

MFG 121 : INTRODUCTION TO ORNAMENTAL METAL WORK

Transcript title

Ornamental Metal Work

Credits

3

Grading mode

Standard letter grades

Total contact hours

70

Lecture hours

10

Lab hours

60

Prerequisites

MFG 100.

Course Description

Explores ornamental and decorative applications of metalworking within a manufacturing context. Students will learn safe shop practices and develop foundational skills in welding, cutting, forming, and finishing techniques in this introductory course. Emphasis is placed on translating design concepts into fabricated projects that balance craftsmanship with creative expression. Through hands-on projects, students gain experience preparing and joining metals, applying surface finishes, and creating original ornamental works that integrate technical skill with principles of design and composition.

Course learning outcomes

1. Apply safe work practices when performing welding and fabrication, including the correct use of PPE, tools, and equipment.
2. Demonstrate basic welding, cutting, and fabrication skills to join and shape metal for artistic applications.
3. Prepare and finish metal surfaces using grinding, sanding, and decorative treatments to enhance craftsmanship and design.
4. Translate design concepts into fabricated projects by applying principles of form, proportion, and composition.

Content outline

1. Safety and Shop Orientation
2. Introduction to Metalworking Tools and Processes
3. Metal Preparation and Finishing
4. Design Principles in Ornamental Metalwork
5. Fabrication Projects (Hands-On)
6. Critique and Reflection

Required materials

Students are required to provide their own PPE.