IE Business School Global Network Week: Digital Transformation
Using Emerging Tech to Develop Business Opportunities

Overview

Information technology has transformed the ways in which firms compete, having become an important factor in management decisions at all levels of business. Our economy is sometimes referred to as the "digital economy", which is indicative of the pervasive nature and the critical role of technology in business strategies and operations.

This course will help to analyze the application of technology in its wider sphere of social transformational drivers, and to apply that in your own sphere of influence. It is aimed to cover the following objectives:

• To analyze what Digital Transformation means and how it affects society, industries and individuals.
• To identify and understand the economic and technological factors that are at the heart of the digital revolution taking place in the economy.
• To manage and lead product and service innovation initiatives in the digital space, assessing strategies and plans for managing the risks—and exploiting the opportunities—associated with Digital Transformation.

Content Outline

Through a series of lectures, discussions, activities and cases, this course provides you with the tools to understand, envision, and create a strategy of digital transformation. The course is led by professors who bring complementary skillsets. The reading material range from articles in press to proprietary content and will be provided to you. Participants are expected to come prepared having read the material due for each session.

Session topics include:

Digital Transformation Thinking and Doing
What is Digital Transformation, and why is it important for leaders? These introductory sessions are designed to give students an overview of the week's topic, as well as tools and frameworks to create a Digital Transformation Roadmap.

Leveraging AI and Big Data in the Fourth Industrial Revolution
Artificial Intelligence, Machine Learning, and Big Data have all changed the competitive landscape for businesses in both their operations and opportunities. Students will be introduced to fundamental machine learning algorithms, analyzing successful business applications of AI, and examining the boundaries and limitations of AI in today's business world. Students will gain an understanding of what AI algorithms can do for a business and how companies can capitalize on the Fourth Industrial Revolution, while also looking at humans' role in the revolution and potential threats posed by the latest tech advances.

Cybersecurity and the Digital World

In a society where mobility, data and social collaboration are the new normal, companies and individuals face increased risks in everything from an organization's operations and brand, to personal privacy. Students will explore the situation today, learn about the concept of cybersecurity from a broad perspective, and consider how to develop strategies and actions to improve security profiles.

Disruptive Technologies

The combination of emerging technologies with the re-imagination of traditional processes and business models will transform not only entire industries, but society as a whole. Which are the key technologies to follow? Which models can we use to understand their impact? Students will explore some of the technologies that have potential to disrupt entire industries, looking at the opportunities and challenges they pose for current players in those industries.

Format and Assessment

While participating in this online exchange, students will work on a group project that will challenge them to develop a digital transformation roadmap. The project will be assessed. Groups will be assigned in advance of the module and will be required to begin collaboration on their project before the week commences.

Groups will be required to present their project at the end of the week.

The academic credit that will be offered for this module is equivalent to 25 contact hours, comprised of academic sessions and group work. The evaluation criteria are class participation (50%) and the group project (50%).

Faculty

The course will feature different faculty members from IE Business School, as well as guest lecturers in the field.

Prof. Alvaro Arenas (Lead Faculty)

Alvaro Arenas is Professor of Information Systems and Cybersecurity at IE Business School, where he teaches in MBA programmes on the topics of digital innovation, risk management and information security. Alvaro is also Head of the Information Systems and Technology Area at IE.

Alvaro's research work has focused on digital innovation, and trust and security in distributed information systems. His research has been published in a number of top-tier academic journals. Highlight of some of his research work includes models for reputation management in service computing; trust management in virtual organizations and business collaborations; and security requirements for large-scale distributed systems.

Before joining IE, Alvaro was a senior research scientist at the Science and Technology Facilities Council (STFC) in the UK, leading the Distributed Systems Team at the STFC e-Science Centre.