Syllabus

Digital Transformation

Instructors:

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Office hours: 1 hour before or after the class meets, upon prior agreement

- **Credits:**   2
- **Term:**   Winter 2018-2019
- **Course level:**   MA/MSc
- **Prerequisites:**   No prerequisites

Course Availability

Students form the MS in Business Analytics and MS in Technology Management and Innovation programs have direct entry (first priority). Students from other programs and departments are automatically placed on the waitlist. If spaces are left, they will be added to the class on a first comes first served basis.

Course Description and Objectives

The past twelve years have brought a fundamental change in our lives, and the reason for the changes was technological development itself. In times of crisis and continuously changing environment there is an evidence need for creativity and innovation to stay in front of others. Technologies of the new era are surrounded by data and are changing the business and market dynamics. Technology now ranks as the number-one factor impacting organizations, its revolutionizing products, operations and business models. In this technology driven business environment competition may come from anywhere. The business boundaries have been blurred and a disruptive innovation may even take many companies out of the game. There is no doubt that technology is re-shaping the business landscape, but the main question is how and why now?This course will be made up of interactive conceptual presentations and a workshop series covering topics from all across the industries. The aim of this course is to give students business insights based on current and future technology trends and to raise the awareness of the audience about the rapid evolution of Technology by building up thoughts around ways how to adapt them in our everyday life.

The main objective of the course is to share practical knowledge and to help the audience understand the managerial and non-technical challenges of disruption in all levels in order to use the technology successfully. In order to achieve this, we will need to establish strong interactive sessions by bringing into the class real examples and field experiences.

Learning outcomes

Core Learning Area	Learning Outcome
Interpersonal Communication Skills	Introduce students to the terminology of Digital Transformation. Improve ability to communicate and co-operate with technology managers and specialists. Demonstrate competence in effective writing and oral communication.
Technology skills	Get a close view to new technologies which will influence strategic business decision making now and in the future. Better understand the way of leveraging them. Integrate technology and business thinking.
Cultural Sensitivity and Diversity	The course will refer to some national and cultural variations in business practices, and also will underline the need to understand the context in which technology is applied. Students will be familiar with the human oriented aspects of the digital invaders.
Quantitative Reasoning	Reasoning in relationship to a particular business plan is very important for managers: quantitative issues will be discussed in relation to Technology.
Critical Thinking	Students will be encouraged to be creative and professional in dealing with a range of business issues and challenges.
Ethics and Social Responsibility	Students will be asked to consider the ethical implications of innovation.
Management Knowledge and Skills	Gain basic knowledge and skills to recognize the contributions of technology to business needs situations/scenarios. Enhance ability to practice sophisticated integration of diverse approaches and to create new ways to think and deal with management issues. Have a clear understanding of the role of the Technology in enterprises.

Reading list

"Disruptive Technologies: Advances that will transform life, business and the global economy (MGI)"
http://www.mckinsey.com/business-functions/digital-mckinsey/our-insights/disruptive-technologies

"Facing the storm: Navigating the global skills crisis (IBM)"
https://www-935.ibm.com/services/us/gbs/thoughtleadership/skillsstorm/

"The Global Innovation Index 2018 – Cornell, INSEAD, WIPO"
https://www.globalinnovationindex.org/gii-2018-report

"The Global Competitiveness Report 2018, World Economic Forum"
https://www.weforum.org/reports/the-global-competitveness-report-2018

"Gartner Top 10 Strategic Technology Trends for 2019 (Gartner)"
https://www.gartner.com/smarterwithgartner/gartner-top-10-strategic-technology-trends-for-2019/

"FutureScape: Worldwide IT Industry 2019 Predictions (IDC)"
https://www.idc.com/getdoc.jsp?containerId=WC20181030

Assessment

The course grade will be based on a number of different evaluation elements.

- Individual class participation   40%
- Student Team Presentation   30%
- Final Reflection, self-assessment   30%

Grade	Quality rating	Grade points Awarded
A	Outstanding	4.00
A-	Excellent	3.67
B+	Very good	3.33
B	Good	3.00
B-	Satisfactory	2.67
C+	Minimum pass	2.33
F	Fail	0.00

The instructor reserves the right to adjust the scale, that is, to grade on a "curve", should he find that significantly more than the usual number of students would not pass the course under the indicated grading scale or should the distribution of the grades represent an unrealistic pattern.

Individual Class participation – 40%

40% of the grading points will be earned by a student for class participation.

Class activities include:
- Evidence of preparation,
- Contributions to class discussion,
- Bringing real life examples based on own working experience,
- Raising thought provoking questions

These points are subjective by nature. The instructor will do his best to be as fair as possible but this grading element is not open for discussions.

Student Team Presentation – 30% (WORKSHOP)

Student teams are asked to work on a specific task together during the 5th session of the course. Each study group will be asked to prepare a presentation that comprises an analysis and assessment of a Digital Transformation problem which will be given to them during the class. Each study group is expected to offer a presentation that will last 10 minutes and then allow for another 5 minutes for discussion and questions in class.

Final Reflection - 30%

After the end of the course students are asked to prepare a self-assessment on one or two competences selected from the skills and competencies which are required to drive a successful Digital Transformation and will be defined during the course. This paper should not exceed 3 pages (maximum 2000 words). The final reflection is due 7 days after the last session (Please submit via Moodle). Instructor will provide a written evaluation on it.

The Instructor expects all students to adhere to the fundamental principles of academic integrity in any and all behaviours associated with their course work and otherwise, as stated in the CEU Honor Code (see Student Handbook). Attempted cheating of all forms is treated extremely seriously and can result in dismissal from the University.

Course schedule and materials for each session

All classes will be interactive in format, and the expectation is that all students will thoroughly prepare and actively participate. A combination of lectures, debate discussion, team presentations, and written assignments will be used.

Main Topics & Schedule
- Technology and the Business Environment, Foundation Concepts
- Areas of IT management and its challenges, IT services, IT organisation
- Enterprise Innovation and the Digital Transformation
- Industry, development trends, business competitiveness due to Technology
- Using Technology as Innovation, Integration and Interconnection of business
- Digitally Reinvented Enterprises
- The Evolution of Global Innovation
- Experienced based Strategies
- Disruptive Innovation
- Emerging Technologies
- Orchestrated Ecosystems
- New Business Models
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Session #1   5ᵗʰ of January, Saturday (13.30 – 17.00, 200 min)

Information Transformation: Homo Informaticus
What has changed in the last decade? How everyday people use technology? How has our mind reacted to that? Which are the skills and competencies required to run a successful Digital Transformation? How do we channel creativity and experimentation to able to manage innovation? Agenda, expectations, High level introduction of Digital Transformation.

The rise of Innovation Ecosystems, Digital Reinvention of Enterprises, Disruptive Innovation
Reading: *"Disruptive Innovation, by Clayton M. Christensen"*
                   "Disruptive Technologies: Advances that will transform life… - *MGI"*

Session #2   18ᵗʰ of January, Friday (17.30 – 21.00, 200 min)

Disrupting business processes: emerging technologies opening opportunities
We are going to look into three areas of organisations that are going to radically transform. How mass customisable messages and customer behaviour predictions are merging the sales and marketing process into a data driven customer experience journey management? How natural language processing and robotic process automation creates a massive zero level support layer and shrinks the department? How accurate forecasts and IoT and blockchain integrates supply chain management?

Disrupting industries: transforming value chains and business models
Throughout the class we look into two industries that are drastically changing. In the car industry we will try to grasp how self-driving technology will roll out? How electric vehicles will change the electricity and battery production landscape? What new business models have evolved and what might change future solutions thinking of Tesla's free charging stations or Uber's software only presence?
Then we will dig into the value chain and transformation of the health industry.

Session #4   14th of February, Saturday (09.00 – 12.00, 200 min)

Transforming society: how do we make sense of what is happening?
Technology will replace a lot of regular jobs over 2 billion jobs will disappear by 2030. Not only in the production industry, but even office workers are in jeopardy and might be replaced by robots, artificial intelligence, big data, or automation. Our behaviour is highly predictable based on algorithms. What will freedom mean in the future? What is privacy and how will we execute the right to change? We will be able to redesign the human genome and expand our capabilities with implants. How will we handle social inequality when it manifests in the cast of superhumans? How are we going to live with AI and what will we learn about our own intelligence?

Session #5-6   3rd of March, Sunday (09.00 – 17.30, 400 min)

Intelligent use of Technology in the world
Smart cities are integrating a variety of technologies to transform the way we live and work together in cities. Understanding the technologies already discussed and their key implications revealed students will have to combine all their knowledge to create a strategy for Budapest to become a truly 21st century city.

New ways of Thinking in Innovation Strategy, The Evolution of Global Innovation
Reading: *"The Global Competitiveness Report 2016 – 2017, World Economic Forum"*
                 "The Global Innovation Index 2017 – Cornell, INSEAD, WIPO"

Digital Transformation workshop: smart cities and their implications
During the workshop students will have the opportunity to work in teams in a role of Digital Transformation Consultants. Through this workshop the teams will have the chance to develop their own transformation strategy using the concepts learned during the course. At the end of the workshop each team will present their own transformation strategy.

Closing, Wrap Up, Lessons learned…

Brief Bio of the Instructor

Achilles Georgiu is the Program Director of MSc in Technology Management & Innovation and the Industrial Director of MSc in Business Analytics program at the Department of Economics and Business in CEU. He is also a Senior Adjunct lecturer of Digital Transformation and Leadership courses at the various MSc programs of the school. Besides MSc degrees in Computer Sciences and Informatics Management, he has more than

20 years of international and multicultural experience from the field and ample knowledge of standard IT management and control frameworks with special focus on personalized human motivation, team building and performance management. He worked for several international companies and he is currently working at IBM as the Technology Support Services Director and being a Subject Mater Expert of solution sales and cross industry specializations. As an Opinion Leader, his personal objective is to burn pictures in people's mind via metaphors and visual stories in order to transform them to future e-Leaders, who understand technology evolution and the adaptation to everyday business environment. (for more: www.georgiu.hu)

Gergely Szertics is heading AI Partners, a consulting firm specializing in helping companies live with the business potentials artificial intelligence brings. He leads AI implementations and business transformations for Hungarian and German companies. He is the driver of the initiative to create a world map of AI providers and use-cases to show that artificial intelligence already brings business value. He is a guest lecturer in several universities and executive education programs teaching tech implementation, organisational theory and organisational development. Prior to AI Partners, Gergely founded and was CEO of a start-up that developed a natural-language-processing-based knowledge management system. He won several start-up competitions with the company and lead it through several investment rounds. He earned an economist degree from Budapest Corvinus University and has 10+ years of experience in organisational development especially in large group techniques and positive psychology based techniques (Appreciative Inquiry, Open Space, Solution focused coaching, World Café). (LinkedIn profile)

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