

Suggested Courses for ME Students Interested in Industrial Design

A formal Industrial Design Minor is offered through College of Architecture. It requires 18 credits of courses from the approved checksheet, including a 6 credit industrial design studio taught only during the summer. For information on the Industrial Design minor please see:

<http://archdesign.vt.edu/industrial-design/minor>

Technical Electives:

A limit of 6 credits of List #2 technical electives can be used to satisfy the 15 credits of technical electives required to earn a BSME degree. There is no limit in List #1 technical electives. Be sure to consult the current list of approved technical electives for the year in which you plan to graduate to make sure the courses listed below are valid technical electives.

List #2 Technical Electives:

IDS 2044 – Human Factors (3 credits) **Required for Industrial Design Minor - typically restricted and can be taken only by IDS minor students. Fall only.**

This course examines human factors as it informs the design process, and as a tool to maximize the physical and psychological aspects of design toward the establishment of a human centered design. Frameworks of industrial design philosophy, research methods, standards and data, human issues, cultural context, and design outcomes. Pre: ARCH 1016.

IDS 3124– Materials & Processes (3 credits)

****Required for Industrial Design Minor** - typically taught during Spring only**

Current design processes, materials, manufacturing processes, techniques, and equipment used in the design of products for mass and rapid production. Variety of materials and manufacturing processes available to the industrial designer for mass production impact his/her design process. Emphasis placed on the relationship of processes and equipment, to the environment and the end user. Includes concepts of material science. Practical issues of material selection and application, process selection, and specification.

List #1 Technical Electives:

ISE 3614 – Introduction to Human Factors Engineering (3 credits)

This course may be restricted to ISE majors. Contact ISE advising department for more information. Fall only.

Investigation of human factors, ergonomics, and work measurement engineering, with emphasis on a systems approach toward workplace and machine design. Discussion of basic human factors research and design methods, design/evaluation methods for work systems and human machine interactions, human information processing, visual and auditory processes, display and control design, and effects of environmental stressors on humans. Pre: C- or better: (ISE 2204 or 2214), STAT 4105, and ISE 2034.

Curriculum for Liberal Education Electives:

ARCH 3115-3116 History of Architecture I & II (3 credits each) – Areas 2 & 6 (Note: You cannot use one course to satisfy BOTH Area 6 and another area) A review of world architecture, predominantly but not exclusively with reference to Occidental building art. The study of principles concepts and representations of buildings and structures from the 4,000 BC to the present through reading, drawing, and writing are important aspects of the course. Pre: ARCH3115 for 3116. This course may be restricted by major, see timetable for details.