

Industrial Design - INDD

Courses

INDD 1120 INDUSTRIAL DESIGN IN MODERN SOCIETY (3) LEC. 3. Survey of design and its impact upon modern society. Review of methods, products, marketing, patents, education, and career opportunities.

INDD 1310 SYNTHESIS OF DRAWING (10) LEC. 3, LST. 12. Developing mechanical and production design drawings, with in-depth study of perspective systems. Product design communication with emphasis on drawing, development, and presentation.

INDD 1320 PROTOTYPE FABRICATION (3) LEC. 2. LAB. 2. Coreq. INDD 1310. Fabrication of three-dimensional models utilizing various materials and machineries. Includes model making, creative modeling, study models, presentation models, mock-ups and prototypes.

INDD 1400 CAREERS IN INDUSTRIAL DESIGN (2) LEC. 2. Survey of careers in the field of industrial design demonstrated through case studies, product examples and biographies.

INDD 2110 TWO DIMENSIONAL INDUSTRIAL DESIGN PRINCIPLES (6) LEC. 2, LST. 10. Transference of abstract principles of design to fabrication of simple tools. Emphasis on expression of functional objects.

INDD 2120 COMPUTER AND DESIGN COMMUNICATIONS (3) LEC. 2. LAB. 2. Alternative modes of communicating design ideas via computer. Executing design ideas for two-dimensional design fundamentals and mechanical design drawings.

INDD 2130 PRESENTATION RENDERING (3) LEC. 2. LAB. 2. Concept development using drawing and rendering skills with different media for ideas communication and presentation.

INDD 2210 THREE DIMENSIONAL INDUSTRIAL DESIGN PRINCIPLES (6) LEC. 2, AAB/LST. 10. Pr. INDD 2110. Analysis of design fundamentals through three dimensional form. Analyzing function, utility, convenience, safety, maintenance and sustainable design.

INDD 2220 ANTHROPOMETRY (3) LEC. 3. Pr. INDD 2110. Body measurements, movements and human capacity in relation to design with introduction to ergonomics and human physiology as it relates to design. School approval.

INDD 2230 HISTORY OF INDUSTRIAL DESIGN (3) LEC. 3. Pr. INDD 2110. Survey humankind's production of artifacts, from prehistory to present. Emphasis on ideas that mass produced artifacts mirror history and everyday culture.

INDD 3110 EXHIBIT AND PACKAGING (6) LEC. 1, LST. 8. Pr. INDD 2210. Display systems using models, concepts development, rendering, packaging, identity programs and professional presentations.

INDD 3120 INDUSTRIAL DESIGN METHODS (3) LEC. 3. Pr. INDD 2210. Introduction to design management. Design methods and organizational procedures in analysis and solutions of design problems. Surveying philosophies and theories of design.

INDD 3130 BASIC PHOTOGRAPHY FOR INDUSTRIAL DESIGN (3) LEC. 2. LAB. 2. Pr. INDD 2210. Photography in design and art environments. Techniques of developing, printing and enlarging. Lighting techniques for portfolio photography, including lighting, studio photography, composition.

INDD 3150 DESIGN THINKING: INTRODUCTION TO PRODUCT SOLUTIONS (3) LEC. 2. LAB. 1. Application of design thinking (focus on experience of the user) in the context of product design. Students will deconstruct a design of an existing product and create a design concept for a new product. Introduces innovation in physical products and services through collaborative and creative approaches to critical and strategic thinking with focus on the user. Course may be repeated for a maximum of 6 credit hours.

INDD 3157 HONORS DESIGN THINKING: INTRODUCTION TO PRODUCT SOLUTIONS (3) LST. Application of design thinking (focus on experience of the user) in the context of product design. Students will deconstruct a design of an existing product and create a design concept for a new product. Introduces innovation in physical products and services through collaborative and creative approaches to critical and strategic thinking with focus on the user. Course may be repeated for a maximum of 6 credit hours.

INDD 3210 PRODUCT DESIGN (6) LEC. 2, LST. 10. Pr. INDD 3110. Product design utilizing design methodology from proposal to working pre-prototype, including planning, research, development, model-making, manufacturing and documentation.

INDD 3220 MATERIALS AND TECHNOLOGY (3) LEC. 3. Pr. INDD 3120. Characteristics and utility of materials such as plastic, metal, and ceramics in manufacture and the study of machine/tool processes used by industry.

INDD 3230 ADVANCED COMPUTER AIDED DESIGN (3) LEC. 2. LAB. 2. Pr. INDD 2120. Introduction to CAD software emphasizing three-dimensional modeling. Students will learn drawing functions. Concepts of three-dimensional relationship of objects discussed.

INDD 4110 ADVANCED PRODUCT DESIGN (6) LEC. 2, AAB/LST. 10. Pr. INDD 3120 and INDD 3210. Design or redesign of products and systems of advanced complexity.

INDD 4210 INDUSTRIAL DESIGN THESIS (6) LEC. 2, AAB/LST. 10. Pr. INDD 4110. Product design projects involving all design phases; including planning, research, development, finalization, specification, and documentation.

INDD 4220 PROFESSIONAL PRACTICE (3) LEC. 3. Pr. INDD 3110 and INDD 3210. Business aspects of industrial design, including property, design contract, letters of agreement, business planning and design marketing.

INDD 4907 HONORS READING (1-3) LEC. Course may be repeated for a maximum of 3 credit hours.

INDD 4997 HONORS THESIS (1-3) LEC. Pr. Honors College. Departmental approval.. Course may be repeated for a maximum of 3 credit hours.

INDD 5120 PROFESSIONAL PORTFOLIO (3) LEC. 3. Pr. INDD 3110 and INDD 3210. Design and development of a portfolio and promotional material presenting the student's work to entry-level professional standards.

INDD 5960 SPECIAL PROBLEMS (1-5) AAB. Development of individual projects. Research, design and reports on approved topics. Course may be repeated for a maximum of 15 credit hours.

INDD 6010 HISTORY OF INDUSTRIAL DESIGN II (3) LEC. 3. A survey of humankind's production of artifacts, from prehistory to contemporary times, with an emphasis on the idea that mass produced artifacts mirror the meanings of historical events and everyday culture.

INDD 6030 CASE STUDIES IN DESIGN (3) LEC. 3. Design projects undertaken by industry studied by examination of artifacts and records, and by class discussions. Focus on the socio-cultural relevancy of the artifacts.

INDD 6120 PORTFOLIO (3) LEC. 3. Preparation of professional portfolio for graduation and employment.

INDD 6960 SPECIAL PROBLEMS (1-5) AAB. Development of individual projects. Research, design and reports on approved topics. Course may be repeated for a maximum of 15 credit hours.

INDD 7010 DESIGN ORIENTATION (3) LEC. 3. Introduction to the Industrial Design graduate program: degree options, study directions, research methods, and areas. Students are required to develop a research/project proposal.

INDD 7020 COMPUTER/INDUSTRIAL DESIGN (3) LEC. 3. Synthesizing studies in research, analysis, and application based on interdisciplinary concept. Emphasis on the relation of products and systems to those who use them.

INDD 7610 PRINCIPLES OF INDUSTRIAL DESIGN (3) LEC. 3. Detailed study of the communication principles of form qualities with emphasis of these aesthetic principles to the technical and human factors of artifacts.

INDD 7620 DESIGN MANAGEMENT (3) LEC. 3. Detailed study of the industrial design project management and development with emphasis on the interrelational management concepts of research, product planning, production and marketing.

INDD 7630 HUMAN FACTORS IN DESIGN (3) LEC. 3. Theoretical and empirical examination of human factors (Anthropometrics, Biotechnology, Engineering Psychology, Behavioral Cybernetics, Ergonomics) as applied to man-machine environmental systems.

INDD 7640 AESTHETICS IN DESIGN (3) LEC. 3. Aesthetics in the context of the designed environment encompassing: non-verbal communication; object language semiotics; gestalt and perception systems; information aesthetics, and consumer product safety.

INDD 7650 DESIGN THEORIES (3) LEC. 3. Examination of design theories and philosophies related to technical artifacts in man-machine systems. Comparative studies of unifying theories in art, science, design, technology and the humanities.

INDD 7660 INDUSTRIAL DESIGN METHODOLOGY (3) LEC. 3. Industrial design methodologies and specific methods employed in research, analysis, synthesis, and evaluation in comprehensive design problems.

INDD 7670 SYSTEMS DESIGN (3) LEC. 3. Systems approach and interdisciplinary team work to design problems inquires into details of sub-systems, components and parts, with emphasis on the relation of the performance of technical systems to optional human factor effects.

INDD 7910 INDUSTRY PRACTICUM (5) AAB/STU. 5. This course will demand the application of acquired skill to the resolution of product design based issues within an industry collaboration studio over the period of one semester.

INDD 7980 NON-THESIS DESIGN (3) STU. 3. Synthesizing studies in research, analysis and application based on interdisciplinary concept. Emphasis on the relation of products and systems to those who use them.

INDD 7990 DESIGN THESIS (1-5) AAB/RES. Credit to be arranged. Course may be repeated with a change in topic.