

IS6608: DIGITAL TRANSFORMATION AND TECHNOLOGICAL INNOVATION IN THE ORGANISATION

Effective Term

Semester A 2025/26

Part I Course Overview

Course Title

Digital Transformation and Technological Innovation in the Organisation

Subject Code

IS - Information Systems

Course Number

6608

Academic Unit

Information Systems (IS)

College/School

College of Business (CB)

Course Duration

One Semester

Credit Units

3

Level

P5, P6 - Postgraduate Degree

Medium of Instruction

English

Medium of Assessment

English

Prerequisites

IS5313 Foundations of Information and Electronic Business Systems

Precursors

Nil

Equivalent Courses

Nil

Exclusive Courses

Nil

Part II Course Details

Abstract

The aims of this course are to:

Develop and enhance students' ability to:

- analyze digital transformation initiatives and technological innovation in the context of organisations;
- appreciate and apply models that explore the digital transformation process
- identify opportunities to engage in technological innovation that facilitates the transformation of organisational processes into digitally-enhanced processes that create competitive advantage and process efficiencies for the organisation
- recognise the potential value and applicability of emerging technologies and practices (such as Blockchain, IoT, AI) for digital transformation
- communicate digital transformation initiatives and technological innovation to a variety of relevant stakeholders both within the organisation and externally, in the role of digital and innovation thought leaders
- motivate organisational stakeholders to identify and engage with technological innovations that facilitate digital transformation
- consider how technological innovation and digital transformation contribute to strategic planning in the broader organisational context.

Course Intended Learning Outcomes (CILOs)

CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Conduct a rigorous analysis of case-based organisational processes (using different models and tools) in order to gain insights into opportunities for technological innovation that can then facilitate digital transformation.	x	x	x
2	Describe the emerging and innovative technologies and practices that constitute the basis for digital transformation	x	x	x
3	Plan strategic directions for organisations from the perspective of the Chief Digital Officer	x	x	x
4	Communicate technological innovation and digital transformation ideas and directions to both internal and external stakeholders	x	x	x

A1: Attitude

Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.

A2: Ability

Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to real-life problems.

A3: Accomplishments

Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

Learning and Teaching Activities (LTAs)

	LTA s	Brief Description	CILO No.	Hours/week (if applicable)
1	LTA1. Seminar	Students will learn the cases and situations that describe digital transformation and technological innovation in organisational contexts. Students will be expected to read material before class. A variety of means will be used to analyse and discuss the cases, including small group focus group discussion and whole-class white board discussion.	1, 2, 3, 4	Seminar : 39 hours
2	LTA2. Independent Study	All students will be expected to engage with the topic matter via outside class activities that may include readings of journal articles and web-based resources.	1, 2, 3, 4	
3	LTA3. Research Experiences	All students will need to work on group projects in which they will need to undertake a review of the relevant literature and analyse how digital transformation and technological innovations are applied in organisation of their choice in order to develop their own insights.	1, 2, 3, 4	

Assessment Tasks / Activities (ATs)

ATs	CILO No.	Weighting (%)	Remarks ("-" for nil entry)	Allow Use of GenAI?	
1	AT1. Discussion and Participation Students will be required to attend at least 70% of classes (9 classes). Failure to do so will result in failure of the course as a whole. Individual discussion and participation will be assessed during classes, and an aggregate score calculated for the entire semester. Discussion opportunities will include focus group discussions, student presentations, whiteboard-based discussions, open questioning during the seminar.	1, 2, 3, 4	20	-	Yes
2	AT2. Group Project A group project will be developed involving the analysis of technological innovation and/or digital transformation in an existing organisational context.	1, 2, 3, 4	40	GenAI may be used during preparation, but you are not allowed to copy and paste its output directly into your final submission. If you use GenAI, include your prompts and your own original work in the appendix, and clearly refer to them in your report.	Yes

Continuous Assessment (%)

60

Examination (%)

40

Examination Duration (Hours)

2

Minimum Continuous Assessment Passing Requirement (%)

50

Minimum Examination Passing Requirement (%)

30

Additional Information for ATs

AT3.Examination

A written examination is designed to assess students' competence in the taught material. The examination will assess both basic knowledge and the acquisition and application of more advanced insights into the application of technological innovation and digital transformation in organisational contexts.

Note: Students must pass BOTH coursework and examination in order to get an overall pass in this course.

Assessment Rubrics (AR)

Assessment Task

AT1. Discussion and Participation (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

Capability to rigorously and reflectively analyse organisational case-based problems, demonstrate insights into organisational realities and communicate these persuasively

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

AT1. Discussion and Participation (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

Ability to describe the strengths and weaknesses of different technological innovations and digital transformation situations in the organisational context

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

AT1. Discussion and Participation (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

Ability to engage in a professional standard of strategic planning from the Chief Digital Officer' s Perspective

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

AT1. Discussion and Participation (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

Ability to undertake a professional application of technological innovation in order to accomplish digital transformation in an organisational context

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

AT2. Group Project (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

Capability to rigorously and reflectively analyse organisational case-based problems, demonstrate insights into organisational realities and communicate these persuasively

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

AT2. Group Project (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

Ability to describe the strengths and weaknesses of different technological innovations and digital transformation situations in the organisational context

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

AT2. Group Project (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

Ability to engage in a professional standard of strategic planning from the Chief Digital Officer' s Perspective

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

AT2. Group Project (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

Ability to undertake a professional application of technological innovation in order to accomplish digital transformation in an organisational context

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

AT3. Examination (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

Capability to rigorously and reflectively analyse organisational case-based problems, demonstrate insights into organisational realities and communicate these persuasively

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

AT3. Examination (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

Ability to describe the strengths and weaknesses of different technological innovations and digital transformation situations in the organisational context

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

AT3. Examination (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

Ability to engage in a professional standard of strategic planning from the Chief Digital Officer' s Perspective

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

AT3. Examination (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

Ability to undertake a professional application of technological innovation in order to accomplish digital transformation in an organisational context

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

AT1. Discussion and Participation (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

Capability to rigorously and reflectively analyse organisational case-based problems, demonstrate insights into organisational realities and communicate these persuasively

Excellent

(A+, A, A-) High

Good

(B+, B) Significant

Marginal

(B-, C+, C) Moderate

Failure

(F) Not even reaching marginal levels

Assessment Task

AT1. Discussion and Participation (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

Ability to describe the strengths and weaknesses of different technological innovations and digital transformation situations in the organisational context

Excellent

(A+, A, A-) High

Good

(B+, B) Significant

Marginal

(B-, C+, C) Moderate

Failure

(F) Not even reaching marginal levels

Assessment Task

AT1. Discussion and Participation (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

Ability to engage in a professional standard of strategic planning from the Chief Digital Officer' s Perspective

Excellent

(A+, A, A-) High

Good

(B+, B) Significant

Marginal

(B-, C+, C) Moderate

Failure

(F) Not even reaching marginal levels

Assessment Task

AT1. Discussion and Participation (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

Ability to undertake a professional application of technological innovation in order to accomplish digital transformation in an organisational context

Excellent

(A+, A, A-) High

Good

(B+, B) Significant

Marginal

(B-, C+, C) Moderate

Failure

(F) Not even reaching marginal levels

Assessment Task

AT2. Group Project (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

Capability to rigorously and reflectively analyse organisational case-based problems, demonstrate insights into organisational realities and communicate these persuasively

Excellent

(A+, A, A-) High

Good

(B+, B) Significant

Marginal

(B-, C+, C) Moderate

Failure

(F) Not even reaching marginal levels

Assessment Task

AT2. Group Project (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

Ability to describe the strengths and weaknesses of different technological innovations and digital transformation situations in the organisational context

Excellent

(A+, A, A-) High

Good

(B+, B) Significant

Marginal

(B-, C+, C) Moderate

Failure

(F) Not even reaching marginal levels

Assessment Task

AT2. Group Project (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

Ability to engage in a professional standard of strategic planning from the Chief Digital Officer' s Perspective

Excellent

(A+, A, A-) High

Good

(B+, B) Significant

Marginal

(B-, C+, C) Moderate

Failure

(F) Not even reaching marginal levels

Assessment Task

AT2. Group Project (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

Ability to undertake a professional application of technological innovation in order to accomplish digital transformation in an organisational context

Excellent

(A+, A, A-) High

Good

(B+, B) Significant

Marginal

(B-, C+, C) Moderate

Failure

(F) Not even reaching marginal levels

Assessment Task

AT3. Examination (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

Capability to rigorously and reflectively analyse organisational case-based problems, demonstrate insights into organisational realities and communicate these persuasively

Excellent

(A+, A, A-) High

Good

(B+, B) Significant

Marginal

(B-, C+, C) Moderate

Failure

(F) Not even reaching marginal levels

Assessment Task

AT3. Examination (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

Ability to describe the strengths and weaknesses of different technological innovations and digital transformation situations in the organisational context

Excellent

(A+, A, A-) High

Good

(B+, B) Significant

Marginal

(B-, C+, C) Moderate

Failure

(F) Not even reaching marginal levels

Assessment Task

AT3. Examination (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

Ability to engage in a professional standard of strategic planning from the Chief Digital Officer' s Perspective

Excellent

(A+, A, A-) High

Good

(B+, B) Significant

Marginal

(B-, C+, C) Moderate

Failure

(F) Not even reaching marginal levels

Assessment Task

AT3. Examination (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

Ability to undertake a professional application of technological innovation in order to accomplish digital transformation in an organisational context

Excellent

(A+, A, A-) High

Good

(B+, B) Significant

Marginal

(B-, C+, C) Moderate

Failure

(F) Not even reaching marginal levels

Part III Other Information

Keyword Syllabus

Note: While many topics are covered below, each will be used primarily in the context of a case to illustrate the application of an innovative technological approach that is valid in the broader context of digital transformation. Thus, students are not expected to learn everything about a particular topic, which might normally require much more time.

- Technological innovation, including the development and application of digital technologies that have the potential for enhancing the way work is undertaken and the way an organisation operates. Such technologies include, but are not limited to, Artificial Intelligence, Blockchain, Internet of Things, Machine Learning, Radio-Frequency Identification (RFID) and Near-Field Communication, Virtual and Augmented Reality

- Digital Transformation of the way: individual employees work, products/services are marketed and sold to customers, information is communicated to salient stakeholders including internal employees and external partners

- IS Strategy & Planning from the perspective of the Chief Digital Officer (CDO), including the work that the CDO undertakes in collaboration with other C-suite officers, as well as employees throughout the organisation
- Models of digital technology adoption and change, and their application to specific organisations

Reading List

Compulsory Readings

Title	
1	Nil

Additional Readings

Title	
1	Kane, G.C. et al. (2019) The Technology Fallacy: How People are the Real Key to Digital Transformation Management, MIT Press. 978-0262039680
2	Siebel, T.M. (2019) Digital Transformation: Survive and Thrive in an Era of Mass Extinction, Rosetta Books. 978-1948122481
3	Vaz, N. (2021) Digital Business Transformation: How Established Companies Sustain Competitive Advantage from Now to Next, Wiley. 9781119758679