



Trinity College Dublin

Coláiste na Tríonóide, Baile Átha Cliath

The University of Dublin

Trinity Business School

DIGITAL AND ARTIFICIAL INTELLIGENCE STRATEGY

2026/27

MODULE CODE: BUU33806

MODULE NAME: DIGITAL AND ARTIFICIAL INTELLIGENCE STRATEGY

ECTS: 5

Lecturer: Dr Ayushi Tandon

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Office Hours: email for appointment

Pre-Requisite

The module has no quantitative pre-requisite, but student must be willing to read case-studies and have some exposure about (or willingness to learn) Information Systems (Digital technologies & AI) related vocabulary. Last year students were shared Podcasts, Videos, Chatbots, which was also liked by students with varied learning styles and international / Erasmus students. Last year's class size: 130 students.

If you want a head start in the Module, I recommend reading Chapter 1 & 2 from this book available online <https://openstax.org/books/foundations-information-systems/pages/1-introduction>

MODULE DESCRIPTION

This module delves into the profound ways digital technologies and artificial intelligence are reshaping contemporary business landscapes. In this module we will analyse the strategic requirements, data-driven beliefs, and competitive market dynamics that shape the deployment of digital and AI initiatives within organizations. Throughout the module the content is planned to cultivate a critical understanding of information system strategies. Students will analyse business cases to develop the ability to recommend effective alignments of information systems with overarching business objectives. Furthermore, they will acquire the skills to identify and address the challenges associated with integrating digital technologies across diverse organizational

functions, including navigating digital ecosystems, online marketplaces, and multi-sided platforms. The primary focus of this module is on the fundamental understanding of how organizations navigate and respond to the evolving digital landscape and AI revolution. The secondary focus is on analysing the most effective strategies for digital intervention and change management. Throughout the module, students will learn theoretical frameworks with the help of real-world examples from industries such as virtual reality, vaccine manufacturing, luxury retail, sports, corporate aviation, digital museum.

LEARNING AND TEACHING APPROACH

This module adopts an application-oriented approach to teaching digital and AI strategies, demanding an understanding of digital technologies and a keen interest in the contemporary digital ecosystems within which organizations operate. The primary learning strategy incorporates pre-session readings, supplemented by lectures and in-class discussions. Assessment comprises an individual mid-term examination and a group project, fostering learning-by-doing throughout the course.

MODULE-LEVEL LEARNING OUTCOMES

Having successfully completed this module, the student should be able to:

1. Understand how digital technologies and artificial intelligence are impacting business.
2. Analyse the strategic requirements that shape the deployment of digital and AI initiatives within organizations.
3. Evaluate possible digital intervention and change management strategies.
4. Apply theoretical frameworks to real-world examples from diverse industries.
5. Create comprehensive digital and AI strategy proposals tailored to specific business processes or organisations.

You can get a glimpse of Module Learning and Content by watching this video ([link](#))

RELATION TO DEGREE

This module directly supports learning outcomes essential for business students, particularly in today's digital landscape. A comprehensive knowledge and understanding of digital and AI strategies, along with core concepts like digitization and digital transformation, are now considered fundamental components of contemporary Business Degrees. Specifically, this module equips students with the strategic insights and practical skills required for successful career paths in IT consulting or IT analyst roles within both private and public sectors.

WORKLOAD

This module carries 5 ECTS credits, amounting to about 125 hours in total workload. This includes time spent preparing for and attending lectures reading the course texts including case studies and academic readings, working in groups, and preparing for the individual evaluation (mid-term).

<i>Content</i>	<i>Indicative Number of Hours</i>
<i>Lecturing hours</i>	<i>22</i>
<i>Preparation for lectures</i>	<i>33</i>
<i>Tutorials</i>	<i>5</i>
<i>Group assignment</i>	<i>35</i>
<i>Individual exam preparation (mid-term)</i>	<i>30</i>
<i>Total</i>	<i>125</i>

STUDENT PREPARATION FOR THE MODULE

Students are expected to read all materials presented to them along with the weekly PowerPoint slides. This will prepare them for in class discussions where meaningful participation is required.

TEXTBOOKS AND REQUIRED RESOURCES

Readings for each session will be uploaded to Blackboard.

ASSESSMENT

1. Group Project (end module submission)

Worth 50% of overall grade – detailed evaluation rubrics will be uploaded on the blackboard.

Each group will have a maximum of six members. You may choose your own group and self-enrol your group on blackboard. Further details on the project will be available in the assignments folder on blackboard and will be discussed in class. Deliverables:

- A report with a word limit of 2000 words (40%).
- A creative poster of project problem statement and executive summary (10%).

2. Individual mid-term exam (possibly after reading week)

Worth 50% of overall grade – will test understanding and application of topics covered in the module. Sample questions will be provided in the due course of module.

A penalty for late submission will apply. Students unable to submit/take an assignment for medical reasons must produce a medical certificate within three working days of the missed submission date. Certificates received after that time will not be accepted.

RE ASSESSMENT

Students who fail the module will sit a supplemental exam. The supplemental exam will count for 100% of the grade.

MODULE COMMUNICATION

Administrative information and changes of dates, times, venues, discussion and project group membership, etc., will be communicated through email and/or posted on Blackboard. Students taking this course are responsible for checking their college email regularly and checking the module information on Blackboard regularly. Students seeking interaction with the instructor via social media are encouraged to follow the course Instagram handle

<https://www.instagram.com/https302.selflearn/>

Please note:

- *All course related email communication must be send from your official TCD email address. Emails send from other addresses will not be attended to.*
- ***All email communication related to the group project (including the submission of the assignment via email) must be copied to all group members.** Emails that are not copied to all group members will not be attended to, and do not count as formal submissions for the purpose of relevant deadlines. Missed deadlines will result in grade penalties.*

Module Content	
Session	Content
1	Course introduction Foundations of IS, IT, and business strategy
2	Digital technologies and AI overview
3	Digital and AI value analysis
4	Digital competitive landscape analysis Strategy development
5	Digital business & platform models: Strategy development
6	Implementing digital transformation Strategies
7	Individual Assessment
8	Digital culture analysis
9	AI & future work
10	AI ethics & implementation
11	Summary of frameworks and concepts

Module Schedule (tbc)		
Session	Content	Readings
1	Introduction to the course objectives and structure. Exploration of foundational concepts in Information Systems (IS), Information Technology (IT), and business strategy.	
2	Overview of key digital technologies and AI including cloud, NLP and Chatbots.	Case study: Greenstein, S., Martin, M., & Agaian, S. (2021, April). IBM Watson at MD Anderson Cancer Center. Harvard Business School Case Collection. Build a Winning AI Strategy for Your Business by Christopher Young IT Doesn't Matter by Nicholas G. Carr
3	Analysis of how digital technologies and AI generate value within organizations.	https://openstax.org/books/foundations-information-systems/pages/2-2-strategies-to-improve-the-value-of-information-technology-within-organizations How to Decide If AI Should Be Part of Your Growth Strategy Five steps to help your company create a plan. by <i>Tomas Chamorro-Premuzic and Darko Lovric</i>
4	Methods for analysing the competitive landscape. Development of digital strategies to gain and maintain competitive advantage.	The Five Competitive Forces That Shape Strategy Cook, S., Hagi, A., & Wright, J. (2024). Turn generative AI from an existential threat into a competitive advantage. <i>Harvard Business Review</i>, 102(1), 118-125.
5	Analysis of various digital business models Understanding platform-based business models.	https://openstax.org/books/foundations-information-systems/pages/2-3-digital-business-models https://openstax.org/books/foundations-information-systems/pages/2-5-digital-innovation-creation-distribution-and-commercialization

		The Financial Times (FT) and Generative AI By: Andrew Rashbass, Ramon Casadesus-Masanell and Jordan Mitchell Hagiu, A., & Zhou, B. (2024). Transforming Products into Platforms: Unearthing New Avenues for Business Innovation. <i>NIM Marketing Intelligence Review</i>, 16(2), 10-17.
6	Strategizing for digital transformation	Case study: Girod, S. J. G., & Duke, L. (2019, April). Digital Transformation at GE: Shifting Minds For Agility. Harvard Business School Case. Galbraith, J. R. (2011). The star model. <i>The STAR Model</i>.
7	Implementing digital transformation Strategy	Case study: Avery, J. (2017). <i>The Tate's digital transformation</i>. Harvard Business School Case Collection. Correani, A., De Massis, A., Frattini, F., Petruzzelli, A. M., & Natalicchio, A. (2020). Implementing a digital strategy: Learning from the experience of three digital transformation projects. <i>California management review</i>, 62(4), 37-56.
8	Analysis of the changing nature of work in the age of AI. Strategies for managing the impact of AI on the workforce, including workforce development and talent management.	Mollick, E. (2024). Reinventing the Organization for GenAI and LLMs. <i>MIT Sloan Management Review (Online)</i>, 1-4. Accelerating AI Adoption in the U.S. Air Force By: Maria Roche and Alexander Farrow
9	Critical analysis of AI Implementation and Ethical Considerations	Klein, L., & D'Ignazio, C. (2024, June). Data feminism for AI. In <i>Proceedings of the 2024 ACM Conference on Fairness, Accountability, and Transparency</i> (pp. 100-112). EU AI Act Ireland's National AI Strategy
10/11	Summary of frameworks and concepts	

Accommodation for students with disabilities

To promote inclusivity, course materials will be accessible on the Blackboard system after each class, presented in appropriate font styles and sizes. We will accommodate any additional needs identified by the Trinity Disability Service as much as possible.

PLAGIARISM

Please note the plagiarism provisions in the General Regulations of the University Calendar for the current year, and make sure you have completed the Online Tutorial on avoiding plagiarism 'Ready, Steady, Write', located at <https://libguides.tcd.ie/academic-integrity/ready-steady-write>

POLICY ON THE USE OF GENERATIVE AI TOOLS

For Group project following generative AI declaration must be included

Generative AI Declaration

Please choose A or B with regards to your use of generative AI tools in this project:

A. Nothing to declare. I did not use generative AI software.

B. I used generative AI software.

If you answer A and the module leader finds evidence that you used AI software, this behaviour will be considered as unethical, the assignment will be failed, and you will be penalized accordingly with reference to the TCD policy on academic misconduct. If you answer B, please clearly explain for which parts of submission you used AI software and how it helped you to improve your learning process within ethical guidelines. You should include your answer – 300 to 600 words approx.- in the appendix.

BIOGRAPHICAL NOTE:

Dr. Ayushi Tandon is Assistant Professor at Trinity Business School. Her research interests include user engagement with digital platforms and the economic and societal implications of digital technology usage. She has published experiment-based research leveraging mobile applications, as well as qualitative research on accessibility in virtual technology and the digitalization of women's health records in India. Her recent work has appeared in *Information Systems Research* and the *Journal of Workplace Learning*. Ayushi was listed among 100 Brilliant Women in AI Ethics, 2022. Prior to her PhD in management, she worked as engineer at Qualcomm India on product lines such as Snapdragon.