

**GRAPHIC ARTS AREA****IA 60. Basic Graphic Arts (3) (Former IA 26)**

Introduction to the graphic arts; hand composition, paper making, stereotype, rubber-stamp, thermography, marbling; experiences in relief printing methods; overview of entire printing industry. (lecture-demonstration; student projects, field trips)

**IA 160. Advanced Graphic Arts (3) (Former IA 127)**

Prerequisite: IA 60 or permission of instructor. Typographic layout and design; problems of book manufacture; principles of advertising layouts; hand, machine, and photographic typesetting methods; experience in running automatic printing press and typesetting machine. Field trips.

**IA 162. Graphic Arts Crafts (2) (Former IA 128)**

Various processes and media used in the graphic arts industry; creative and recreational aspect for the student; silk screen, linoleum block, flexography, intaglio, stereotype, papermaking, thermography, marbling, student projects. Field trips.

**IA 164. Bookbinding (2) (Former IA 142)**

Historical development of the book and its influence on our society; preparation for publication, methods of reproduction and materials used; projects in binding and rebinding; yearbook and textbook problems. Field trips.

**IA 166. Graphic Reproduction Techniques (3) (Former IA 145)**

Prerequisite: upper division student. For persons interested in the field of buying, selling or producing printed material. Processes of reproduction; types of publications; media, materials and equipment; technical problems in layout; legal problems; yearbook and in-plant publication reproduction. Field trips.

**METALS AREA****General Metalworking****IA 70. Basic Metalworking (3) (Former IA 40)**

Introduction to and exploration in various metal areas including sheet metal, bench metal, art metal, wrought iron, foundry and forging.

**IA 170. Advanced Principles of Metalworking (3) (Former IA 119)**

Prerequisite: IA 70 or equivalent. Study and experience in the technological, scientific, and historical aspects of nonferrous metal casting, core-making; forging; principles of metal spinning.

**Welding****IA 71. Metallurgical Processes (2) (Former IA 6)**

Fundamentals of metallurgy; properties and characteristics of metals; survey of metal welding processes, equipment, and procedures; introduction to destructive and nondestructive testing methods. (lecture-lab)

**IA 171. Advanced Metallurgical Processes (2) (Former IA 106)**

Prerequisite: IA 71. Design of weldments; welding drafting and symbols; production processes and techniques; production economy. (lecture-lab)

**Sheet Metalworking****IA 173. Metal Fabrication Processes (3) (Former IA 118)**

Sheet metal pattern drafting and layout applicable to parallel, radial, and triangulation methods using light gauge metals; individual problems in planning, using, and maintaining hand and machine tools.