

Intro to Knife Making Class

Are you a fan of the hit TV show Forged in Fire? Broken Hammer Forge is pleased to offer a group knife making class. Students will participate in a two day course where they will forge and finish a blade of their own design. The knives will consist of single edge blades with wooden scales for handle.

This course is intended for students from a wide range of skill. Any prior experience that you have will be helpful but beginners are welcomed. There is no set age limit for this class but it is an intense 2 day course. Any teenager who applies will need to have enough focus and physical strength to make it through 2 days of swinging a 2 ½ lb hammer. We recommend around 15 and up. Included in this pamphlet is your sign-up sheet and liability waiver. If you have any questions please feel free to call me at: 410 - 310 - 4560.

As for the always entertaining liability waiver form, which my insurance company makes me have everyone sign, the basic idea is this: blacksmithing can be dangerous. The danger is significantly reduced by using the proper safety gear and, of course, by using common sense and following the safety rules. It is my job to see to it that this class is safe and fun. Having said that there are times when I accidentally hurt myself in the shop. Minor scrapes and burns can happen. We will be working with hand tools and next to open flames. Also this is a physical activity that will last for several hours over three days. Water and rest times are provided but if you feel that your physical conditioning will not allow you to participate then you may want to reconsider.

Disclaimer:

While we will make every effort for students to be successful do keep in mind that we do not guarantee that everyone will be successful in making the knife. Things can go wrong and mistakes can be made. Please pay careful attention to all instructions and mind your fires. Also please keep in mind that blades are tools and tools have limits. If they are taxed beyond their limits or if there was a mistake in the forging process they may break. Please do not abuse

your blade at home. Also for any student under 18 there are two additional considerations. First, a parent or guardian must attend with them. Second, it will be the decision of the parent if the blade is sharpened.

Blacksmithing Class Liability Waiver Form

In consideration of Broken Hammer Forge and its instructor, David Collier, making these classes available and granting permission to enter the school of said classes, I hereby waive all claims for damage and/or loss to my person or property which may be caused by any act on my part, the part of the instructor, act of God or acts of my fellow students. I understand there are inherent dangers in blacksmithing and I assume the risk of all dangerous conditions in and about said classes. I also understand that blacksmithing can be physically demanding and I assert that I am in good physical condition and therefore able to handle the demands of the class. I also agree to follow and obey the safety rules and instructions of the class instructor. Failure to do so may result in being expelled from the facility.

This class and the items made during it are intended for artisan craft training and conceptual purposes only and neither the instructor (David Collier) nor Broken Hammer Forge assumes any liability in any form for the items' misuse by anyone. The student accepts full responsibility to possess, transport, store, use and monitor the items (especially the sword) in accordance with all rules of safety and responsibility and to comply with any and all applicable local, state and federal laws concerning such items. Also, neither the instructor (David Collier) nor Broken Hammer Forge assumes any responsibility if the blades fail or break at any time. I also accept that my registration fee is non-refundable if I fail to attend a class, cancel within two weeks of the class date or am unable to complete the class. By signing this, I acknowledge that I understand and accept this waiver and that I am at least 18 years of age.

Signature _____

Date _____

Printed Name _____

Date _____

Blacksmithing Class Liability Waiver Form

In consideration of Broken Hammer Forge and its instructor, David Collier, making these classes available and granting permission to enter the school of said classes, I hereby waive all claims for damage and/or loss to my person or property which may be caused by any act on my part, the part of the instructor, act of God or acts of my fellow students. I understand there are inherent dangers in blacksmithing and I assume the risk of all dangerous conditions in and about said classes. I also understand that blacksmithing can be physically demanding and I assert that I am in good physical condition and therefore able to handle the demands of the class. I also agree to follow and obey the safety rules and/or instructions of the class instructor. I understand and accept that if I fail to obey these rules and/or instructions it may result in my removal from the class and the forfeit of my registration fee. I also accept that my registration fee is non-refundable if I fail to attend a class, cancel within two weeks of the class date or am unable to complete the class. By signing this, I acknowledge that I understand and accept this waiver.

Parent or Guardian's Signature _____

Date _____

Parent or Guardian's Printed Name _____

Date _____

Student's Name _____

Class Schedule:Saturday:

8:00 – noon: morning session

noon – 12:30: lunch

12:30 – 4:00: afternoon session

Sunday:

8:00 – noon: morning session

noon – 12:30: lunch

12:30 – 4:00: afternoon session

What to expect:

The school is held indoors with fans and natural ventilation. Classes will alternate between verbal instruction and demonstration followed by hands on practice. There are 6 slots total. We will be using 2.25lb hand hammers, various hand tool and some power tools. We will have pizza for lunches. If you have special dietary needs feel free to bring lunch. We do have a small kitchen on site with a fridge and microwave.

Class Cost:

This class is \$450 per student. This cost includes all fuel, materials, tools.

Please bring the following gear:

- full length pants; preferably jeans (unless the forecast calls for hot weather)
- closed toe shoes (work boots are ideal)
- gloves (leather is ideal, no synthetic materials, must be able to have good dexterity with them, they should come off easily, no large welding gloves)
- shirts should be made from natural materials to prevent melting or flash-burning
- long hair will need to be pulled back.
- camera and note taking material if you wish
- please keep in mind that we will be working with coal which tends to be somewhat dirty, so older work clothes may be best

The following gear will be provided:

- safety goggles, aprons, ear plugs

Also provided:

There will be coffee each morning. Water will be available throughout the sessions. All materials and tools are provided but if you have a favorite hammer you wish to bring please feel free.

The School is located at:

16343 Oakland RD
Henderson, MD 21640
410 - 310 – 4560 – cell
410 – 482 – 6221 – landline

Registration and Cancellation Policies:

Due to the possibility of having more people interested in a particular class than we have room for, we prefer to have the paperwork and registration fee sent in as soon as you reasonably can. This will guarantee your spot and avoid any confusion. If the full amount is too much at one time you may send in a 50% deposit and mail in the rest at least two weeks prior to the class. Cancellations more than two weeks prior to class will receive a full refund. Please note that your fee is non-refundable if you fail to attend a class, cancel within two weeks of the class date or are unable to complete the class. Please note that the two week cut off is for cancellations only. Registration remains open for any class up to the day before class, assuming there are still openings.

Hotels:

For local hotel please visit the bottom of the 'Directions' page on our website.

Parking:

Our facility is on a working farm and due to livestock safety regulations certain areas are restricted. Please park in front of the brick house – just off to the left when the road splits - following the signs. The shop is the large brown building just behind the brick farm house. Someone will be there to show you the way. Please note that due to certain areas being off limits, because they are part of the working farm, we ask that all students, parents and other family who may be in attendance to please stay in the designated forge area. There are certain biohazards that can be accidentally tracked in on shoes and clothing which can be harmful to our livestock. Thank you.

Broken Hammer Forge
Intro to Knife Making Class
Registration form
www.brokenhammerforge.com
16343 Oakland RD
Henderson, MD 21640
410 – 310 - 4560

Name_____

Street_____

Town_____ State_____ Zip_____

Telephone_____

E-mail_____

I am signing up for the following 2026 session:

February 7 - 8 _____

March 28 - 29 _____

July 11 – 12 _____

December 5 – 6 _____

Class fee: \$450 / person

- includes full weekend, all materials and meals
- make check payable to Broken Hammer Forge
- We can take credit cards over the phone

Please mail registration form, money and waiver to:

16373 Oakland RD
Henderson, MD 21640

Full Tempering Sequence

- Note that this is the full version used for knives.
- Some exotic steels may need slightly different steps, some will need higher temps and some of the high alloy steels can't be traditionally tempered but rather are hardened by air cooling.
- note that there is technically supposed to be a soak time for all metals at each step. That is once at critical it should be held at that temperature for 1 hour / inch of thickness. With blades you can often get away with just a few minutes since the edge is so thin.

Step 1: Normalize – This is where the metal is brought up to the critical point, a little beyond when a magnet will no longer stick to it, and then allowed to cool slowly in still air. The metal must not be laying flat on a surface that will act as a heat sink and pull heat out faster from one side. Critical point varies based on carbon content. This should be done 1 – 2 times.

Step 2: Anneal – This is where the metal is heated to critical point, held for longer than normal soak time and then allowed to cool over several hours. This can be done with a controlled over, burying in vermiculite (although it should be heated first with other bars of hot steel) or placed in hot wood ash. This step is actually only needed for milling. So if it is a blade that will just be ground on the belt sander then this step can be skipped.

Step 3: Quenching – Heat again to critical point and then quench in water or oil until cool enough to handle. Water or oil and which oil to use depends on the alloy.

Step 4: Tempering – Slowly bake the steel (ideally in an oven) until it reaches the desired temperature. Hold there for ½ and hour once the steel is at temp. most people put the blade in for 2 hours and walk away. Longer time does no damage at this point. Exact temperatures vary somewhat depending on the alloy of steel and different sources will give different numbers. Also the colors do not always correspond to the right temperatures. However, the general numbers are:

- 275 degrees for hard steel like a flint strikers
- 350 degree for tougher steel such as hammers
- 450 degrees for knives and springs
- Higher heats for some modern alloy steels