

**IA 184. Woodworking Specialties (3) (Former IA 103)**

Prerequisite: IA 82. Specialized activities related to field of woodworking; wood finishing and paint technology, machine installation and maintenance, upholstering, inlaying and veneering, advanced wood turning, furniture restoration.

**IA 186. Wood Technology (3) (Former IA 104)**

Prerequisite: IA 82 or permission of instructor. Properties and uses of wood, lumber grading, lumber and wood products manufacturing, wood seasoning and preserving, plywood and laminated wood, glue and glued products, fiber and particle boards. (lecture-lab)

**PROFESSIONAL COURSES****IA 190. Independent Study (1-3; max see reference)**

See *Regulations and Procedures—Independent Study*.

**IA 192. Industrial Arts Education in Secondary Schools (3) (Former IA 123)**

Prerequisite: SED 151. Principles, objectives, and recent trends in modern industrial arts instructional practices, including group observation.

**IA 194. Course Materials in Industrial Arts Education (2) (Former IA 125)**

Prerequisite: IA 192. Development and use of written instructional materials; analysis and organization of course content for various subjects in industrial arts areas.

**IA 196. Graphic Communications (2) (Former IA 126)**

Preparation and use of instructional aids, including models, mockups, cutaways, charts, educational films, slides, overlays; photographic processes; planning, construction, classroom demonstration and evaluation.

**IA 197. Energy Utilization and Instrumentation (3)**

Fundamental sources of energy; energy converters using direct mechanical force, external combustion, internal combustion, and electricity as energy sources; mechanical, thermal, and electrical instrumentation for industrial process indication and control.

**IA 199. Senior Problem in Industrial Technology (3)**

Prerequisite: senior standing in industrial technology. Approved problem or research project in the area of the student's option.

**GRADUATE COURSES**

(See *Course Numbering System—Definitions and Eligibility*)

**IA 224T. Professional Topics in Industrial Education (2-3; max total 6 on master's degree with no area repeated)**

Advanced study in professional industrial education; sociological, historic, economic, and philosophic implications.

**IA 270. Technical Problems (2-3; max total 6 if no area repeated)**

Technical work in selected areas; research under supervision of instructor.

**IA 280. Problems in Industrial Arts Research (2)**

Seminar in research procedures in the industrial arts; basic bibliography, research form and method.

**IA 284T. Topics in Industrial Technology (2-3; max total 9 on master's degree if no area repeated)**

Advanced study in technical areas; current industrial practices, developments, and trends related to design, materials, and processes.