DESIGN & INNOVATION (DESN)

DESN 210. Introduction to Programming for Business Applications. 3 Units.
Goals: This course will introduce students to the basics of programming logic utilizing the Python programming language and environment. The course will help students understand how to apply programming solutions and related algorithmic thinking to solve common business and decision problems. This class is a great introduction into programming logic; it just happens to use Python. This course will teach the fundamentals of programming logic, which could be applied to any programming language available today or into the future. Learning Objectives: Upon completion of this course students should have a foundational knowledge of how to use variables, operators, manipulate strings, loops, functions, and basic array manipulation all through Python programming language. The course will culminate with a final project where students will be divided into groups with each group solving a different small business problem. The final submission will require a joint white paper submission that demonstrates the following learned objectives: problem research, scope, architect, and design a potential solution using python environment. A sample of the implemented Python code that was used to solve this problem will be required for final submission. Course Requirements: Each student must have access to a computer that can be brought to class. No programming experience is required. Downloading and installing Python is covered at the start of the course. Basic computer skills: surfing websites, running programs, saving and opening documents, etc. Offered as BTEC 420 and DESN 210.

DESN 302. Creativity in Design & Business: Sources of Perception, Imagination, & Creative Thinking. 3 Units.
The goal of this course is to develop skills and techniques for creative problem solving. The course is for anyone interested in design, the development of new products and services, and strategies for change in organizations and society. It is useful wherever we face challenging situations that require imagination, new ideas, and innovative approaches in a rapidly changing world. At its core, creativity is an issue of perception. Learning to change one’s perception from what is known, comfortable, and familiar to what is unknown and potentially valuable and rewarding is the challenge of this course. We will explore a wide variety of methods, techniques, and tools for encouraging new perceptions. There will be useful readings, but also exercises and projects for individuals and teams to develop new strategies of creative thinking. Offered as DESN 302 and ENTP 302.

DESN 308. Business Model Design and Innovation. 3 Units.
This course takes the perspective of entrepreneurs or business unit managers. The three basic questions that all entrepreneurs and: These three questions are what make the answer: who will buy our product or service (where to play), how the company will make money (how to win), and what we will do to make the business successful (what to do). Offered as DESN 308 and ENTP 308. Prereq: Junior standing or higher.

DESN 310. Systems Analysis and Design (SAD). 3 Units.
This course begins with business analysis and ends with information systems design. Students are introduced to tools and techniques enabling effective analysis, design, and documentation of an information system application. The student learns methodologies that form the basis of systems design and engineering practices. Models that focus on the articulation of business functions, integrating process, data and behavioral abstraction form the core of formal methods in systems development using the Unified Modeling Language (UML). The course teaches students principles and skills that are essential to their function as system developers, participants, and leaders of system development projects. Prereq: MIDS 301 and (ENGR 131 or CSDS 132 or DESN 210).
DES 410. Leading Digital Innovation by Design. 3 Units.
A new wave of digital revolution is transforming every industrial sector. Powered by increasingly smaller yet potent microprocessors and sensors, a new generation of analytical tools, and ubiquitous wearable and mobile devices, companies can radically transform the way they interact with users and the way they create and capture value. Technology like Block Chain and AI are likely to fundamentally reshape how we think about firms and industries. Such changes make existing strategic frameworks and tools obsolete. In order to understand how and why digital technology changes the industrial landscape, companies must understand some of the fundamental characteristics of digital technology and how it demands new types of value creation logic. Be it a large corporation or a small start-up; or a government agency or a multinational enterprise; everyone is struggling to deal with the new digital reality. Yet, exactly how to use digital technology to create value is not clear. While all companies must understand how digital technology is fundamentally different from other forms of technology, ironically digital innovation is not about technology. Digital innovation is making digital technology meaningful and value to users. Therefore, digital innovation requires us to truly understand us (people), what we do, why we do what we do, what makes us happy, and what we consider meaningful. Therefore, digital innovation is a deep humanistic exploration to make digital technology meaningful and valuable to us. In order to fully harness the transformative capacity of digital technology, we must gain deeper insights on people and their actions, meanings and values. In this experiential course, we use design as the primary tool to gain such humanistic insights, and work with real-world projects to apply those ideas and tools to build real digital innovations.

DES 419. Entrepreneurship and The Good Life. 3 Units.
Entrepreneurship and business ownership is how most wealth is created. Pursuing the "Good Life", when done effectively, leads to wealth and fulfillment. Wealth, like happiness & fulfillment, is not to be pursued directly, it ensues as a result of living a life of positive impact for others. We will explore two primary entrepreneurial strategies used to create value for others, Entrepreneurship Through Acquisition and Real Estate as attractive alternatives to Startups (traditionally equated with "entrepreneurship"). We will explore these topics with real entrepreneur guests who will share their experience and strategies with the class. This course employs an active learning approach, based on the belief that the best way to learn is through a progression of real world insights rather than a list of policies and practices delivered via long lectures. Offered as DES 419 and IIME 419.

DES 425. Chief Executive Officer. 3 Units.
This course will take the perspective of the CEO in deciding the actions that lead to sustainable competitive advantage. We will study decisions that span from starting a small business to expanding beyond the core using mergers and acquisitions. We will also study how CEOs decide to exit a market. The successful CEO not only has to design the strategy for success but has to also design an execution plan. As the organization grows the importance of delegation to the right subordinates becomes increasingly critical. The course material includes case studies, decision briefs and presentations (virtual and in person) by senior executives. Decision briefs are short notes that have the same information that the CEOs had when starting the business. You will develop the strategy based on these decision briefs and will compare your suggestions to what was actually done by both successful and unsuccessful CEOs. Offered as DES 425 and IIME 424.