



School District of Marshfield

Course Syllabus

Course Name: Jewelry & Metal Arts

Length of Course: Semester

Credits: ½ credit

Course Description: Students will explore and create a variety of handmade wearable art jewelry from copper, brass, nickel and sterling silver. Through investigation of multiple techniques and the study of cultural uses of jewelry, students will learn soldering, torch work, metal sawing & piercing, cabochon stone-setting, patina applications, oxidation, and color treatments on metal. Students will use fabrication techniques to create wearable pieces of art, including necklaces, rings, and earrings.

Learning Targets:

- Investigate traditions of jewelry making across time and cultures
- Research cultures that have used sophisticated jewelry techniques
- Learn about the jewelry design process and create 2-dimensional plans for 3-dimensional models
- Demonstrate the techniques of sawing and piercing metal
- Demonstrate the techniques of soldering metals together using a jeweler's torch
- Demonstrate final finishing techniques, including buffing, oxidation and patina application
- Demonstrate alternative connection methods, such as cold-connections
- Create jewelry that includes a cabochon stone using a bezel setting
- Create fabricated jewelry designs, including rings, pendants, earrings and pins

Topic/Content Outline-Units and Themes:

1. Understanding Metallurgy (1 week)
 - A. History of Metals and Jewelry
 - B. Metals: What are they? Understanding copper, brass and sterling silver
 - C. Understanding Melting Points, Properties & Malleability
 - D. Learning the Difference Between Ferrous & Non-Ferrous Metals
2. Basic Fabrication Techniques and Safety (2 weeks)
 - A. Sawing and Piercing Metal: Safety, Process and Technique
 - B. Pattern-Making
 - C. Filing and Sanding Metal

- D. Creating Texture: Hammering, Stamping, Embossing, Chasing
 - E. Polishing Safety and Techniques; Buffing Wheel and Flexible Shaft
 - F. Alternate Finishes: Oxidation and Patina Application
3. Symbolic Pendant Design Project (*4 weeks*)
- A. Study Cultural Symbols and Their Meanings
4. (Japanese Kanji, West African Adinkra, Celtic Design)
- A. Design Techniques for Pendant-Making:
 - a. Bail Design and Creation
 - b. Using Texture as a Design Enhancement
 - c. Dapping Metal
 - B. Soldering Safety and Techniques
 - a. Safety and Equipment Demonstrations
 - b. Using the Acetylene Torch
 - c. Flux Application
 - d. Solder Types and Uses
 - e. Annealing Metal
 - f. Using solder to attach two pieces of metal
 - C. High Polish Finish
5. Hopi Ring Project (*4 weeks*)
- A. Understanding the Hopi Indians and their Contributions to Jewelry-Making Techniques and Traditions
 - B. Discussing the Importance of Natural Forms in Hopi Design
 - C. Ring Design and Ring Sizing Techniques
 - D. Using the Hopi Overlay Technique
 - E. Forming and Forging a Ring using the Ring Mandrel
 - F. "Seamless" Soldering Techniques
 - G. Possible Inclusion of Chip Stone Inlay Process
6. Art Nouveau vs. Art Deco Design with Cabachon Stone (*4 weeks*)
- A. Designing Jewelry for a Cabachon Stone Setting
 - B. Investigate the Art Nouveau & Art Deco Periods and Style: How do they continue to impact today's art and design?
 - C. Learning about Cabachon and Faceted Stones
 - D. Discussion of Rocks, Gems, Minerals, Fossils (natural vs. lab created)
 - E. Understand and View Precious and Semi-Precious Stones
 - F. Bezel-Making for Cabachon Stones
 - G. Stone Setting with Bezel Rocker

7. Rivets, Layers and The Addition of Color (3 weeks)
 - A. Study Current Artists and Their Techniques for Adding Color
 - B. Investigate How Color Can Both Add and Subtract From Formal Design
 - C. Fabricate Handmade Rivets from Brass & Copper Wire
 - D. Use Techniques of Adding Color, such as Prismacolor & Enamels
 - E. Create Depth in Wearable Art Pieces by Adding Layers

Resources:

- *Jewelry: Contemporary Design and Technique*, Chuck Evans, Davis Publications
- *Lapidary Journal Jewelry Artist Magazine*
- *Art Jewelry Magazine*
- *The Complete Metalsmith: An Illustrated Handbook*, Tim McCreight, Davis Publications, Inc 1982
- *The Beauty of Hopi Jewelry*, Theda Bassman, Kiva Publishing 1993