

Handles and Guards

American Bladesmith Society, Inc.

Class Syllabus

The purpose of the American Bladesmith Society, Inc. is to preserve the art of the forged blade, tools, and other implements. The ABS is a non-profit educational entity which strives to accomplish this goal by providing information and instruction. The following syllabus is submitted as pertains to the ABS Handles and Guards Course.

Goals

The goal of this five-day course is to familiarize students with the different types of handle and/or guard assemblies commonly used in the construction of a finished knife and develop the skills necessary to plan, build and assemble a variety of handle and guard assemblies in a professional manner.

Students should be exposed to different types of handle construction during this five-day course to include the following types of handle construction:

1. Hidden tang (also referred to as stick tang)
 - a. Threaded or pinned tang
 - b. Mortised tang.
 - c. Frame handle

2. Full Tang

At the conclusion of this course, students should be familiar with these different types of knife handle construction and should be able to explain the steps involved in the construction of each. Students should also have assembled and finished at least one complete knife and have the necessary basic skill set to continue finishing knife handles after completing the course.

Handle Materials

Students will become familiar with different types of natural handle materials and their characteristics, as well as the tools necessary to properly set up and finish the different types of handles. Though the class will be taught using wooden handle materials, other materials, such as stag, ivory, horn, and mother-of-pearl will be discussed.

Hardware Materials and Selection

Students will be familiarized with different metals which are commonly used as hardware, such as guards and butt caps. Machining characteristics, soldering/brazing requirements and different finishing techniques will be discussed and/or demonstrated for these alloys.

Adhesives

Students will be familiarized with different types of adhesives, their characteristics and uses for each.

Tool Selection

Students will be advised of tools, both common and specialized which are used in the fabrication of different knife handle materials and designs. This should include power tools, hand tools and custom jigs and available tooling.

Processes Learned

There will be many processes demonstrated during this five-day course. Students should be familiarized with the following:

1. Different types of handles and the purposes for each.
2. Designing handles.
3. Setting up of blade shoulders and tang for receiving the guard.
4. Affixing the guard
 - a. Low-temp soldering
 - b. Solderless
5. Design and fitting of multi-piece guard and spacer assemblies.
6. Shaping of handle/guard materials
 - a. Power tools (belt grinder, etc.)
 - b. Hand tools
7. Design and fitting of butt caps.
8. Final assembly and use of adhesives.
9. Finishing processes for different handle materials
 - a. Metals
 - i. Sanding and finishing of bare metals
 - ii. Discussion of coloration techniques for metals
 - b. Handle materials
 - i. Woods
 - ii. Horn – discussion only
 - iii. Ivory – discussion
 - iv. Mother-of-Pearl - discussion
 - v. Stag – if available; discussion otherwise
10. Embellishments – discussion and some demonstration on different forms of knife handle embellishment, to include the following:

- a. Filework
- b. Engraving
- c. Use of damascus, wrought iron, etc. in handles (masking, etching, and setup).
- d. Carving
- e. Scrimshaw
- f. Pinning

11. Preservation of natural handle materials.

- a. Stabilization prior to use
- b. Care during shaping and finishing
- c. Care after handle completion