ID - Innovative Design

Courses numbered 500 to 799 = undergraduate/graduate. (Individual courses may be limited to undergraduate students only.) Courses numbered 800 to 999 = graduate.

ID 500. Design Thinking Process (1).
Today organizations of all sizes are looking to be more innovative, deliver unique, high-quality user experiences and even disrupt their industry. This course looks at techniques and approaches to innovation design past and present, but focuses on the process of design thinking. Design thinking takes a human-centered approach to problem solving and can be applied to nearly any situation including new ways of looking at products and services, consumer markets, user wants and needs, team functions and building, company alignment, strategy, and more. Course purpose is to help students learn, understand and appreciate the process of design thinking. Focuses on techniques for developing empathy and understanding, effectively defining a problem, exploring ideas, rapid prototyping and testing. Students observe and collaborate with interdisciplinary teams to discover user insights, improve user experiences, innovate new products and services, create team alignment, and overall problem solving. Intended for students with diverse interests and nontechnical backgrounds.

ID 500H. Design Thinking Process Honors (1).
Today organizations of all sizes are looking to be more innovative, deliver unique, high-quality user experiences and even disrupt their industry. This course looks at techniques and approaches to innovation design past and present, but focuses on the process of design thinking. Design thinking takes a human-centered approach to problem solving and can be applied to nearly any situation including new ways of looking at products and services, consumer markets, user wants and needs, team functions and building, company alignment, strategy, and more. Course purpose is to help students learn, understand and appreciate the process of design thinking. Focuses on techniques for developing empathy and understanding, effectively defining a problem, exploring ideas, rapid prototyping and testing. Students observe and collaborate with interdisciplinary teams to discover user insights, improve user experiences, innovate new products and services, create team alignment, and overall problem solving. Intended for students with diverse interests and nontechnical backgrounds.

ID 501. Design Thinking Facilitation (1).
Looks at various techniques and approaches to facilitating teams in the design-thinking process, understanding stakeholders, dealing with a variety of personality types, and handling group dynamics and conflicts. Intended for students with diverse interests and nontechnical backgrounds.

ID 501H. Design Thinking Facilitation Honors (1).
Looks at various techniques and approaches to facilitating teams in the design-thinking process, understanding stakeholders, dealing with a variety of personality types, and handling group dynamics and conflicts. Intended for students with diverse interests and nontechnical backgrounds.

ID 502. Design Thinking Implementation: Design Challenges Level I (2).
Using design-thinking processes, students are assigned to teams to tackle one or more design challenges provided by a Fortune 100 company to innovate new ideas and solutions. (Design challenges vary by semester.) These challenges are more involved than those in ID 501. Each team works through the challenge, develops ideas, prototypes, evaluates and redesigns as needed to reach a final solution which is presented by the team. Intended for students with diverse interests and nontechnical backgrounds.

ID 503. Introduction to Branding (1).
Looks at companies that have developed successful brands and what can be learned from them. Topics include: what branding really is, how branding can impact sales short-term and long term, who really owns the brand, and how companies manage their brands. Intended for students with diverse interests and nontechnical backgrounds.

ID 504. Building a Brand Strategy (1).
Looks at how to position companies for long-term success by developing a well thought out brand strategy. Using the tools learned in ID 503, students work on developing a strategy for a new startup company. Students collaborate in teams, but ultimately turn in an individual company brand strategy. Intended for students with diverse interests and nontechnical backgrounds.

ID 505. Design Thinking Implementation: Design Challenges Level II (2).
Using design-thinking processes, students are assigned to teams to tackle one or more design challenges provided by a Fortune 100 company to innovate new ideas and solutions. (Design challenges vary by semester.) These challenges are more involved than those in ID 502. Each team works through the challenge, develops ideas, prototypes, evaluates and redesigns as needed to reach a final solution which is presented by the team. Intended for students with diverse interests and nontechnical backgrounds.

ID 506. Leadership Development for Innovation (3).
Examines what makes or breaks a great leader, not just in companies, but in life. Studies the six “C’s” of leadership: character, charisma, commitment, competence, communication and courage, and how each one can enhance or take away from leadership ability. Intended for students with diverse interests and nontechnical backgrounds.

ID 507. Tech Talent Development (1).
Prepares students for integration into the rapidly growing technology industry using applied problem solving exercises within the area of technology development. Students are exposed to a diverse array of real-world problems faced by technology startups and established companies, and taught how to facilitate successful outcomes while adapting to the culture. Focuses on team-building exercises, estimating solutions effort and cost, resolving conflicts, developing interpersonal skills, and identifying roles within teams. Intended for students with interests in the technology industry.

ID 508. Introduction to Adaptive Leadership (3).
Introduces the concept of adaptive leadership, a practical leadership framework that helps individuals and organizations adapt and thrive in challenging environments in order to make progress on the difficult challenges facing society, organizations and individuals.

ID 555. Innovating for Social Justice (3).
Achieving sustainable globalization requires a rejuvenation of entrepreneurial and innovation based on a better understanding of the impact of social context. Course is intended for students with diverse interests and nontechnical backgrounds.

ID 705. Seminar in Applied Innovation (1-6).
Focuses on a sample of innovation design and/or ventures problems through theory and application. Content changes as new problems attain prominence locally, nationally and internationally. Content is typically driven by project challenges that often revolve around prototyping and overcoming barriers. Example of course content might be solving a materials issue for a wearable technology, circuitry of an instrument, coding for a mobile application, website development, and can be as broad as problems linked to innovation in third-world industrialization. Intellectual property and fund raising may be
discussed in group settings and may include guest speakers and/or visits to local companies.

ID 705A. Practical Prototyping (1).
Exploration of concepts employed in realizing practical prototypes including form versus function, user/product interface, failure, and quality. Use of at-hand processes and equipment may be explored.

ID 705B. Kan-Fab: modeling & fabrication (1).
This course helps develop the concepts, skills and methods needed to design, prototype, and fabricate physical "things". Relevant techniques in sketching, 2D and 3D modeling, and fabrication are presented along with basic electronics and circuit design. Fabrication techniques may include laser-cutting, 3D printing, soldering, water jet, etc.

ID 705C. Gadgets (1).
Introduction to electronic product design elements. Expose students to interesting and surprising design features inside electronic device products. Reverse engineer an existing product, assess limitation of size and power, and undertake a mechanical design project.

ID 705D. Project Coding (2).
Don’t just learn to code, learn to develop products. Use critical thinking tactics to explore how to use your set of coding skills to fit into various real world applications.

ID 705E. Product Development Process (1-3).
Discusses how to launch viable, market-ready products. Practice the use of an outcome bases product roadmap.

ID 705F. Optimizing Design (1-3).
This course is designed for the non-professional graphic designer looking to explore methods and concepts to take your ideas and designs to the next step on your own.

ID 705G. Start Up (1-3).
This course combines business strategy with design thinking. We’ll discuss methods of addressing risk and capitalizing on opportunity to increase value. Innovative approaches to present revenue models and sales channels will be explored.

ID 705I. Introduction to Blockchain 'Intro to Crypto-Currency' (1-3).
This course is for the nontechnical audience. It will introduce the key concepts behind blockchain technology, digital currency, hyperledger, and other use cases.

ID 710. Service Design Thinking (2).
Teaches students how to tailor design-thinking processes to achieve intended outcomes and objectives associated with services, systems and processes using empathy maps, journey maps, storyboards, prioritization grids, and next steps. Additionally, students learn how vision, goals, activities, tasks and steps can help users complete an intended outcome in a way that supports the overall mission of the organization. Course is for anyone who works with or develops services, systems or processes including innovators, engineers, game designers, web designers, operations management, efficiency management and service-related industries such as restaurants, hotels and event centers.

Provides an overview of prototyping concepts with the specific intent of help innovation design degree students identify various methods of successfully demonstrating the potential of their ideas. Intended for students with diverse interests and nontechnical backgrounds.

ID 753. Design: Intent vs Impact (3).
Explores the ethics behind companies with the least impact vs the companies who create the most negative impact. Addresses why “being less bad” is still not good enough, and tackles the 4R’s —

reduce, recycle, reuse and regulations. Students discuss and learn about ethically resourced materials, sustainability, carbon footprints, natural resources, outsourced responsibility, product lifecycles, social responsibility, cutting waste, government concerns, respecting diversity and what potential new issues can arise from artificial intelligence. Course is for anyone planning to launch or run a company, innovate new products and services, looking to grow their leadership skills, or lead a team for a company that produces products and services. Intended for students with diverse interests and technical or nontechnical backgrounds. Completion of this course fulfills the Graduate School’s professional/scholarly/integrity training requirement.

ID 840. Innovation in Practice (1-6).
Independent study course for students undertaking the Master of Innovation Design or other related programs. Built around experiential enrichment related to the broad topic of innovation. Topics such as intellectual property, branding, pitching, wire-framing, prototyping and funding are discussed in a group setting and may include guest speakers and/or visits to local companies. Repeatable for credit, but only 6 credit hours may count toward plan of study.

ID 841. Project (1-6).
Independent study course for students undertaking the project development/creativity option for completion of the Master of Innovation Design. Project is a substantive piece of creative work involving primary and/or secondary development, which serves to demonstrate mastery over the discourse, methods and content of at least one academic, creative or professional field. Requires students to synthesize knowledge and skills acquired over the course of the graduate career. Project must be designed and completed under the supervision of a graduate faculty supervisor and at the supervisor's discretion, may be reviewed by additional faculty advisors. Repeatable for credit, but only 6 credit hours may count toward plan of study.

ID 842. Thesis (1-6).
Independent study course for innovation design degree students undertaking the research and writing of a master's thesis. A thesis is a substantive piece of scholarship or creative work involving primary and/or secondary research, which serves to demonstrate mastery over the discourse, methods and content of at least one academic, creative or professional field. Requires students to synthesize knowledge and skills acquired over the course of the graduate career. Thesis projects must be designed and completed under the supervision of a graduate faculty thesis supervisor and, at the supervisor's discretion, may be reviewed by additional faculty advisors. Repeatable for credit, but only 6 credit hours may count toward plan of study.