

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.

Course Content

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.

Course timing: Students can expect sessions to take place at different times between 1:00 p.m. CET and 7:00 p.m. CET, with programmed breaks.

Session topics include:

Digital Transformation Thinking and Doing

Professor: [Kiron Ravindran](#)

Successful efforts at digitization must keep both technological and managerial perspectives in mind. In the first part of the course, we will discuss why understanding "Digital Transformation" is important for future leaders, including its conceptual origins, what questions it raises for managers, and its implications for the organization. This 2-session introduction equips you with a set of tools and frameworks to craft a Digital Transformation Roadmap.

Pre-class assignments:

- Watch [“Leading Digital Transformation Now - No Matter What Business You’re In”](#)
- Read [“DIGITAL LEADERSHIP: An interview with Angela Ahrendts”](#) (4 pages)

Leveraging AI and Big Data in Your Business

Professor: [Konstantina Valogianni](#)

The advent of machine learning (ML) and artificial intelligence (AI) coupled with Big Data has brought new challenges to the way businesses operate and is creating new opportunities that corporations need to capitalize on in order to remain competitive. This part of the course is aimed at introducing the fundamental machine learning algorithms, analyzing successful business applications of AI, and examining the boundaries and limitations of AI in today’s business world. The end goal of this course module is to provide you with an understanding of what AI algorithms can do for your business and how to capitalize on this 4th Industrial Revolution. Finally, we will analyze the role of humans in this revolution, as well as potential threats posed by this fast-paced technological advancement.

Pre-class assignments:

- Read “What’s Driving the Machine Learning Explosion?”, by Erik Brynjolfsson and Andrew McAfee. (Link provided in IE’s LMS)
- Read [“Becoming a data driven organization”](#) (Forbes)

Cybersecurity and the Digital World

Professor: [Álvaro Arenas](#)

As you will explore during the week, The Fourth Industrial Revolution is here. Digital disruption is affecting all industries and the way society, individuals and businesses work. Changes are profound in the way we live, work and relate with each other, where mobility, data and social collaboration are the new normal. This increases the risks for companies and individuals, affecting from organization’s operations and brand to personal privacy. How does it affect the way companies and individuals need to protect their assets? Do we encounter new threats, or just wider attack surface? We will explore the situation today, understand the concept of cybersecurity in a wider view, and explore how to develop strategies and actions to improve our security profile.

Simulation to be played in class: IT Management Simulation: Cyber Attack!

Disruptive Technologies

Professor: [Ricardo Pérez](#)

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 its impact? In this part we will explore some of the technologies that have the potential to disrupt entire industries, looking at the opportunities and challenges they pose for current players in those industries.

Work Group Coaching Session

Professors: [Álvaro Arenas](#) and [Casimiro Juanes](#)

Pre-assigned work groups will benefit from a coaching session with Prof. Álvaro Arenas or Prof. Casimiro Juanes, both of whom will serve as evaluators for the group project presentations at the end of the week.

Final Group Presentations (See below.)

Evaluating Professors: [Álvaro Arenas](#) and [Casimiro Juanes](#)

Format and Assessment

While participating in this online course, students will be pre-assigned to a work group and will participate in a group project in which they will analyze the application of one emerging technology to digital transformation.

The project will be assessed. Each group will present their project before a panel of evaluators at the end of the week.

The academic credit that will be offered for this module is equivalent to 20 contact hours. The evaluation criteria are class participation (50%) and the group project (50%).

Faculty

The course will feature different faculty members from IE Business School.



[Prof. Alvaro Arenas](#) (Lead Faculty)

Álvaro 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. Álvaro is also Head of the Information Systems and Technology Area at IE.

Álvaro'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, Álvaro 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.