

IA 158. Principles of Electrical Wiring (3) (Former IA 111D)

Prerequisite: IA 52. Principles of electrical power distribution; industrial and residential wiring; circuits, devices, and systems; local and national electrical codes. (lecture-lab; field trips)

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. Publications Production Management (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 nonferrous metal casting, core-making, forging; principles of metal spinning.

Welding**IA 71. Basic Welding (2) (Former IA 6)**

Fundamentals of oxyacetylene and shielded metallic arc welding processes; oxyacetylene flame in brazing and flame cutting; familiarization with commonly welded joints; types, uses, and classification of electrodes and equipment. (lecture-lab)

IA 171. Advanced Welding (2) (Former IA 106)

Prerequisite: IA 71. Major welding processes and fields of application; weldability of ferrous and nonferrous metals and alloys; fundamentals of welding metallurgy; welding symbols; introduction to destructive and nondestructive testing methods. (lecture-lab)