INTERACTIVE DESIGN (IXDS)

IXDS 503 Design Methods for Interactivity (5 Credits)
This course addresses the principal fields of information design, user interface design and human-centered design as they relate to interactive design. Through the exploration of key principles and methodologies of these fields, students develop a working knowledge for evaluating data sets, finding the appropriate information perspectives, creating dynamic interfaces and conducting user testing in order to produce a functional, polished interactive project.
Attributes: Studio Elective Requirement

IXDS 512 Web Development Methods (5 Credits)
Web applications and development is still the predominant form of content production on the internet, surpassing mobile applications. This course focuses on the development of websites from initial design to final implementation. Students explore technical and conceptual aspects of web designs while simultaneously learning about key elements of industry-standard authoring tools to create dynamic and exciting web sites.
Attributes: Studio Elective Requirement

IXDS 708 Product Strategy & Storytelling (5 Credits)
Product strategy empowers entrepreneurs to transform ideas into market-defining solutions. In this comprehensive exploration, students master cutting-edge frameworks including the Lean Canvas and Blue Ocean Strategy while navigating competitive market landscapes. Applying persuasive storytelling principles, students seamlessly integrate data, visuals, and design to craft compelling narratives that resonate with clients and stakeholders. Through real-world projects, students develop professional presentation skills for thesis reviews, industry conferences, and business environments. This course propels students to skillfully synthesize market research, narrative development, and visual communication, creating breakthrough strategies that dominate competitive markets.

IXDS 709 Systems Innovation: Beyond Human-Centered Design (5 Credits)
Systemic design transcends traditional human-centered approaches, empowering students to tackle complex, interconnected challenges through strategic frameworks and forward-thinking methodologies. In this comprehensive exploration, students master systems diagramming, stakeholder mapping, and intervention prototyping while navigating real-world problem landscapes. Applying ethical design principles, students seamlessly integrate responsible decision-making with innovative solutions addressing today's and tomorrow's pressing challenges. Through meaningful project applications, students develop inclusive, actionable interventions with transformative potential. This course propels students to skillfully synthesize systemic thinking, strategic analysis, and ethical considerations, creating breakthrough solutions that reshape complex environments.

IXDS 710 Patterns & Prototyping (5 Credits)
This course builds advanced skills in digital prototyping and UI/UX patterns, emphasizing inclusive, accessible, and AI-integrated interfaces. Students explore design conventions and pattern libraries to create cohesive user experiences. Hands-on practice includes paper prototyping, Wizard of Oz testing, and rapid prototyping using industry-standard tools. Motion, animation, and sound design are introduced to enrich interactivity. The course equips students to design engaging, responsive prototypes that meet diverse user needs and align with best practices in modern interface and experience design.
Attributes: Studio Elective Requirement

IXDS 712 Game Engines for IX (5 Credits)
This course explores game engines as low-code platforms for creating real-time, interactive experiences beyond games. Students prototype and deploy projects across web, mobile, AR/VR, and physical interfaces, integrating live data and designing responsive systems. Emphasis is placed on selecting the right technologies, aligning with business or community goals, and applying storytelling and simulation strategies. Students build fluency in game engine tools while developing strategic thinking, technical deployment skills, and a build-to-learn mindset through hands-on, interdisciplinary projects.
Attributes: Studio Elective Requirement

IXDS 720 MVP Lab: Idea to Execution (5 Credits)
MVP Lab teaches students to use low-code and AI-enhanced tools to rapidly build and deploy minimum viable products (MVPs). Students learn to evaluate tools based on scalability, reliability, and user alignment. Through hands-on projects, they apply emerging technologies—such as AI plugins, app builders, conversational platforms, and IoT systems—to solve real-world problems. Emphasizing rapid iteration, user testing, and deployment, the course builds strategic thinking, technical fluency, and creative agility essential for launching impactful digital solutions.
Attributes: Studio Elective Requirement

IXDS 722 Applied AI (5 Credits)
Applied AI revolutionizes interactive experience design, empowering students to craft adaptive, agentic systems that transform user engagement through intelligent interfaces. In this comprehensive exploration, students master large language models, prompt engineering, and Python scripting while navigating human-AI interaction complexities. Applying hands-on methodologies, students develop chatbots, voice assistants, and autonomous agents evaluating AI's impact across consumer and enterprise environments. Emphasizing ethical foresight and inclusive design, students critically examine social, cultural, and technological implications while creating AI-infused prototypes.
Prerequisite(s): IXDS 710.
Attributes: Studio Elective Requirement

IXDS 724 Interactive Experience Lab (5 Credits)
Emerging frontiers in interactive experience design challenge students to explore specialized topics and advanced methodologies that shape innovation in interactive experiences. In this dynamic exploration, students navigate faculty-guided studies into contemporary issues and sophisticated techniques. Applying flexible learning approaches, students engage through lectures, discussions, individual projects, and critiques tailored to each topic's demands. With varying content and faculty expertise, this adaptive course propels students to develop deep expertise in specialized areas while mastering advanced processes.
Prerequisite(s): IXDS 710.
Attributes: Studio Elective Requirement

IXDS 732 Physical Computing for Tangible Interfaces (5 Credits)
Utilizing microprocessor boards, touch and motion sensors, and prototyping techniques students research, design, and build interactive systems that use tangible interfaces to sense the physical world. Alongside the practical coursework, students explore the origins and evolution of automata and kinetic art and analyze their influence on contemporary interactive art and design.
Prerequisite(s): IXDS 710; Liability waiver is required.
Attributes: Studio Elective Requirement

IXDS 734 Smart Devices (5 Credits)
Smart devices reshape how objects communicate and respond to user interactions through designs that creatively integrate hardware, software, and real-time data. Through hands-on prototyping with sensors, microcontrollers, and cloud platforms, students build secure, scalable systems for smart environments and everyday objects. The course emphasizes user-centered design, interoperability, and sustainability, with applications in healthcare, automation, and mobility. Students explore design methods, assess live data interactions, and consider ethical, technical, and social impacts when creating smart, data-driven solutions.
Prerequisite(s): IXDS 710 or IXDS 720.
Attributes: Studio Elective Requirement

IXDS 742 Physical Computing for Immersive Environments (5 Credits)
Innovations in physical computing allow contemporary artists and digital design agencies to employ mixed reality experiences for marketing, education, entertainment, and more. Utilizing tangible interfaces capable of sensing the physical world, students design interactive installations and create immersive environments for a range of applications and audiences.
Prerequisite(s): IXDS 732 or ITGM 736.
Attributes: Studio Elective Requirement

IXDS 744 Speculative Design for Emerging Technologies (5 Credits)
This course explores speculative design and emerging technologies, encouraging students to prototype innovative solutions for future scenarios. Students critically examine emerging technologies, considering their social, ethical, and environmental impacts. Using speculative methods, they design concepts that address future challenges and opportunities. Emphasizing imagination, foresight, and design ethics, the course pushes students to envision alternative futures. By merging creative ideation with technology, students learn to design complex, future-oriented experiences with attention to usability, sustainability, and social impact.
Prerequisite(s): IXDS 732; IXDS 734 or IXDS 710.
Attributes: Studio Elective Requirement

IXDS 754 IX Collaborative Production (5 Credits)
Agile development mastery transforms collaborative innovation as students work in high-performing teams to create deployable MVPs through the comprehensive SCRUM framework. In this intensive experience students seamlessly synthesize technical, visual, and strategic competencies to address complex real-world challenges through iterative prototyping. Emphasizing collaborative excellence and user-centered methodologies students navigate the complete product lifecycle from initial research through final deployment. This transformative course propels students to deliver portfolio-worthy innovations that demonstrate exceptional leadership capabilities and full-cycle development expertise within dynamic interdisciplinary environments.
Prerequisite(s): IXDS 720.
Attributes: Studio Elective Requirement