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.

Fred Weisenborn grew up in the Ozark hills of Missouri, where his father introduced him to the art of blacksmithing. As a teenager, Fred joined the local blacksmith association, where he worked with artists and craftsmen throughout the country and developed a passion for creating things from metal. He spent the summer of 2002 at the Touchstone Center for Crafts in PA, where he was able to work with many master smiths like Raymond Rybar and Bill Fiorini. When the time came to choose a career, Fred decided to attend Trinidad State College's gunsmith program. In the next two years, Fred was taught everything from basic machining to building his own 50 caliber rifle. After college, he worked for two years as a gunsmith for Gander Mountain in Foreset Lake, MN. He decided to make a career change in 2007 and moved to the St. Louis area in the hopes of more career opportunities in the firearm business. In 2010 he began working for Midwest Gun Works in Pevely, MO as a gunsmith. Fred enjoys the daily challenges that come with his trade, and believes that through hard work and the ability to collaborate with others, no problem is too big to solve. Fred designs and makes knives and pens in his spare time and still enjoys creating work over the forge. He sells items online as well as at local craft shows and consignment shops.



Fred Weisenborn

STUDENT TOOL LIST

(<u>Please keep in mind that the tools suggested for each class are the minimum tools you should</u> 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