

INNOVATION, TECHNOLOGY AND ENTREPRENEURSHIP (ITE)

ITE 510 | PRINCIPLES OF CLOUD AND MOBILE COMPUTING

Units: 3 Repeatability: No

Prerequisites: ITE 501 with a minimum grade of C- and ITE 502 with a minimum grade of C-

The objective of this course is to give students a foundational technical and business understanding of cloud and mobile computing. Students will learn about basic tradeoffs between Centralized vs. Distributed computing. They will understand how and why today's computing, networking, and ubiquitous network technologies created today's cloud computing paradigm. Students will understand how software operating systems, and "stacks", evolved with the hardware to create changes in the software "unit of deployment" and how this drives efficiencies and lower prices. Students will analyze the business offerings of leading cloud computing suppliers and write a simple program to run on one of the cloud services. Finally, students will look at an example emerging application and describe "use cases" to identify considerations for partitioning the workload between central (cloud) and distributed (mobile or IoT) devices.

ITE 520 | PRINCIPLES OF CONNECTIVITY

Units: 3 Repeatability: No

Prerequisites: ITE 501 with a minimum grade of C- and ITE 502 with a minimum grade of C-

This course is an introduction to the emergence and proliferation of Internet of Things (IoT) and its impact on cybersecurity. IoT has evolved well beyond its initial value proposition as a way to understand the flow of goods and services using RFID tags, to transforming physical systems consisting of sensors, actuators and controllers into a complex network of connected devices. Along the way, simple open source computing engines with diverse I/O portfolios, such as Arduino® and Raspberry Pi®, as well as proprietary embedded processors such as the Qualcomm Dragon Board® have enabled the development and implementation of diverse IoT applications. In this course, students will be introduced to the history of IoT, key developments in the field and advances enabled by IoT technologies in markets such as home and building automation, wearables and telemedicine, connected cars and the smart grid. The proliferation of IoT has also elevated concerns about cybersecurity, simply as a result of the explosion of access points in large networks. To understand such issues, students will be instructed on the fundamentals of cybersecurity, including understanding concepts of threats, vulnerabilities, and risk as the definition of "security" for a system. The course will examine types of security policy frameworks, provide definition and examples of contemporary technical, administrative, and physical security controls, setting the foundation for system engineering requirements. Common attacks and mitigations will be analyzed to provide an evaluation and comparison of the effectiveness of the mitigations.

ITE 530 | ENTREPRENEURSHIP AND INTRAPRENEURSHIP

Units: 3 Repeatability: No

Prerequisites: ITE 501 with a minimum grade of C- and ITE 502 with a minimum grade of C-

This course covers the process of identifying and quantifying market opportunities, then conceptualizing, planning, and either starting a new, technology-based enterprise or creating an innovation ecosystem within larger organizations. Topics include opportunity assessment, the value proposition, the entrepreneur, legal issues, entrepreneurial ethics, the business plan, the founding team, seeking customers and raising funds. Working in teams, students develop business models for a start-up project that can launch as a standalone company or as an intrapreneurship team. Projects are experiential and require incrementally designing the business model and the product/service while talking to customers/stakeholders each week.

ITE 540 | TECHNOLOGY MANAGEMENT AND LEADERSHIP

Units: 3 Repeatability: No

Prerequisites: ITE 501 with a minimum grade of C- and ITE 502 with a minimum grade of C-

This course is intended for students to understand challenges in managing technology organizations, choosing from different models a leadership approach that best suits the needs of the company. The course explores the value of leadership in technology-intensive environments and provides students with the tools necessary to inculcate a positive corporate culture and instill organization processes and best practices most suited for the organization. This Technology Management and Leadership course takes students through a series of exercises, case studies, and a simulation related to leading both large and small technology companies with a culture of innovation. We will first explore the various contexts, motivations and paths that evoke leadership in technology. The course will then progress through a series of case studies and exercises in critical knowledge areas and skills required of technology leaders.

ITE 590 | CAPSTONE EXPERIENCE - CUSTOMER AND MARKET DISCOVERY

Units: 1 Repeatability: No

Prerequisites: ITE 501 with a minimum grade of C- and ITE 502 with a minimum grade of C-

Entrepreneurship Projects in the Capstone Experience are proposed by individuals, small groups or faculty members and must be approved by the MITE Faculty. In the Capstone Experience, students will develop a business model for a Connectivity related product. The student will be required to apply knowledge and skills learned throughout the Innovation, Technology and Entrepreneurship curriculum. The class will focus the Teams on 5 major challenges new venture companies or ventures within established companies must navigate: Customer and Market Discovery (1st Semester), Customer Validation and Product Strategy (2nd Semester), and Business Modeling and Venture Launch (3rd semester).

ITE 592 | NEW STUDENT ORIENTATION

Units: 0 Repeatability: No

This orientation course introduces students to the University of San Diego and provides important information about the program. Throughout the orientation, students will learn to successfully navigate through the online learning environment and locate helpful resources. Students will practice completing tasks in the online learning environment as preparation for success in their online graduate courses. This orientation course will be available to students as a reference tool throughout the entirety of your program.

ITE 594 | SPECIAL TOPICS IN INNOVATION, TECHNOLOGY AND ENTREPRENEURSHIP

Units: 3 Repeatability: Yes (Repeatable if topic differs)

Prerequisites: ITE 501 with a minimum grade of C- and ITE 502 with a minimum grade of C-

This is a special topics course discussing areas of interest in innovation, technology and entrepreneurship. This course may be repeated for credit with a different topic.

ITE 595 | CAPSTONE EXPERIENCE - CUSTOMER VALIDATION AND PRODUCT STRATEGY

Units: 1 Repeatability: No

Prerequisites: ITE 501 with a minimum grade of C- and ITE 502 with a minimum grade of C-

Entrepreneurship Projects in the Capstone Experience are proposed by individuals, small groups or faculty members and must be approved by the MITE Faculty. In the Capstone Experience, students will develop a business model for a Connectivity related product. The student will be required to apply knowledge and skills learned throughout the Innovation, Technology and Entrepreneurship curriculum. The class will focus the Teams on 5 major challenges new venture companies or ventures within established companies must navigate: Customer and Market Discovery (1st Semester), Customer Validation and Product Strategy (2nd Semester), and Business Modeling and Venture Launch (3rd semester).

ITE 599 | CAPSTONE EXPERIENCE - BUSINESS MODELING AND VENTURE LAUNCH

Units: 1 Repeatability: No

Entrepreneurship Projects in the Capstone Experience are proposed by individuals, small groups or faculty members and must be approved by the MITE Faculty. In the Capstone Experience, students will develop a business model for a Connectivity related product. The student will be required to apply knowledge and skills learned throughout the Innovation, Technology and Entrepreneurship curriculum. The class will focus the Teams on 5 major challenges new venture companies or ventures within established companies must navigate: Customer and Market Discovery (1st Semester), Customer Validation and Product Strategy (2nd Semester), and Business Modeling and Venture Launch (3rd semester).