

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.