

USER EXPERIENCE (UX) DESIGN (UXDG)

UXDG 101 User Experience Design Methods (5 Credits)

This course presents the principles of user experience (UX) design. Students are expected to gain knowledge and expertise to contribute to the design process in computer-based, user-centered systems in which user and task needs are given primary importance. Students also evaluate the usability of interactive systems in fulfilling the requirements of their users.

Attributes: Studio Elective Requirement

UXDG 301 User Experience Design Methods (5 Credits)

UXDG 315 Front-End Visual Interface Design (5 Credits)

This course presents the principles of visual human-machine interfaces. Students are expected to gain knowledge and expertise to develop visual human-machine interfaces that consistently promote high usability and perceived quality. Students also evaluate the aesthetics and visual identity, learning to approach such intangible concepts in an objective and consistent fashion.

Prerequisite(s): IACT 315; UXDG 310 or UXDG 101.

Attributes: Studio Elective Requirement

UXDG 320 Coding for UX Designers (5 Credits)

In this course, students propose solutions to real-world problems with novel, interactive technology solutions. Students explore variety of coding languages and their intended user experience design applications. Students effectively collaborate to design solutions, evaluate design feasibility, and test user experiences.

Prerequisite(s): MATH 240.

Attributes: Studio Elective Requirement

UXDG 325 Prototyping Electronics for Designers (5 Credits)

This course introduces practical techniques for sketching with sensors, electro-mechanical components and code while exposing students to the theoretical underpinnings of electronic prototyping. Through a series of hands-on workshops and projects, students learn how to rapidly and efficiently translate a design concept into a working prototype.

Prerequisite(s): (SDES 205; ELDS 205 or IDUS 231) and UXDG 320; Liability waiver is required.

Attributes: Studio Elective Requirement

UXDG 340 Interactive Product Design (5 Credits)

This course focuses on the issues related to the aesthetics of digital media within a nonlinear environment. Students are introduced to design problems in various disciplines through the use of current authoring techniques and technologies.

Prerequisite(s): (UXDG 101 or UXDG 310) and (UXDG 325; IACT 330 or IACT 315); Liability waiver is required.

Attributes: Studio Elective Requirement

UXDG 350 Professional Practices for UX Designers (5 Credits)

Students focus on in-depth preparation for professional practices of user experience design careers. Students learn to develop career building promotional materials such as digital portfolios, resumes and other materials necessary to professionally present their creative talents. This course examines the different forms of intellectual property protection, their value and how they operate. Students engage in skills for networking, professional self-representation and career development strategies.

Prerequisite(s): UXDG 390 or UXDG 330.

Attributes: Business-focused elective; Studio Elective Requirement

UXDG 360 Information Architecture (5 Credits)

This course provides an overview of an important graphic and interaction design specialty and includes selected studio projects that emphasize visual problem solving. Students are expected to learn to translate complex data into clear, visually dynamic solutions. Types of data can include statistical content, representing sequences that occur in space and time. This course complements study in topics of corporate communications systems, as well as publication, wayfinding and webpage design.

Prerequisite(s): (UXDG 310 or UXDG 101) or IACT 315.

Attributes: Studio Elective Requirement

UXDG 370 Perceptual and Cognitive Human Factors (5 Credits)

This course explores the physical, psychological and behavioral characteristics of humans. Through a series of lectures and projects, this information is applied to interaction design to develop usable, desirable and effective products. The course builds on and applies theories and methods studied in User Experience (UX) Design methods and Information Architecture.

Prerequisite(s): UXDG 315.

Attributes: Studio Elective Requirement

UXDG 380 Usability Testing: People vs. the World (5 Credits)

Usability testing is a vital component of the UX design process. Students learn methods for capturing and measuring user interaction and satisfaction as well as strategies for incorporating those results into an iterative UX design process. Through case study analysis, students practice techniques for planning, researching, analyzing, designing, testing, and reporting usability for various UX designs formats.

Prerequisite(s): UXDG 370 or IACT 375.

UXDG 390 UX Design Studio I: Innovation (5 Credits)

Students deliver innovative designs for digital products and interfaces that utilize best practices for user engagement and creating memorable experiences. This studio focuses on applying user experience design skills gained throughout the program as a holistic practice with professional developmental methodologies such as agile development.

Prerequisite(s): UXDG 370 or IACT 375.

Attributes: Studio Elective Requirement

UXDG 415 UX Design Studio II: The Complexity of Simplicity (5 Credits)

In this advanced studio, students produce working prototypes of their designs and generate digital products that deliver emotional connections to the user. By translating complex tasks and sets of information into user-friendly, understandable, and intuitive digital interfaces and products, students create meaningful and engaging user experiences.

Prerequisite(s): UXDG 390 or UXDG 330.

Attributes: Studio Elective Requirement

UXDG 435 Interaction Design Studio (5 Credits)

Students undertake work that presents complex interaction design problems and propose their own design briefs for a major piece of work. Design work is developed and prototypes are created within the time frame of the course. The project offers students an opportunity to synthesize understanding and method in interaction design.

Prerequisite(s): UXDG 370 or IACT 375.

Attributes: Studio Elective Requirement

UXDG 450 UX Design Senior Studio I: Researching and Ideation (5 Credits)

In the first of two senior design studios, students produce innovative user experience solutions to real design problems and generate working prototypes. Following state-of-the-art processes and design methodologies, students identify valuable opportunities and conduct thorough research that informs the ideation stage. Students envision and document a range of potential solutions for refinement in the successive studio.

Prerequisite(s): UXDG 380 and UXDG 390.

Attributes: Studio Elective Requirement

UXDG 479 Undergraduate Internship (5 Credits)

Internships offer students valuable opportunities to work in a professional environment and gain firsthand experience to help them prepare for careers. In an approved internship setting, a student typically spends one quarter working with an on-site professional supervisor and a faculty internship supervisor to achieve specific goals and objectives related to the program of study.

UXDG 490 UX Design Senior Studio II: Prototyping and Communication (5 Credits)

Students continue their design process through the evaluation, testing and refinement of the concepts they generated in the first senior design studio. Informed by the results of the user testing evaluation, they initiate a new ideation stage and produce professional presentation packages including working prototypes of their interfaces and digital products.

Prerequisite(s): UXDG 450.

Attributes: Studio Elective Requirement

UXDG 701 Theory of UX Design (5 Credits)

UX design theory provides a framework for creating products and services that are not only functional but also delightful and meaningful for users. In this course, students learn how elements such as psychology, design, technology, and business strategy combine to achieve this goal. Through comprehensive research and evaluation, students gain proficiency in articulating the significance and alignment of user experience design within the broader landscape of commercial design. Furthermore, students learn to connect their design solutions to advanced conceptual theories and underlying rationales, fostering a holistic approach to user experience design that transcends the practical.

UXDG 705 Front-End Design for User Experience (5 Credits)

Immerse yourself in the dynamic realm of visual interfaces as you learn the foundational principles that underpin the design of digital based, user-centered systems. Students acquire the knowledge and expertise necessary to ensure optimal controllability and the utmost quality of output, all while maintaining efficiency. Through a systematic and scientific approach, students adeptly evaluate the usability of interactive systems and skillfully define custom requirements. Additionally, students explore the aesthetic and visual identity aspects of design, gaining the tools to objectively and consistently approach these often-intangible concepts.

UXDG 720 Prototyping Coding: Proof of Concept (5 Credits)

Prototypes serve as tangible evidence that a concept or idea can be transformed into a functional and valuable product or solution and play a crucial role in the validation and refinement of ideas before significant resources are invested in full-scale development. Through diligent research, students learn how to pinpoint the optimal development environments for crafting novel digital solutions. Students foster effective collaboration and communication with engineers and developers in diverse contexts, actively contributing to the translation of their design visions into reality. They master an iterative approach, testing design feasibility and using data-driven insights to refine their decisions. Finally, students conceptualize and design interactive products and high-fidelity prototypes, harnessing a range of coding languages and environments to turn their ideas into tangible, fully-realized creations. (

UXDG 730 Modeling Electronics for Designers (5 Credits)

In this course, students cultivate advanced skills for user experience design projects as they master the art of programming, debugging, and seamlessly combining code to create functional prototypes. With a focus on implementing complex technologies, students employ advanced analytical skills to bring their designs to life. Through hands-on experience, students create comprehensive documentation for both tangible circuits and digital code. They develop the expertise to evaluate and select electronic components, ensuring their prototypes' success. Ultimately, they translate design concepts into electronic, operational prototypes with finesse and precision.

Prerequisite(s): UXDG 720; Liability waiver is required.

Attributes: Studio Elective Requirement

UXDG 731 Information Architecture for Designers (5 Credits)

This dynamic course equips students with the expertise to tackle complex information design challenges. Students delve into research and solution development, developing the skills to simplify and visualize vast, complex datasets. Through procedural techniques, students navigate intricate systems with confidence. They learn to craft clear and actionable graphic structures for organizing information, images, and concepts. Utilizing graphic and digital prototypes, students simulate real-world scenarios to understand the profound impact of information design on human actions and decision-making processes.

Prerequisite(s): UXDG 701 or IACT 701.

Attributes: Studio Elective Requirement

UXDG 740 Cognitive Human Factors for Designer (5 Credits)

User Experience Designers must consider the psychological and cognitive aspects of human behavior and perception to shape how users interact with and respond to products, interfaces, and experiences. Through the art of visualization, students adeptly translate intricate theoretical concepts into informative infographics for their future reference. Armed with analytical prowess, students dissect existing solutions and craft experimental models to tackle specific human factor challenges through strategic design modifications. They embrace the scientific method to build, test, and evolve their designs based on empirical evidence. Additionally, students cultivate human factor checklists to meticulously guide design evaluations, ensuring the delivery of high-quality, user-centric outputs.

Prerequisite(s): UXDG 731.

UXDG 750 Usability Testing and Evaluation (5 Credits)

Usability testing places the user at the center of the design process, ensuring that products are user-friendly, effective, and aligned with user needs and business objectives. In this course, students are immersed in academic and professional principles, methodologies, and tools for generative and evaluative usability testing, as well as both quantitative and qualitative usability research. With a focus on long-range usability testing, students progress from initial human-centered design evaluation to the critical analysis, implementation of enhancements, and comprehensive effectiveness evaluation. They master the art of strategic measurement to ensure ongoing solution performance and usability. The course culminates in students creating compelling usability reports, strategically defending their UX research and design process, findings, and solutions, tailored for executive stakeholders.

Prerequisite(s): UXDG 731.

Attributes: Studio Elective Requirement

UXDG 770 Leading UX Design (5 Credits)

Leading UX design teams requires a unique blend of skills, including a deep understanding of user needs, interdisciplinary collaboration, ethical considerations, and a commitment to continuous improvement. To maintain the balance of user-centric design with business goals, students must gain proficiency in communication, team dynamics, project management, agile, and waterfall methodologies. Students explore the ethical and social responsibilities inherent to UX design, formulating strategies for making informed ethical decisions. They conduct in-depth research to align UX design with business strategy, measure its impact, and inform strategic decisions. Through critical thinking and problem-solving, students tackle real-world challenges in UX design management, fostering effective team leadership, strategic planning, and ethical decision-making. They analyze, evaluate, and continually enhance UX design decisions for optimal user experience and satisfaction, ensuring a holistic approach to UX design management.

Prerequisite(s): UXDG 740 or UXDG 750.

Attributes: Studio Elective Requirement

UXDG 779F Graduate Field Internship (5 Credits)

Students in this course undertake a field assignment under the supervision of a faculty member.

UXDG 779T Graduate Teaching Internship (5 Credits)

Students in this course undertake a teaching assignment under the supervision of a faculty member.

UXDG 780 UX Design M.F.A. Thesis I: Research, Synthesis, and Insight (5 Credits)

The insights synthesized from UX design research offer a comprehensive, user-centered view of the design process, empowering designers and organizations to create products and experience that not only meet user needs, but resonate emotionally, resulting in enhanced user satisfaction and market success. In this course, students identify valuable opportunities and conduct thorough user research that informs the ideation stage along with state-of-the-art processes and design methodologies. Through substantial user research and systemic literature review, students identify and effectively communicate the viability of a meaningful and ethical user research topic. Students refine their methodologies and synthesize results into a robust UX design document. Students envision and document a range of potential solutions for refinement in the successive thesis course.

Prerequisite(s): UXDG 730 and (UXDG 750 or UXDG 779).

Attributes: Studio Elective Requirement

UXDG 790 UX Design M.F.A. Thesis II: Design, Validation, and Execution (5 Credits)

In this course, students rigorously test, refine, and execute their final design solutions to ensure they meet user needs, perform effectively, and align with intended goals. Through concise visualizations, oral presentations, working prototypes, and written works, students adeptly refine and convey intricate UX concepts. Students integrate novel research methodologies and desirable design practices, fostering innovation in UX. They engage in collaborative, rapid prototyping, while analyzing and testing design solutions infused with user desires. As the culmination of this program, students present and defend their comprehensive documentation, encompassing user research, UI/UX design, user testing results, and prototypes, all skillfully interwoven into their compelling theses.

Prerequisite(s): minimum score of 6 in 'Graduate Prerequisite Test'; UXDG 770 and UXDG 780.

Attributes: Studio Elective Requirement