This will be a two-week long hands-on course on Metalsmithing the falling block rifle. The emphasis will be on the high quality workmanship and the accurate single shot rifle. The student will be led through the process of properly preparing and barreling their own single shot action. Class will cover the various US and British single shot action designs of the late 19th century up through WWI. Classroom instruction will cover the various action designs, simple and set trigger designs, chamber and extractor/ejector designs, and basic metallurgy and heat treating theory. PREREQUISITES: Mill, lathe and hand tool experience or consent of instructor.

Glenn Fewless is an American Custom Gunmakers Guild member specializing in building high quality BPCR rifles and classic single shot rifles. Glenn not only demonstrates his ability to create works of art in metal and wood, but also as a seasoned competitor in NRA Black Powder Cartridge Rifle Silhouette, Midrange and Creedmoor matches as well as the American Single Shot Rifle Association.

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Metalsmithing the Single Shot Rifle Tool List

Single shot falling block action of your choice, original or reproduction. There are reproductions of some of the old actions available, such as Steve Earle’s Wesson #1 Long Range and CPA’s Steven’s 44-1/2 action.

Barrel blank. Students choice of caliber, twist, contour and make. Contouring or octagoning of blank can be done in class, but if you obtain a contoured or octagon blank it will save some time that could be used elsewhere on the project. Most any of the barrel makers will supply the barrels contoured and some offer octagon. Green Mountain offers quality octagon barrels in large calibers at a reasonable price.

Chamber reamer. Most SAMMI spec reamers are available for use in the TSJC tool room. If you have specific desires for chamber dimensions you will need to provide your own reamer and head space gauges if required.

Sights or scope blocks, as desired.

Shop tools. As the students are expected to have a working knowledge of lathes and milling machines, they will have a good idea as to what tools they will need. A basic list would include.

- Quality 6” caliper
- Quality 1” micrometer
6” scale  
¼ and 5/16” high speed tool bits.  
Center gauge  
Thread pitch gauge  
Milling cutters, ¼, 3/8 and ½”  
3/8” 60* dovetail cutter  
Set of feeler gauges  
Quality dial test indicator  
Magnetic base indicator holder  
Calculator and note book  
Set of Allen wrenches .050” to 3/8  
8” mill file  
6” Swiss pillar files #0 and #2 cut  
Handles for files Polishing tools and techniques. All polishing will be done by hand, requiring a small assortment of abrasive stones and QUALITY abrasive paper. 1/2 “ and 3/8” triangular stones in medium and coarse would be a good start. Abrasive paper in 120, 180, 240, 320, 400 and 600 grit.  
Safety glasses are required in the machine shop labs. Prescription glasses are acceptable. If your eyes have a lot of miles on them you might consider a low to medium power Optivisor to help with the detail work. I use a #3 lens most of the time.  
Students are encouraged to contact instructor for advice on tools and materials for their specific project. Many of the tools and measuring instruments are available at the TSJC Book Store at student discount prices

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