SCHOOL OF DESIGN

College of Liberal & Creative Arts

Dean: Dr. Ifeoma Kiddoe Nwankwo

School of Design

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Visual Communication Design Program Coordinator: Joshua Singer
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Graduate Program Coordinator: Hsiao-Yun Chu
Study Abroad Coordinators: Hsiao-Yun Chu, Ricardo Gomes

Mission

The School of Design serves a diverse body of students in the areas of Product Design and Visual Communication Design at both the undergraduate and graduate levels. Our curricula emphasize the design process as a means of problem-solving, and our classes help students to build the technical, conceptual, critical, and collaborative skills required in design professions.

Program Scope

The School of Design offers a Bachelor of Science in Visual Communication Design, a Bachelor of Science in Industrial Design with a concentration in Product Design and Development, a Minor in Design, and a Master of Arts in Design. All programs employ a user-focused, strategic design methodology.

The **Bachelor of Science in Visual Communication Design** (BSVCD) is a program for students who intend to focus their studies on visual communication design applications including graphic design, interactive design, and experience design. The major addresses a changing technological landscape and the resulting new opportunities in the profession including new tools and opportunities afforded by XR (Augmented and Virtual Reality) and AI (Artificial Intelligence). The design major prepares students for design practice, study, and research, as well as flexible collaboration with other disciplines involved in contemporary technology, user experience, and creative problem-solving fields.

The **Bachelor of Science in Industrial Design with a Concentration in Product Design and Development** (BSID/PDD) is a program for students who intend to focus their studies on physical products. The major addresses the creation of industrial goods and services and concentrates on three principal aspects of design: process, people, and product. The BSID/PDD incorporates the study of user-centered needs, relative to the responsible and resourceful implementation of technology innovation, materials, marketing principles, and aesthetic values.

The **Master of Arts in Design** program is designed for students who want to pursue professional work in design firms, teaching, project management, strategic planning for design firms, or management roles in technology. We emphasize problem-solving competencies, both conceptual and practical. Students in the program study visual communication design and product design with an interdisciplinary perspective. Students with a wide range of backgrounds work with a graduate advisor to design an M.A. program that meets their career goals. Based upon focused research into a chosen design problem, students develop a specialized area of study in graphic design/visual communication design, product design/manufacturing, industrial technology, project management, or digital media. Many students prepare for doctoral work at other institutions.

The **Minor in Design** provides students with majors other than Design a broad exposure to the basic applications and benefits of our undergraduate programs. Students in the minor will obtain a general knowledge of and a foundation in professional design (note: students will declare one program to minor in Visual Communication or Industrial Design. They may declare this when enrolling and through their first semester in the program.

Faculty

Our highly qualified faculty come from a variety of design and technology backgrounds. Faculty play a central role in student advising and the formation of relevant design curricula. Faculty members participate in active design practices, conferences, and consultancies, publish and exhibit internationally, and are part of current, as well as future, trends in design and design education.

Facilities

The school is housed in the Fine Arts and the Humanities Buildings near the western edge of campus. Our facilities include studio classrooms equipped with projection, scanners, and printers as well as materials required for a full design studio. We house a woodshop, a metal shop, and a rapid prototyping lab. We employ a wide range of technologies in our studios, including XR equipment and headsets, letterpress printing, large-format printing, vinyl cutting, 3D printing, and laser cutting alongside other technologies employed in contemporary design practice.

Career Outlook

Graduates of The School of Design go on to careers as professionals working at the highest levels within design and technology industries; our graduates hold important positions in design agencies, corporate in-house design teams, major start-ups, community organizations, arts organizations, government agencies, and anywhere one finds designed artifacts and communications.

Design
- Digital Product (app) Design
- Interactive Design
- User Experience Research and Design
- Physical Product Design
- Typographics, Publication and Printed Design
- Information and Wayfinding Design
- Design Research

Business and Industry
- Marketing/Communications
- Project Management
- Product Development
- Field Service
- Technical Services
- Job Development Training
- Production Coordinator
- Quality Control
- Research Technician

Education
- Curriculum
- Creative Technical Support
- Teaching

Advising
During their first semesters in the major all students are required to enroll in Foundation and Core Classes;

Code	Title	Units
DES 200	Visual Design Literacy	3
DES 222	Digital Design Foundations I	3
DES 322	Digital Design Foundations II	3
DES 356	A History of Design and Technology	3
DES 370	Introduction to The School of Design	1

During the DES 370 course, students will meet with an advisor and complete a "Major/Minor contract."

Students must periodically check with their advisor to update their major advising contract and program goals. Students must also meet with their advisor before the semester of graduation.

Undergraduate Programs
The School of Design is open to all admitted undergraduate students. Students may declare either of the Design Undergraduate degrees (BSVCD or BSID_PDD) in their Student Centers. Students are encouraged to reach out to Design@sfsu.edu with any questions.

MA Design Program
The MA Design program requires a portfolio, a statement of purpose, and letters of recommendation in addition to their application to the University. For details on the MA Design application, please check the program requirements on our department website: https://design.sfsu.edu/master-arts (https://design.sfsu.edu/master-arts/)

International Track
School of Design majors may enhance their course of study by participating in the official School of Design Study Abroad programs in several locations. Eligible International Track students follow a particular course of study, upon consultation with advising Design faculty, that integrates overseas courses with the approved course requirements in Design. All official SF State Study Abroad students earn SF State resident credit and may use SF State financial aid while participating in the program. For more information, please visit http://oip.sfsu.edu/studyabroad (http://oip.sfsu.edu/studyabroad/).

Application Filing Periods
Applications for admission to the majors are accepted by the University during the application filing periods for the fall semester and spring semesters. The School of Design accepts spring applicants and supports spring admissions. For more information on University deadlines, see the Registrar's page at https://registrar.sfsu.edu/deadlines (https://registrar.sfsu.edu/deadlines/).

Transfer applicants from other colleges must submit an application via Cal State Apply at https://calstate.liaisoncas.com/applicant-ux/#/login.

Professor
Yu-Charn Chen (1988), *Professor in Design.* D.I.T. University of Northern Iowa.

Hsiao-Yun Chu (2006), *Professor in Design.* Ph.D. University of Brighton.

Ricardo Gomes (1992), *Professor in Design.* M.F.A. University of California, Los Angeles.

Giuseppe (Pino) Trogu (2007), *Professor in Design.* M.F.A. Rhode Island School of Design.

Associate Professor
Mari Hulick (2017), *Associate Professor in Design.* M.F.A. Northwestern University.

Silvan Linn (2012), *Associate Professor in Industrial Design.* M.S.D. Arizona State University.

Joshua Singer (2008), *Associate Professor in Design.* M.F.A. California College of the Arts.

Saskia Van Kampen (2019), *Associate Professor in Design.* M.F.A. York University.

Assistant Professor
Fernando Carvalho (2021), *Assistant Professor in Industrial Design.* Ph.D. Loughborough University.

Ellen Christensen (2019), *Assistant Professor in Design.* M.F.A. Rhode Island School of Design.

Sana Hussaini (2022), *Assistant Professor in Design.* M.F.A Notre Dame University.

Joshua Mcveigh-Schultz (2018), *Assistant Professor in Design.* Ph.D. University of Southern California.

Omar Sosa-Tzec (2020), *Assistant Professor in Design.* Ph.D. Indiana University Bloomington.

Eugene Young (2023), *Assistant Professor in Design.* M.F.A. California College of The Arts.

Majors
- Bachelor of Science in Visual Communication Design (http://bulletin.sfsu.edu/colleges/liberal-creative-arts/design-industry/bs-visual-communication-design/)
- Bachelor of Science in Industrial Design: Concentration in Product Design and Development (http://bulletin.sfsu.edu/colleges/liberal-creative-arts/design-industry/bs-industrial-design-concentration-product-design-development/)

Minor
- Minor in Design (http://bulletin.sfsu.edu/colleges/liberal-creative-arts/design-industry/minor-industrial-arts/)

Masters
- Master of Arts in Design (http://bulletin.sfsu.edu/colleges/liberal-creative-arts/design-industry/ma-design/)

DES 200 Visual Design Literacy (Units: 3)
Prerequisite: Restricted to Design majors and minors or permission of the instructor.

Fundamental visual design principles, vocabulary, and applications in design. Topics relevant to 2D and 3D design techniques for both tangible and virtual results. (Plus-minus letter grade only) [Formerly DES 323]

DES 210 Our Manufactured World: The Life Cycle of Everyday Objects (Units: 3)
An overview of how common consumer goods are designed, manufactured, marketed, used, and disposed of in industrialized economies. Emphasis on both traditional mass-production techniques (injection molding, casting) and more contemporary computer-aided methods (CAD, 3D printing, etc.). Discussion of the environmental consequences of mass manufacture (pollution, climate change) and some more sustainable alternatives. (Plus-minus letter grade only)

DES 220 Introduction to Drawing for Designers (Units: 3)
Introduction to drawing for design professions: graphic design, industrial design, digital media, and marketing. Learning to draw as learning to see and understand two- and three-dimensional objects, to give form to design ideas and to communicate these ideas to others. (Plus-minus letter grade only)

DES 221 Introduction to 3D Digital Design (Units: 3)
Introduction to Computer-Aided Drafting and Modeling using industry-standard software and techniques. Survey of the field's history and discussions of contemporary trends. Methods of computer modeling from original ideas or references, basic rendering and animation, and presentation of work in professional formats. 3D printing component. Suitable for non-majors. (Plus-minus letter grade only)

DES 222 Digital Design Foundations I (Units: 3)
Digital software and design processes for creating and editing digital images, illustrations, documents for print, and digital applications. Topics include design vocabulary, conceptualization methods, and text formatting. Development and application of knowledge through analysis, critique, projects, and exercises. This course is for prospective Design majors. Activity. (Plus-minus letter grade only)

DES 226 Modern Letterpress Printing: Traditional and Digital Techniques (Units: 3)
Learn typographic principles, terms, and practices through traditional, hands-on typesetting techniques using moveable type. Computer typesetting is used to both plan projects that are then physically composed and printed using a letterpress, as well as to further comprehend typesetting and layout skills. The work done in this course is project-driven, following an iterative process. May be repeated for a total of 6 units. Extra fee required. (Plus-minus letter grade only)
Course Attributes:

  • C1: Arts

DES 228 Introduction to Web Design (Units: 3)
Introduction to interaction design, with a focus on web design. Fundamentals of UX/UI and visual interface design, user-centered design, and GUI development will be introduced. Application of basic design principles and elements to live websites built from scratch, with an understanding of HTML and CSS. Exploration of the basics of effective interface design and usability. Activity. (Plus-minus letter grade only)

DES 252 Rethinking Digital Visual Media: History, Technology, and Content (Units: 3)
Digital visual media (computer animation, interactive multimedia, Internet, virtual worlds) viewed through the lenses of history, cultural impact, technology, and production techniques. (Plus-minus letter grade only)

DES 256 Design and Society: Contemporary Design Issues and Applications (Units: 3)
Introduction to contemporary design issues, applications, and professions; exploration of design's wide-ranging social impacts from visual communication to product design, transportation to city planning, green design to design for social good. (Plus-minus letter grade only)
Course Attributes:

  • C1: Arts

DES 277 Exploration in Meaning and Discourse Through Design (Units: 3)
Prerequisites: Restricted to Design majors and minors; DES 200* and DES 222*.

Explore how design relates to producing meaning and discourse in society. Discussion and demonstration of the application of theory from semiotics and rhetoric to design analysis and production. Activity.

DES 277B Introduction to 3D (Polygon) Modeling (Units: 3)
Fundamentals of 3D modeling with polygon modeling software, integrating concepts and practice. Activity. (Plus-minus letter grade only)

DES 300 Design Process (Units: 3)
Prerequisites: Restricted to upper-division Design majors and minors; DES 200*, DES 356*, and DES 370* with a grade of C or better; or permission of the instructor.

Creativity and the design process. Individual and group creative problem solving related to graphic communications and product design/development for industry. Activity. (Plus-minus letter grade only)

DES 305 Lab Safety Basics (Unit: 1)
Prerequisite: Restricted to upper-division Design majors, minors, and graduate students.

Introduction to basic power and hand tools in the product design labs to ensure safe operation of tools for the duration of the student's program of study; proper dress, techniques, and protective equipment. Activity. May be repeated for a total of 2 units. (CR/NC grading only)

DES 310 Product Design I (Units: 3)
Prerequisites: Restricted to upper-division Design majors and minors; DES 200*, DES 305*, DES 320*, DES 321*, DES 356*, and DES 370* with grades of C or better; or permission of the instructor.

Industrial manufacturing processes related to the development of three-dimensional objects for product and interior designers and manufacturing personnel. Activity. Extra fee required. (Plus-minus letter grade only)

DES 311 Image Making for Designers (Units: 3)
Prerequisites: Restricted to Design majors and minors; DES 200* and DES 222*.

Exploration of conceptual image making, both representational and non-representational. The use of digital and analog methods of making including (but not limited to) photography, Adobe Illustrator, Adobe Photoshop, and 3Dimensional structures will be explored. Engagement with the rhetorical value of materials and how they can support the communication of an idea or concept. Activity. (Plus-minus letter grade only) [Formerly DES 377A]

DES 320 Drafting and Sketching for Design (Units: 3)
Prerequisites: Restricted to upper-division Design majors and minors.

Mechanical and freehand drawing, the reproduction of drawings, and interpretation of graphic projections. Perspective drawing and the common elements of technical illustration. Signs and symbols of design and drafting. Required for BSID majors. Activity. Extra fee required. (Plus-minus letter grade only)

DES 321 Technical Drawing I: Introduction to CAD (Units: 3)
Prerequisites: Restricted to upper-division Design majors and minors.

Fundamentals of two-dimensional geometric image generation techniques to familiarize the student with computer-aided drafting (CAD). Microcomputer CAD hardware and software. Activity. Extra fee required. (Plus-minus letter grade only)

DES 322 Digital Design Foundations II (Units: 3)
Prerequisites: Restricted to upper-division Design majors and minors; DES 222 with a grade of C or better; or permission of the instructor.

Introduction to InDesign and Acrobat, building upon the foundation of industry-standard design software taught in DES 222. Engagement in an iterative design process for production, image editing and rendering, file formatting and resolution, multipage document layout, and project presentation. Extra fee required. (Plus-minus letter grade only)

DES 324GW Research and Writing for Design - GWAR (Units: 3)
Prerequisites: Restricted to Design majors; GE Area A2; DES 200*, DES 356*, and DES 370* with a grade of C or better; or permission of the instructor.

Critical examination of works across the industry sub-disciplines of product design, visual communication, and new media. Authoring design concepts and shaping visual presentations. (ABC/NC grading only) [CSL may be available]
Course Attributes:

• Graduation Writing Assessment

DES 325 Graphic Design I (Units: 3)
Prerequisites: Restricted to upper-division Design majors and minors; DES 200*, DES 322*, DES 356*, and DES 370* with grades of C or better; or permission of the instructor.

Engagement with the elements and principles of design for use in visual communication (print and screen) design applications. Emphasis on the design process of research, ideation, prototyping, testing and refinement, finalizing, implementation, and evaluation. Discussion of basic production tools and techniques as well as typography, form, and structure. Activity. Extra fee required. (Plus-minus letter grade only)

DES 327 Interactive Design I (Units: 3)
Prerequisites: Restricted to upper-division Design majors and minors; DES 200*, DES 322*, DES 356*, and DES 370* with grades of C or better; or permission of instructor.

Introduction to digital media design focusing on Web design. Conceptual approaches to structuring information and interaction, basic graphic design considerations germane to networked media, and basic production skills. Activity. Extra fee required. (Plus-minus letter grade only)

DES 332 Electricity and Electronics (Units: 3)
Prerequisites: Restricted to upper-division Design majors; DES 200*, DES 356*, and DES 370* with a grade of C or better; or permission of the instructor.

Fundamentals of DC/AC circuits theory and basics of semiconductor devices. Principles of power generation, distribution, and applications. Application of theory to practical applications in home and industry. Activity. Extra fee required. (Plus-minus letter grade only)

DES 340 Design and Materials (Units: 3)
Prerequisites: Restricted to upper-division Design majors; DES 200*, DES 305*, DES 356*, and DES 370* with grades of C or better; or permission of the instructor.

Properties of industrial materials related to the design and manufacture of contemporary products. Design process of material properties and traditional technologies relative to the form and function of design objects. Activity, 3 units. (Plus-minus letter grade only)

DES 356 A History of Design and Technology (Units: 3)
Prerequisites: Restricted to upper-division Design majors and minors or permission of the instructor.

History of modern design and attendant technology issues. Antecedents of modern design in product design, visual communications, and allied sectors in design. (Plus-minus letter grade only.)

DES 360 Model Development Laboratory (Units: 3)
Prerequisites: Restricted to upper-division Design majors; DES 200*, DES 305*, DES 356*, DES 370* with grades of C or better; or permission of the instructor.

Rudiments of model building for the industrial designer. Production of various levels of models, including presentation-grade models. Activity. Extra fee required. (Plus-minus letter grade only)

DES 367 Introduction to Game Design (Units: 3)
Prerequisites: Restricted to upper-division Design majors; DES 200*, DES 322, DES 356*, and DES 370*; or permission of the instructor.

Introduction to game design. Build on a codified language for games and a set of design methodologies collectively called "playcentric design." Develop flexible skills and knowledge to create playable systems more efficiently and collaborate with others more effectively. Activity.

DES 370 Introduction to The School of Design (Unit: 1)
Prerequisites: Restricted to Design majors and minors with sophomore standing or above; or permission of the instructor.

Orientation to the design major program and concentrations, to the university, to department resources, and to extracurricular opportunities. Issues and trends in design, technology, and industry will be discussed. Introduction to strategies for student success, including, but not limited to: time management, meeting deadlines, effective communication, and meeting with faculty advisors. Professional outlooks and opportunities for graduate study will also be covered. (CR/NC grading only)

DES 377B Visual Storytelling (Units: 3)
Prerequisites: Restricted to Design majors and minors; DES 200*, DES 222*, DES 322*, DES 325*, and DES 327*.

Introduction to visual storytelling through design with analysis of narrative theory and structure, point of view and persuasive techniques, and intended audience(s). Guided assignments in sequence, pacing, content and image selection, curation, translation of material into new formats, and development of design "voice" to tell a story. Activation of community oral narratives and other archival materials in experimental formats for print and screen. Activity.

DES 405 How to Develop, Patent, and Market an Idea (Units: 3)
Prerequisite: Restricted to upper-division standing or permission of the instructor.

Presentations by experts from the field concerning consumer trends, procedures, pitfalls, advantages, and disadvantages involved in developing, patenting, and marketing new ideas or products. (Plus-minus letter grade only)

DES 410 Product Design II (Units: 3)
Prerequisites: Restricted to upper-division Design majors; DES 300*, DES 305*, DES 310*, DES 321*, and DES 420* (may be taken concurrently); or permission of the instructor.

Introduction to the product design and development process: people, process, and product. User/market research, product development documentation, concept visual, models, and applications. Activity. Extra fee required. (Plus-minus letter grade only)

DES 411 Visual Storytelling for Designers (Units: 3)
Prerequisites: Restricted to Design majors and minors; DES 200*, DES 222*, DES 322*, DES 325*, and DES 327.*

Introduction to visual storytelling in design with analysis of narrative theory and structure, point of view and persuasive techniques, and intended audience(s). Guided assignments in sequence, pacing, content and image selection, curation, translation of material into new formats, and development of design "voice" to tell a story. Activation of community oral narratives and other archival materials in experimental formats for print and screen. Activity.

DES 420 Rapid Visualization (Units: 3)
Prerequisites: Restricted to upper-division Design majors; DES 320* and DES 370* with grades of C or better.

Illustration of product and graphic design ideas. Three-dimensional sketching and rendering techniques. Lecture, 2 units; activity, 1 unit. (Plus-minus letter grade only)

DES 421 Technical Drawing II: 3-D Solid Modeling (Units: 3)
Prerequisites: Restricted to upper-division Design majors; DES 321* or equivalent; or permission of the instructor.

Industry-standard computer-aided drafting. Use of computers to develop working drawings in architectural and industrial design. Practice with industrial input and output devices. Activity. (Plus-minus letter grade only)

DES 425 Graphic Design II (Units: 3)
Prerequisites: Restricted to upper-division Design majors; DES 325* with a grade of C or better; or permission of the instructor.

Building on the design and problem-solving skills explored in Graphic Design I, students work on more advanced and complex projects. Classic design briefs and experimentation in contemporary applications of type, letterforms, and imagery as design elements are combined with guided, complex design problems. Activity. Extra fee required. (Plus-minus letter grade only)

DES 427 Interactive Design II (Units: 3)
Prerequisites: Restricted to upper-division Design majors; DES 327* with a grade of C or better; or permission of the instructor.

Rich media design strategies and authoring techniques featuring graphical interaction, motion graphics, sound, and video content for Web and mobile platforms. Activity. (Plus-minus letter grade only)

DES 448 User Experience Design (Units: 3)
Prerequisites: Restricted to upper-division Design majors; DES 300*, DES 327*; or permission of the instructor.

Explore user experience (UX) design process, research methods, prototyping techniques, and UX in industry contexts. Specific topics covered include user interface (UI) design, iterative prototyping methods, user research (for designers), usability testing, heuristic evaluations, ethics and social justice in UX design, design systems, strategy, and articulating UX problem-solving in presentation and writing. May be repeated for a total of 6 units. Activity. (Plus-minus letter grade only)

DES 456 Design Thinking Principles and Practices (Units: 3)
Prerequisite for DES 756: Graduate standing or permission of the instructor.
Prerequisites for DES 456: Restricted to upper-division Design majors; DES 200*, DES 356*, and DES 370* with grades of C or better; GPA of 3.0* or higher; or permission of the instructor.

Design thinking is a method for problem-solving and innovation that promotes an understanding of and empathy for the needs of the end-user of the product or service, and that emphasizes an iterative, process-based approach to problem-solving. Introduce design thinking methods including user-based research techniques and prototyping, offer opportunities to apply these methods to class projects, and examine case studies. (Plus-minus letter grade only)
(DES 456/DES 756 is a paired course offering. Students who complete the course at one level may not repeat the course at the other level.)

DES 460 Rapid Prototyping and Manufacturing Systems (Units: 3)
Prerequisites: Restricted to Design majors; DES 300*, DES 310*, and DES 321* or equivalents; or graduate Design students; or permission of the instructor.

Design applications for Rapid Prototyping and Computer Integrated Manufacturing (CIM) systems; Manufacturing Resource Planning (MRP), integration methodologies and flexible manufacturing systems. Activity. Extra fee required. (Plus-minus letter grade only)

DES 475 Topics in Design (Units: 3)
Prerequisites: Restricted to upper-division Design majors; DES 300* and DES 322* or equivalents; or permission of the instructor.

Directly supervised special topic design study taking various forms including teaching assistantship, group project, etc. Topics to be specified in the Class Schedule. Activity. May be repeated for a total of 9 units when topics vary. (Plus-minus letter grade only)
Topics:

a. A Business Approach to Branding and Marketing
b. Introduction to Solar Energy
c. Exploring Package Design
d. Contemporary Design Issues

DES 505 Senior Design Project (Units: 3)
Prerequisites: Restricted to senior Design majors; DES 200*, DES 322*, DES 324GW*, DES 356*, DES 370*, and either DES 425* or DES 310*.

Culminating Design problem-solving experience. Initiating an industrial research and development project; conducting all phases of the design development, from initial research, testing, and prototyping, along with feasibility analysis and presentation. Activity. (Plus-minus letter grade only) [CSL may be available]

DES 521 Technical Drawing III: Advanced Modeling and Rendering (Units: 3)
Prerequisites: Restricted to upper-division Design majors; DES 321* and DES 421*; or permission of the instructor.

Advanced techniques in solid and surface modeling and rendering, using computer-aided design software and rendering programs to create accurate and visually compelling 3-D models; rapid prototyping component. Activity. (Plus-minus letter grade only)

DES 523 Information Design I: Data Visualization (Units: 3)
Prerequisites: Restricted to upper-division Design majors or minors; DES 200*, DES 300*, DES 322*, DES 325*, DES 327*, DES 356*, and DES 370*; or permission of the instructor.

Introduction to the field of information design focusing on data visualization problems for digital media, print, and environmental communication. Activity. (Plus-minus letter grade only)

DES 525 Graphic Design III: Advanced (Units: 3)
Prerequisites: Restricted to upper-division Design majors; DES 425* with a grade of C or better; or permission of the instructor.

Application of design principles in the solution of complex design projects. Activity. Extra fee required. (Plus-minus letter grade only)

DES 527 Interactive Design III (Units: 3)
Prerequisites: Restricted to Design majors; DES 427* with a grade of C or better; or permission of the instructor.

Focused experimentation and production in topics such as XR (AR and VR), motion graphics, and interaction design. Activity. (Plus-minus letter grade only)

DES 560 Prototyping Smart Devices (Units: 3)
Prerequisites: Restricted to upper-division Design majors or minors; DES 310*, DES 321*, and DES 360*, or permission of the instructor.

Computer programming and electronic hardware design as applicable to product design practice. Use of microcontrollers, sensors, digital I/O devices, and various programming environments. Techniques of prototyping interactive electronic "smart" products for demonstration and evaluation. Activity. Extra fee required. (Plus-minus letter grade only)

DES 570 Professional Practices for Designers (Units: 3)
Prerequisites: Restricted to senior Design majors; DES 300*, DES 322*, (DES 325* and DES 327*) or DES 310*; or permission of the instructor.

Professional standards and practices of design. Development of an entry-level design portfolio and supporting documentation. Investigation of design and related roles in industry, employment opportunities, professional associations, design ethics, and interview skills. Hybrid components. Activity. (Plus-minus letter grade only)

DES 575 Contemporary Design Workshop (Units: 3)
Prerequisites: Restricted to upper-division Design majors and minors; DES 200*, DES 356*, and DES 370*.

Supervised projects on variable topics that may include CSL. Topics to be specified in the Class Schedule. May be repeated when topics vary. Activity. Extra fee may be required. (Plus-minus letter grade only) [CSL may be available]
Topics:

a. Biomimicry
b. Emerging Media
c. Justice Design: Crafting Ethical Design Solutions
d. Social and Community Design

DES 576 Practical Experience: Internship (Units: 3)
Prerequisites: Restricted to upper-division Design majors; DES 200*, DES 356*, and DES 370*.

In-service experience in a special field. Directed experience in teaching and/or industry. Lecture, 1 unit; activity, 2 units. May be repeated for a total of 9 units. (CR/NC grading only) [CSL may be available]

DES 625 Graphic Design Practicum: Design Working Group (Units: 3)
Prerequisite: Restricted to upper-division Design majors; DES 325* and DES 425*; or graduate Design students.

Produce actual projects from beginning to end: concept to design to production. Students work directly with clients, both individually and in teams while gaining an understanding of the impact of materials and production costs as they produce materials promoting the University's programs, events, and initiatives. May be repeated for a total of 6 units. Activity. (Plus-minus letter grade only) [CSL may be available]

DES 627 Advanced Projects in Visual Communication Design (Units: 3)
Prerequisite: Restricted to upper-division Design majors and minors; DES 325 and DES 327; or permission of the instructor.

Development of projects in advanced areas of interactive and/or print media. Special topics may include user experience and brand identity design. Activity. May be repeated for a total of 6 units when topics vary. (Plus-minus letter grade only) [CSL may be available]
Topics:

a. Visual Design for User Experience
b. Type in Motion: Motion Graphics
c. Brand Identity Design

DES 628 Design Gallery: Exhibitions and Communications (Units: 3)
Prerequisites: Restricted to upper-division Design majors; DES 322* and DES 356* with grades of C or better; or permission of the instructor.

Theory and production of exhibitions, symposia, and publications for the Design Gallery, including planning, preparation, annotation, and critique. Activity. May be repeated for a total of 6 units. (Plus-minus letter grade only)

DES 677 Exploration in Delightful Design (Units: 3)
Prerequisites: Restricted to Design majors and minors. DES 200*, DES 322*, DES 325*, and DES 327*; or permission of the instructor.

Delightful design helps people live a happy and flourishing life. Explore concepts from semiotics, rhetoric, and aesthetics to applying them in design projects focused on living pleasantly (hedonia) and well (eudaimonia). Through design critiques, research, and projects, there will be discussion and demonstration of the compositional and experiential qualities that shape delightful design and how it supports the hedonic and eudaimonic dimensions of everyday life. Activity.

DES 685 Projects in the Teaching of Design (Units: 1-4)
Prerequisite: Permission of the instructor; completion of an equivalent course in the subject matter.

Teaching experiences in design practice, theory, and history through assigned instructional projects as classroom aides. Training in teaching principles including supervised classroom teaching activities. (Students may earn a maximum of 4 units toward the baccalaureate degree for any course(s) numbered 685 regardless of discipline.)

DES 699 Independent Study in Design (Units: 3)
Prerequisites: Restricted to upper-division Design majors; DES 200*, DES 300*, DES 322*, DES 356*, and DES 370* with grades of C or better; cumulative GPA of 3.0*; or permission of the instructor.

Supervised study of a particular problem in design. Open to students who have demonstrated the ability to work independently. May be repeated for a total of 6 units.

DES 700 Seminar in Design Research (Units: 3)
Prerequisite: Restricted to Design graduate students; Graduate Essay Test, which must be taken within six months of starting the graduate program.

Seminar in research methodology and introduction to the graduate program. Must be completed in the first semester of enrollment. (Plus-minus letter grade only)

DES 701 Seminar: Trends and Issues (Units: 3)
Prerequisite: Graduate standing in Family and Consumer Sciences or the School of Design.

Trends and issues in discipline-specific fields affecting individuals, families, and communities. Review of research and application of findings to problems. (This course is offered as FCS 700 [Formerly CFS 700] and DES 701. Students may not repeat the course under an alternate prefix.)

DES 724 Graduate Research and Writing Methods in Design (Units: 3)
Prerequisite: DES 700* or permission of the instructor.

Overview and practicum of graduate-level research methods and scholarly writing forms, such as literature review, methods, abstracts, in preparation for graduate creative work and thesis projects. Project-based approach including collaborative, hands-on, and student-led learning. (Plus-minus letter grade only)

DES 755 Seminar in Design Management (Units: 3)
Prerequisites: Restricted to Design graduate students; DES 700*; or permission of the instructor.

Students create a production using their project management skills throughout the experience. (Plus-minus letter grade only)

DES 756 Design Thinking Principles and Practices (Units: 3)
Prerequisite for DES 756: Graduate standing or permission of the instructor.
Prerequisites for DES 456: Restricted to upper-division Design majors; DES 200*, DES 356*, and DES 370* with grades of C or better; GPA of 3.0* or higher; or permission of the instructor.

Design thinking is a method for problem-solving and innovation that promotes an understanding of and empathy for the needs of the end-user of the product or service, and that emphasizes an iterative, process-based approach to problem-solving. Introduce design thinking methods including user-based research techniques and prototyping, offer opportunities to apply these methods to class projects, and examine case studies. (Plus-minus letter grade only)
(DES 456/DES 756 is a paired course offering. Students who complete the course at one level may not repeat the course at the other level.)

DES 800 Seminar in Design Topics (Units: 3)
Prerequisites: Restricted to graduate Design students; DES 700* or equivalent.

Design theory and practice. Special techniques in individual and group approaches to problem-solving. (Plus-minus letter grade only)

DES 805 Seminar in Design Methodology (Units: 3)
Prerequisite: Restricted to Design graduate students or permission of the instructor.

Research-driven design projects using advanced methodologies related to user-centered design, market/consumer research, human factors, product development, etc. Topics to be specified in Class Schedule. May be repeated when topics vary. (Plus-minus letter grade only)
Topics:

a. Industrial Design
b. Visual Communications

DES 852 Directed Experience in Design (Units: 3)
Prerequisites: Restricted to graduate standing; permission of the graduate major adviser, supervising faculty member, and department chair.

Preparatory course preceding graduate creative work or thesis project comprising investigation of literature and/or prior art, formulation of a research question, preparation of creative work/thesis proposal, completion of a research plan, and presentation. May be repeated for a total of 6 units. (Plus-minus letter grade only) [CSL may be available]

DES 894 Creative Work Project (Units: 3)
Prerequisites: Permission of the instructor and departmental graduate committee; and approval of Advancement to Candidacy (ATC) and Culminating Experience (CE) forms by Graduate Studies. ATC and Proposal for Culminating Experience Requirement forms must be approved by the Graduate Division before registration.

(CR/NC, RP grading only)

DES 898 Master's Thesis (Units: 3)
Prerequisites: Permission of the instructor and major adviser and approval of Advancement to Candidacy (ATC) and Culminating Experience (CE) forms by Graduate Studies. ATC and Proposal for Culminating Experience Requirement forms must be approved by the Graduate Division before registration.

(CR/NC grading only)

DES 899 Independent Study (Units: 3)
Prerequisite: Enrollment by petition approved by the supervising instructor, the major adviser, and the department chair.

Special study of a particular problem in industry or industrial education conducted under the direction of a faculty member. May be repeated. [CSL may be available]