (example: ball-peen or cross peen hammer)
5. Blacksmith tongs or vise-grips to hold 1/2" round stock and 1/4" stock
6. Hacksaw with extra blades
7. Tape measure
8. Ruler
9. Black permanent marker
10. Metal scribe
11. File card & brush
12. Assortment/variety of files- Magicut files are good (example: 6" mill bastard cut, 8" mill bastard cut, 12" mill bastard cut)  
\*\*\*Must have: 6" mill bastard cut 10" round rat tail, 10" mill bastard cut, 14" half round second cut, 8" half round mill bastard or comparable\*\*\*
13. Aluminum oxide sand paper 80, 120, 180, 240, 320 grit CLOTH BACKED! shop rolls or sheets- Norton and 3M brands are good
14. Telescoping magnetic pickup tool
15. Pliers- needle nose and standard utility
16. Soft vise jaws (example: Bessey- non-marring vise jaws from Home Depot)
17. 2 pieces of SPENT!! bottle neck cartridge brass (example: 30-06)
18. Torch glasses or goggles for oxyacetylene cutting/welding
19. 6" adjustable wrench

-This list reflects minimum requirements. If you have other tools or supplies that maybe useful, bring them because you can never have enough tools.

#### Optional Tools

1. Propane or MAP Gas Torch