

Art - Design (ARTG)

ARTG 1250. Design Process Context and Systems. 4 Hours.

Explores common design practices, principles, and vocabularies, introducing the design process as a method of inquiry and problem solving through studio projects. Emphasizes the importance of an awareness of audience and context in the creation of meaningful communications and experiences. Explores the practice of design as an iterative process, offering students an opportunity to obtain an understanding of the value of systems thinking and the importance of feedback and exchange as a means for assessing the quality of design's effectiveness in helping users achieve their goals.

ARTG 1255. Design Process Context and Systems Abroad. 4 Hours.

Explores common design practices, principles, and vocabularies, introducing the design process as a method of inquiry and problem solving through studio projects. Emphasizes the importance of an awareness of audience and context in the creation of meaningful communications and experiences. Explores the practice of design as an iterative process, offering students an opportunity to obtain an understanding of the value of systems thinking and the importance of feedback and exchange as a means for assessing the quality of design's effectiveness in helping users achieve their goals. Taught abroad. May be repeated without limit.

ARTG 1990. Elective. 1-4 Hours.

Offers elective credit for courses taken at other academic institutions. May be repeated without limit.

ARTG 2250. Typography 1. 4 Hours.

Introduces typography as the basis of graphic design and visual communication. Guides students through an understanding of letterforms, words, sentences, and text as both image and information. Studies form, context, and visual meaning. Introduces use of the typographic grid and issues of hierarchy and legibility through assigned projects, readings, and lectures. Includes the historical evolution of typefaces and their classification as a rational system.

ARTG 2251. Type Tools. 1 Hour.

Offers students an opportunity to acquire technical software skills used in typesetting, such as Adobe InDesign, in this introductory lab.

ARTG 2252. Graphic Design 1. 4 Hours.

Explores graphic form and vocabulary through the development of icons and symbols. Applies graphic design principles to the correlation of forms with their function, content, and context. Incorporates a variety of media as visual communication elements.

ARTG 2260. Programming Basics. 4 Hours.

Exposes students to basic programming design for user interfaces. Offers students an opportunity to become familiar with the logical elements of programming languages. Through lectures, hands-on in-class exercises, and modular projects, explores Web-based design and programming solutions for managing interaction and animation.

ARTG 2300. Business Literacy for Design and Media. 4 Hours.

Provides students with a toolkit that offers insight into how companies operate, what their managements do, and how success is measured. Exposes students to creative rights issues and professional paths they might pursue—employee, freelancer, and entrepreneur. Evaluates various company cultures and offers students an opportunity to assess their personal career fit.

ARTG 2400. Interaction Design 1: Responsive. 4 Hours.

Applies information design principles to Web and mobile interface design. Explores user-centered interface and programming design strategies for the delivery of responsive data-driven websites. Discusses audience definition, content development, information structuring, and navigation. Emphasizes tools and strategies for design, such as site maps, wireframes, prototypes, usability testing, and iterative development. Offers students an opportunity to obtain meaningful interactive experiences through team-based projects.

ARTG 2401. Interaction Design Tools. 1 Hour.

Introduces skills and software used in designing and developing Web-based interactive environments. Explores Web-page scripting and tagging, CSS-based design coding, options for front- and back-end page design connections, and alternative technologies.

ARTG 2990. Elective. 1-4 Hours.

Offers elective credit for courses taken at other academic institutions. May be repeated without limit.

ARTG 3250. Physical Computing. 4 Hours.

Explores the communication between the physical world and the interactive, computer-based interface. Examines the potential of reactive analog and digital devices embedded within the physical realm. Offers students an opportunity to use simple kit sensors and indicators designed to enable student teams to create interfaces triggered by gesture, bodily movement, physical forces, and other tangible actions. Concludes with discussions of more complex interactive devices, the relationship between physical computing and robotics, and possible future directions.

ARTG 3350. Typography 2. 4 Hours.

Continues ARTG 2250, exploring structures and hierarchies through increasing typographic complexity. Investigates meaning, legibility, and readability with an emphasis on voice, organization, sequence, and the typographic grid.

ARTG 3351. Time-Based Design. 4 Hours.

Introduces principles of time-based media—such as anticipation, interval, succession, and rhythm—through a series of analog and digital projects. Explores the potential of communicating information over time with a focus on kinetic typography and visual/sonic narratives. Examines concepts from film, music, and other related time-based arts through assignments, lectures, and student presentations. .

ARTG 3450. Graphic Design 2. 4 Hours.

Explores the conceptual potential inherent in the merging of words/text with images/symbols to achieve a level of communication that exceeds the sum of visual and verbal components. Examining how the relationship of verbal and visual content can enhance meaning and comprehension, students identify a social issue of personal relevance and create a visual campaign targeting a core audience. Through a process including projects, readings, and lectures/discussions, students research, frame concepts, explore visual decisions, and determine appropriate deliverables.

ARTG 3451. Information Design 1. 4 Hours.

Introduces basic concepts, methods, and procedures of information design with a focus on mapping information. Students investigate visual systems and information structures such as maps, graphs, charts, and diagrams. Emphasizes the creative process of organizing, visualizing, and communicating data by making complex information easier to understand and use.

ARTG 3460. Identity and Brand Design. 4 Hours.

Addresses the origins, significance, and consequence of identity and branding expressions, in diverse media, in terms of personal, cultural, and commercial values. Using design research and studio methods, a series of exercises explores expressions of individual and collective identity. Offers students an opportunity to work in teams to develop branding projects in a process designed to increase their capacity to create effective brand expressions and analyze semiotic significance and cultural and economic value. Critique of work and presentation of concepts of identity and brand seek to sharpen students' skills and challenge their ideas about brand. External critique seeks to create valuable tests of bias and assumptions, while principles of managing attention and trust seek to build the ability to function as a brand steward in actual practice. .

ARTG 3462. Experience Design 1. 4 Hours.

Investigates a wide range of design research methods and means of representing user intentions and actions in order to develop coherent designs based on the needs of the user. Includes use of context assessment, user experience audits, and scenario development as means to understand the motivations, behaviors, and values of audiences and participants.

ARTG 3463. Experience Design 2. 4 Hours.

Continues ARTG 3462 processes and strategies for creating compelling human-centered experiences. Offers students an opportunity to use design processes from multiple disciplines to develop real-world solutions.

ARTG 3465. Experience Design 1 Abroad. 4 Hours.

Investigates a wide range of design research methods and means of representing user intentions and actions in order to develop coherent designs based on the needs of the user. Includes use of context assessment, user experience audits, and scenario development as a means to understand the motivations, behaviors, and values of audiences and participants. Taught abroad. May be repeated without limit.

ARTG 3700. Interaction Design 2: Mobile. 4 Hours.

Explores user-centered interface design for information exchanges using handheld and mobile devices. Studies the potentials for leveraging both the social and locative possibilities of mobile devices through research, discussions, and project assignments.

ARTG 3990. Elective. 1-4 Hours.

Offers elective credit for courses taken at other academic institutions. May be repeated without limit.

ARTG 4550. Design Degree Project 1. 4 Hours.

Draws on a range of theoretical and critical texts that address current issues and research methodologies in graphic design. This course is writing intensive and offers students an opportunity to complete weekly writing assignments and to visit local design studios, galleries, and museums. Writings and discussions are designed to lead to identification of a focus for ARTG 4551.

ARTG 4551. Design Degree Project 2. 4 Hours.

Forms the graphic design major capstone together with ARTG 4550. This intensive research-driven studio explores the realm of designing authorship. A single project theme extends in phases through an entire term to mirror the development sequence of complex professional design projects. Essential to the process is that the medium is not predetermined. Offers students an opportunity to investigate a topic of their choice, author and edit content, and determine the most effective medium for their message, which they design to resonate with a specific audience. Central to the course is a substantive written problem definition and proposal designed to integrate each student's academic and design experience.

ARTG 4552. Information Design 2. 4 Hours.

Builds on concepts from ARTF 2223 and ARTG 3451. Offers students an opportunity to develop strategies for structuring and communicating complex information to increase understanding through dynamic states, which are controlled through the interaction of end users. Explores possibilities offered by interfaces that mediate between a person and information space through research, projects, readings, and discussions.

ARTG 4553. Environmental Information Design. 4 Hours.

Explores visual communication as experienced in the time-space continuum. Projects investigate social issues that contribute to shaping the concept of spaces, such as public art installations, interpretive exhibits, and wayfinding.

ARTG 4554. Typography 3. 4 Hours.

Offers an advanced course exploring a variety of typographical solutions, including expressive formal and complex content-based projects.

ARTG 4700. Interaction Team Degree Project 1. 4 Hours.

Encompasses the definition, research, planning, and proposal of a large-scale project in graphic, interaction, or experience design. Guides students in interdisciplinary teams in the process of investigating and developing a topic of their choice, from defining audience to authoring and editing content and determining the most effective medium to resonate with a specific audience and context. A central aspect is writing a substantive problem definition and proposal that integrates each student's academic and design expertise. This course is the first of two courses in a capstone sequence. The project concept and preliminary groundwork are completed in this course in preparation for final design and production the following term in ARTG 4701.

ARTG 4701. Interaction Team Degree Project 2. 4 Hours.

Continues ARTG 4700. Guides the completion of the capstone project initiated in ARTG 4700 through a design process of prototyping, iteration, realization, testing, implementation, and presentation.

ARTG 4990. Elective. 1-4 Hours.

Offers elective credit for courses taken at other academic institutions. May be repeated without limit.

ARTG 5100. Information Design Studio 1: Principles. 4 Hours.

Explores the theories and practices of information design through studio projects. Investigates visual systems and information structures such as maps, timelines, charts, and diagrams. Emphasizes the creative process of organizing, visualizing, and communicating data by seeking to make complex information easier to understand and use. Requires graduate standing or permission of program coordinator or instructor.

ARTG 5110. Information Design History. 4 Hours.

Investigates the history of visualization practices across disciplines and in relation to technology developments. Critically examines seminal visualizations in social, cultural, and technological contexts by means of discussions and writing activities in a seminar format. Requires graduate standing or permission of program coordinator or instructor.

ARTG 5120. Research Methods for Design. 4 Hours.

Examines qualitative and quantitative research methods pertinent to design. Through discussion and writing activities, offers students an opportunity to investigate varied inquiry toward the development of researchable questions, argument formation, and assessment methodologies. Students who do not meet course restrictions may seek permission of instructor.

ARTG 5130. Visual Communication for Information Design. 4 Hours.

Explores graphic and typographic theory, principles, and practices. Introduces students to visual communication design with a primary focus on typography as the fundamental means of conveying content. Readings locate design and typography within the larger history of visual art and writing development. Covers methods of organizing content through hierarchy and spatial organization of grid structures. Considers relationships between positive and negative space, depth perception, transparency, and color theory. Requires graduate standing or permission of program coordinator or instructor.

ARTG 5150. Information Visualization Principles and Practices. 3 Hours.

Introduces information visualization from theoretical and practical perspectives. Defines the information visualization domain and advances principles and methods for the effective visual representation of data. Contextualizes the field from a historical perspective. Presents the perceptual and cognitive tasks enabled by visualizations. Studies an extensive range of visualization models. Illustrates good and bad practices in visualization with real-world examples. Introduces concepts in computer programming in an information visualization context. .

ARTG 5310. Visual Cognition. 4 Hours.

Introduces human visual cognition as it applies to information design and visualization. Focuses on perception, attention, pattern recognition, information acquisition, memory, and creation of mental models. Explores reasoning, cognition, decision making, and problem solving in relation to visual artifacts. Students who do not meet course restrictions may seek permission of instructor or program coordinator.

ARTG 5320. Statistics Basics for Designers. 4 Hours.

Offers design students an opportunity to obtain the necessary skills to collect, summarize, analyze, and interpret data. Introduces concepts and methods in statistical reasoning and analysis. Topics include data mining, comparison, assessment, and delivery. Students who do not meet course restrictions may seek permission of instructor or program coordinator.

ARTG 5330. Visualization Technologies 1. 4 Hours.

Introduces programming languages that allow computational analysis and digital delivery of dynamic information. Examines implications of environmental and personal sensor data sources, mobile collection and analysis of data, real-time networked data sets, and social use of shared data visualization tools. Students who do not meet course restrictions may seek permission of instructor or program coordinator. May be repeated once.

ARTG 5600. Experience Design Studio 1: Principles. 4 Hours.

Offers students hands-on project development of systems, artifacts, communication, environments, or service offerings with a focus on the unique personal experience of the audience exposed to the project. Experience design is a holistic approach to design that investigates the human experience in specific situations to improve its quality, given an understanding of human goals, needs, and desires. This course provides a context for a cohesive experience through interaction, movement, and understanding, which builds on previous knowledge of audiences and applications. Presents students with design methods and processes for experience design by developing a semester-long project. Offers students an opportunity to develop competency in tools used to create the various elements that create the context for experiences in specific situations and events including interaction, artifact, and environment design. Understanding a design process and knowledge of studio critique practices is recommended.

ARTG 5610. Design Systems. 4 Hours.

Explores a systems-based perspective on our environment by addressing questions that are fundamental to design practice: What is a system, and what are the different types? How do we observe, analyze, and represent systems? What interactions can we have with systems and what are the different types of interaction? Explores structures and processes for the design of systemic relationships between people, artifacts, environments, and activities. Systems may be physical, virtual, social, or a combination. Through discussion, writing, diagramming, and project exercises, offers students an opportunity to learn principles of systems theory and explore the connection between design methods and systems thinking. Students who do not meet course restrictions may seek permission of instructor or program coordinator.

ARTG 5620. Notational Systems for Experience. 4 Hours.

Examines theoretical foundations, concepts, and methods of visual notational systems used in the effective analysis and communication of existing experiences and in the envisioning of conditions for future experiences. Notational systems are sets of graphic signs and codes that denote or prescribe specific actions, forces, operations, events, or performances that occur over time. Students engage with concepts and models through readings, discussion, case study analyses, and speculative design projects. Evaluates the role that notational systems play in documenting, analyzing, and understanding the human goals, actions, behaviors, and perceptions key to experience and assesses their value in designing for agency and new experiences. Students who do not meet course restrictions may seek permission of instructor or program coordinator.

ARTG 5640. Prototyping for Experience Design. 4 Hours.

Explores tools, technologies, and processes to create prototypes of artifacts, environments, and interactive systems for experience design projects. Offers students the opportunity to learn, use, experiment with, and test prototypes using a wide range of state-of-the-art prototyping technologies to further their understanding of multiple strategies and techniques of prototyping for experience design. Tools and techniques change over time but typically include laser cutting, 3D printing, CNC machining, electronics prototyping, augmented reality, machine tools and 2D forming, fast prototyping, and hand tools. .

ARTG 6100. Information Design Studio 2: Dynamic Mapping and Models. 4 Hours.

Continues the exploration of data representations in a variety of media. Focuses on interactive and time-based techniques. Emphasizes computational methods of data collection, manipulation, and encoding. Requires graduate standing or permission of program coordinator or instructor. May be repeated once.

ARTG 6110. Information Design Theory and Critical Thinking. 4 Hours.

Examines various theoretical models of information visualization and delivery systems. Evaluates the concepts and effectiveness of the models through discussions and writing activities. Students who do not meet course prerequisites or restrictions may seek permission of program coordinator or instructor.

ARTG 6200. Information Design Studio 3: Synthesis. 4 Hours.

Continues the exploration of theories of information design and visualization through focused projects that are intended to lead to development of a thesis project. Requires graduate standing or permission of program coordinator or instructor.

ARTG 6310. Design for Behavior and Experience. 4 Hours.

Examines the potential of interfaces as mediators between information and users. Explores iterative prototyping and research methods to analyze patterns of behavior and implications of interface on effective communication. Utilizes observation, empathy, ethnography, and participatory design methods to offer students an opportunity to increase their understanding of audiences' and stakeholders' motivations and expectations. Requires graduate standing or permission of program coordinator or instructor.

ARTG 6320. Design of Information-Rich Environments. 4 Hours.

Explores methods of information organization, presentation, and navigation in physical space. Introduces concepts of wayshowing and embodiment and examines the bridging of physical and virtual spaces through the use of mobile and locative technologies. Encourages collaborative studio projects exploring interventions in public or urban environments and in exhibit-based learning environments. Undergraduate students may seek permission of instructor.

ARTG 6330. Information Design Mapping Strategies. 4 Hours.

Examines the relationships between content and context through mapping methods. Emphasizes the impact of geographic information systems, evolving technologies, community mapping tools, globalization, and delivery systems. Undergraduate students may seek permission of instructor.

ARTG 6600. Experience Design Studio 2: Group and Interpersonal. 4 Hours.

Offers students an opportunity to learn a human-centered design perspective and to develop experience design competency in the complex context of interpersonal and group interactions. Experience design is a holistic approach that investigates the human experience in specific situations in order to improve its quality. Students study the person-to-person aspect of human-centered design through readings and in-class activities, as well as practice applying its perspectives, models, and theories to the project process. Students are asked to participate in class discussions and create compelling experience design projects to address the needs, desires, fears, and aspirations of their audience.

ARTG 6900. Special Topics in Design. 4 Hours.

Explores focused research topics relevant to the graduate program curriculum. Undergraduate students may seek permission of program coordinator or instructor. May be repeated up to five times.

ARTG 7100. Thesis Seminar for Design. 4 Hours.

Examines emerging research and critical practices in design. Offers students an opportunity to develop the visual and verbal expression of the thesis through writing, discussion, presentation, and critique.

ARTG 7990. Thesis. 4,8 Hours.

Offers students support in developing and producing the written component of a design thesis that integrates and applies their accumulated knowledge. Encourages student participation within a practice and research community consisting of classmates, advisor(s), and external professionals. Restricted to students in experience design and Information design and visualization.

ARTG 7996. Thesis Continuation. 0 Hours.

Offers students continuing thesis supervision by members of the department.