

# Jewelry and Metal Arts Courses (Art, Art History, and Design) (MTLS)

## MTLS Courses

This is a list of courses with the subject code MTLS. For more information, see Art, Art History, and Design (College of Liberal Arts and Sciences) in the catalog.

### **MTLS:2910 Introduction to Jewelry and Metal Arts 3 s.h.**

Fabrication, hammer forming, hydraulic die forming, soldering, riveting, etching, texturing, anodization of aluminum and titanium, stone setting, and patination techniques; creation of jewelry, flatware, and other functional and nonfunctional sculptural objects using varied metals and other materials; emphasis on creativity, learning, and basic metalworking techniques. Prerequisites: ARTS:1520 and ARTS:1510. GE: Engineering Be Creative.

### **MTLS:3285 Fabrication and Design: Hand-Made Bicycle 4 s.h.**

Building a bicycle frame by hand; use of CAD modeling and development of fabrication skills to create a modern-day work of art. Prerequisites: TDSN:2240.

### **MTLS:3910 Intermediate Jewelry and Metal Arts 4 s.h.**

Exploration of different applications with casting (mostly gold, silver, and bronze), enameling, and stone setting; combining all three processes to create artwork; may include introduction to other processes (e.g., photo-etching, 3D computer modeling); historical and current trends in craft. Prerequisites: ARTS:1510 and ARTS:1520 and MTLS:2910.

### **MTLS:3915 Fabrication and Finishing in Jewelry and Metal Arts 4 s.h.**

Students further their conceptual development with intermediate-level skills in fabrication and surface finishing; builds on introductory skills with techniques in complex and larger-scale soldering and forming, as well as new techniques (e.g., chasing, repousse); exploration of finishing and surface treatments (e.g., aluminum anodization, etching, powder coating). Prerequisites: MTLS:2910.

### **MTLS:3920 Advanced Jewelry and Metal Arts 4 s.h.**

Electroforming; production of hollow copper structures through prolonged electroplating on a nonmetallic form (typically wax) with a conductive coating; metal-forming techniques (e.g., raising and fold forming); emphasis on development of personal aesthetics, learning, and refining technical skills in metalworking and jewelry techniques. Prerequisites: MTLS:2910.

### **MTLS:4910 Mixed Media and Professional Practices 3-4 s.h.**

Free exploration of all media and materials, including found objects; creation of conceptual and/or functional mixed media objects, jewelry, sculptures, installation pieces; pioneering use of new materials, development of new techniques, creation of diverse innovative artworks. Prerequisites: ARTS:1510 and ARTS:1520 and MTLS:2910. Recommendations: MTLS:2910 and MTLS:3920.

### **MTLS:4920 Mold Making 4 s.h.**

All aspects of mold making, including plaster, rubber, and silicone. Prerequisites: CERM:2010 or TDSN:2210 or MTLS:2910 or SCLP:2810.

### **MTLS:4930 Experimental Casting With New Technology 4 s.h.**

Students combine traditional casting techniques with new technology (e.g., ceramic shell, 3D printed models, 3D printed resin sand molds, casting simulation software) in pursuit of their creativity; emphasis is on vessels and hollow objects; examples of historical and current application of casting, especially in mixed media and cross-disciplinary approaches. Prerequisites: SCLP:2810 or MTLS:2910.

### **MTLS:4960 Project Design Hand-Made Bike II 4 s.h.**

Builds on MTLS:3285; advanced concepts of bicycle frame design and fabrication; concept development, fabrication geometry and design, metal properties and selection, tool selection, brazing and welding including titanium milling and how to build a frame jig; emphasis on applying fabrication skills while situating frame-building project within context of a design problem. Prerequisites: MTLS:3285.

### **MTLS:4970 Project Design Hand-Made Bike III 4 s.h.**

Builds on MTLS:4960; advanced concepts of bicycle frame design and fabrication; concept development, fabrication geometry and design, metal properties and selection, tool selection; brazing and welding including titanium-milling and how to build a frame jig; emphasis on application of fabrication skills while situating frame building project within context of a design problem. Prerequisites: MTLS:4960.

### **MTLS:4999 Undergraduate Individual Instruction 1-3 s.h.**

Individual instruction in metalsmithing and jewelry for advanced students.

### **MTLS:6999 Individual Instruction in Metalsmithing and Jewelry arr.**