

Enameling

This studio course gives 7th and 8th students the opportunity to learn something of the art of enameling – its history, its process, its materials and several simple design techniques used in this art form. Students will have the opportunity to make a number of enameled plaques on copper using this process and these techniques. Emphasis will be placed upon his learning to use this process and these techniques to make original works of enameled art.

Introduction

1. Define enameling.
2. Describe its historical beginnings.
3. Describe its use and development in several early cultures – The Mycenaean period, Greek artisans, the Celtic period, Roman Britain.
4. Describe the development in the use of enamels in later European cultures.
5. Contemporary use of enamels – as an art form, commercial use.
6. Describe the components of enamel – a simplified chemistry, the various types of enamel.
7. Describe the similarities and the differences between enameling and other ceramic processes.

The Basic Process of Producing an Enamel

1. Describe and demonstrate the preparation of the copper plaque.
2. Describe and demonstrate the procedure by which enamel is applied and fused to the copper substrate.
3. Discuss the appropriate practice of safety in handling and application of the enamels.
4. Discuss and demonstrate the use of the firing kilns – how to fire an enamel, the stages of fusion (what the enameled surface looks like during firing), the appearance of the enamel when firing is complete, kiln temperatures, and safe practices in using the kiln and the firing tools.
5. The cooling period – describe and demonstrate safe practices in handling the handling the enamel after firing is complete and it has been removed from the kiln.
6. Discuss and review all practices that relate to safety in the use of the materials, tools and equipment used to produce the enamel.

The Design Techniques

Scrolling

1. Describe and give examples of the technique of scrolling.
2. Explain and demonstrate the use of the scrolling tool in manipulating the design in the molten enamel as it is firing.
3. Explain the temperature requirements for successful scrolling.
4. Discuss some of the problems that may occur during the firing and scrolling itself.
5. Review appropriate safety practices.
6. Discuss basic elements of design related and appropriate to the scrolling technique.

Dump off

1. Describe and give examples of the so-called dump off technique.
2. Explain and demonstrate the procedure to be followed in producing an enameled piece that uses dump off as a design technique.
3. Explain the properties and possibilities inherent in transparent colored enamels.
4. Compare and contrast opaque and transparent enamels – a review.
5. Explain how various application techniques will affect the color composition of the piece.
6. Explain the temperature and firing requirements for transparent enamels.
7. Review appropriate safety practices.
8. Discuss basic elements of design related and appropriate to this technique.

Sgraffito

1. Define the term “sgraffito”.
2. Describe and give examples of enamels that use sgraffito as the design technique.
3. Explain and demonstrate the procedure to be followed in producing an enameled piece that uses sgraffito as a design technique.
4. Explain and demonstrate the use of the various tools related to this procedure.
5. Explain the temperature and firing requirements relevant to the sgraffito technique.
6. Review appropriate safety practices.
7. Discuss basic elements of design related and appropriate to this technique.

Optional Design Techniques

Copper Inclusion

1. Describe and give examples of enamels that use pieces of unenameled copper embedded in the glass as a part of the design composition.
2. Explain the procedure to be followed in producing an enameled piece that uses this technique.
3. Explain the ways that unenameled copper may be treated for inclusion as part of the enameled design – the hammered surface, the sawn shape, the cut shape, the polished surface, the matted surface, the oxidized surface.
4. Explain and demonstrate the use of various tools used to achieve these different surface effects – the metal working hammers, the jeweler's saw, the filing table, the alundum and carborundum stones, emery papers.
5. Explain the firing requirements relevant to this technique.
6. Review appropriate safety practices.
7. Discuss basic elements of design related and appropriate to this technique.

Fire Glaze

1. Describe and give examples of enamels that use fire glaze as the design technique.
2. Explain and demonstrate the procedure to be followed in producing an enameled piece that uses this technique.
3. Explain how fire glaze forms in the kiln and how it may be used.
4. Discuss the possibilities of using the random patterns inherent in fire glaze as a design element.
5. Review the qualities inherent in transparent colored enamels and their use in this technique.
6. Review appropriate safety practices.
7. Discuss basic elements of design related and appropriate to this technique.

Dropping

1. Describe and give examples of enamels that use dropping as the design technique.
2. Explain and demonstrate the procedure to be followed in producing an enameled piece that uses this technique.
3. Explain and demonstrate that variation of this technique that uses a surface flooded with gum solution or water to achieve various effects in the fired glass.
4. Explain and demonstrate other variations in this technique that may be useful in producing other interesting color effects.
5. Explain relevant firing procedures.
6. Review appropriate safety practices.
7. Discuss basic elements of design related and appropriate to this technique.

OAKWOOD JUNIOR HIGH: ENAMELING

Expected of the Student:

The student will be expected to demonstrate a reasonable degree of knowledge about the enameling process and the design techniques, and to demonstrate a reasonable fluency and technical skill in the use of these and the appropriate enameling tools and materials by producing several enameled plaques on copper in the various techniques given. The student will likewise be expected to recognize simple technical problems that may be encountered in the making of these plaques, and be able to solve these when they occur.