

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

## MTLS Courses

This is a list of courses with the subject code MTLS. For more information, see Art and Art History (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: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: 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: 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 Form and Fabrication: The Hand-Built Bicycle Frame II 4 s.h.**  
Builds on TDSN: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: TDSN:3285.

**MTLS:4970 Hand-Built Bicycle 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.**