KING FAHD UNIVERSITY OF PETROLEUM AND MINERALS

KFUPM Business School

Department of Information Systems & Operation Management

Digital Transformation in Business (MIS 393)

Fall Semester 2024-25 (241)

Dr. Mazen Shawosh

Office: 24/243

E-mail: mshawosh@kfupm.edu.sa

Office hours: UT 09:55AM-10:55AM, by appointment, or via MS Teams.

	Day	Time	Location
Lecture	UT	11:00AM-12:15PM	24-240-1

Course Description:

As part of the Saudi Vision 2030 initiative, digital transformation is one of the primary objectives, which aims to enhance the country's economy, education, health, and quality of life. This course aims to provide students with a comprehensive understanding of digital transformation and its impact on businesses. The course covers a range of topics related to digital transformation, including digital threats, opportunities, and disruption, the foundation of digital innovation, digital business models, emerging technologies, resources and capabilities required for digital transformation, the role of leadership in digital transformation, and data and digital governance. The course will provide students with the necessary knowledge and skills to effectively leverage emerging technologies to create new business models and transform traditional business processes. The course is designed to equip students with the theoretical and practical knowledge required to adapt to the rapidly changing digital landscape and navigate the challenges and opportunities presented by digital transformation.

Objectives:

1. Explore emerging digital technologies and their impact on business and societies.
2. Analyze digital technologies and their real-world applications.
3. Develop critical thinking and problem-solving skills in the context of emerging digital technologies.
4. Enhance students' understanding of Digital data governance, management, and impact on business and society.

Learning Outcomes:

Upon completion of this course, students will have the ability to:

- Explore emerging digital technologies and their impact on business and societies.
- Enhance students' understanding of Digital data governance, management, and impact on business and society.
- Analyze digital technologies and their real-world applications.
- Develop critical thinking and problem-solving skills in the context of emerging digital technologies.

Textbook:

The course readings for this course will be drawn from a range of reputable sources, including academic journals such as Science, Nature, and MISQ Quarterly Executive, as well as industry-focused publications like Harvard Business Review and MIT Sloan Management Review.

The readings selected for this course have been chosen to provide students with a comprehensive understanding of the rapidly changing business landscape and the role that digital transformation plays in contemporary business.

As part of the course requirements, students will be expected to read all assigned materials in advance of each class session and come prepared to discuss the readings in class. In addition, students will be expected to engage critically with the readings, analyzing and synthesizing key concepts and ideas in their written work.

Prerequisites:

MIS 250

Important Dates to Remember

- Consult the University Calendar for Term 241:
  - https://registrar.kfupm.edu.sa/academic-calendar/current-academic-year/
- Final Examinations Dates:
  - https://registrar.kfupm.edu.sa/exams-grades/final-exam-schedule/

Grading Policy

The grading policy is as follows:

Participation	10
Quizzes	8
Assignments	8
Case Discussion	9
Class Project	25
Midterm Exam	15
Final Exam	25
Total	100 percent

The grade will be standard, unless it is absolutely necessary to average or curve the grade at the end of the semester.

Grade Distribution

≥ 95	≥ 90	≥ 85	≥ 80	≥ 75	≥ 70	≥ 65	≥ 60	< 60
A+	A	B+	B	C+	C	D+	D	F

Grading Policy Details: Followings are the detail for the grading policy. Please read it carefully.

Exams:

- **Mid Term Exam (15%)** will be held on Week 8, during class. It will cover the topics as mentioned in the course schedule.
- **Final exam (25%)** will cover the remaining chapters and will be held as scheduled by the Registrar. No makeup exams will be given.

Participation (10%): Participation carries 10 percent marks. It will be considered in three ways.

1. Participation will be counted during the semester. The more active you are in class, the higher your participation score.
2. Posting relevant material and having discussions on the MS Teams channel of the course will also be counted towards your participation grade. They will be counted at the end of the semester, and accordingly, participation grades will be awarded. Only one posting per day is allowed. You should have at least 10 postings. The last day for posting is December 7, 2024.
3. Throughout the semester, we will host a series of guest speakers who will share valuable insights from their professional experiences. Your active participation in these online sessions is crucial. This includes attending the sessions, keeping your camera on throughout, and engaging with the speakers by asking thoughtful questions. These actions will significantly contribute to your participation grade.

Quizzes (8%): Officially, there will be four quizzes. Nevertheless, depending on the schedule and time, we will ±2 quizzes. The worst or missed quiz will be dropped from the grade calculation. There will be no makeup quizzes, unless there is an official excuse.

Assignment (8%): Assignment will be based on the lecture material and will be given after finishing each chapter. Each homework might include questions about the basics of each chapter and a business case that requires the student's analytical skills and a good understanding of what is covered in the chapter. The assignment is to be submitted on BB 9.1 under homework on its due date for grading. Late submission of the assignment will result in a homework grade deduction.

Case Discussion (9%): Cases introduce information about situations in which problems need to be solved, decisions must be made, and/or existing policies and practices can be evaluated. Cases present unstructured and complex problems to the student. Case method teaching is essential to learning and applying what has been learned to real-world situations, past or present. We will have three case discussions. The day before the case discussion, you are required to submit a one-page Word document summarizing the case to be discussed.

Class Project (25%): A separate document will be shared. It will contain all the details regarding the project and its different parts.

Course Policy and Regulations:

1. Students are expected to do all reading assignments before the class session for which they are assigned to be discussed in the class.
2. Each student is expected to do all his own work. Working in PAIRS or GROUPS is NOT

allowed unless required in group work. Unreasonable collaboration is cheating. Cheating in any assignments, quizzes, or exams will result in an automatic "F" grade for ALL parties concerned.

3. All University regulations related to class attendance will be applied. Students are expected to attend classes on time. Any student accumulating Six unexcused absences will receive a "**DN**" grade in the course. However, your attendance score will be reduced by 1% point per absence for more than two unexcused absences. Moreover, three late attendances will be counted as one absence.
4. All students are expected to conduct themselves as professionals in all aspects of the course. Any attempt to copy other students' work during exams, quizzes, or other assessment times will be strictly dealt with.
5. Guidelines, notes, and materials will be available on BB 9.1. Please check BB 9.1 regularly.
6. BB 9.1 and MS Teams will be used extensively throughout the course, including course material, participation, assignments, online classes, announcements, and other relevant information.

About Using Generative AI:

In this course, the use of Generative AI tools, including but not limited to ChatGPT, Claude.ai, and Google Gemini, in completing assignments and project is generally prohibited, unless otherwise specified in individual assignment instructions. The rationale behind this policy is to foster and develop essential skills such as information retrieval, synthesis, summarization, and critical thinking, which are crucial for your academic and future career success. It is important to understand that these skills are valuable and enduring, and their cultivation will prove beneficial in the evolving landscape of technology and employment. The following points provide the rationale behind this policy:

Skill Development: Homework assignments are intentionally designed to challenge you to actively engage with course materials, research, and critical thought processes. By abstaining from the use of AI tools, you will have the opportunity to hone your problem-solving abilities, analytical thinking, and communication skills. These abilities are indispensable for your academic journey and future career endeavors. **Ethical Considerations**: It is important to recognize that AI tools, while powerful, can raise ethical concerns when used in academic contexts. Plagiarism, academic dishonesty, and unfair advantages can result from their misuse. We aim to maintain academic integrity and uphold ethical standards by restricting their use. **Future Preparedness**: The skills you develop in this course will serve as a strong foundation for your future career. As the field of AI advances, it is crucial to differentiate yourself by your ability to understand, interpret, and apply knowledge. By relying on your own intellectual capabilities, you will be better prepared to adapt to and thrive in an ever-changing job market. **Human-Centric Learning**: This policy aligns with our commitment to a human-centric approach to learning. While AI tools are valuable in many contexts, this course focuses on the cultivation of human intelligence, creativity, and problem-solving skills. These qualities distinguish you as a learner and a professional.

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COURSE WEEKLY SCHEDULE TERM: 241*

Week	Lecture Topics	Readings
What is Digital Transformation?		
1	**Counce Introduction**	
	History of Technological Revolution: The Four Industrial Revolutions	• **Schwab, K. (2016).** The Fourth Industrial Revolution (pp. 11-13). • **History.com (2023).** Industrial Revolution: https://www.history.com/topics/industrial-revolution/industrial-revolution • **History.com (2023).** How the Second Industrial Revolution Changed Americans' Lives: https://www.history.com/news/second-industrial-revolution-advances
2	**Digital Transformation: A Definition**	• **SAP.** What Is Digital Transformation? • **IBM.** What Is Digital Transformation? • **McKinsey & Company.** What Is Digital Transformation? • **SMR (2014) - Westerman et al.** The Nine Elements of Digital Transformation • **SMR (2020) - Bonnet & Westerman.** The New Elements of Digital Transformation
	What Drives Digital Transformation? Strategy or Technology?	• **HBR (2019) - Tabrizi et al.** Digital Transformation Is Not About Technology • **SMR (2015) - Kane et al.** Strategy, not Technology, Drives Digital Transformation • **SMR (2017) - Ross.** Don't Confuse Digital with Digitization
3	**Digital Transformation: Threats, Opportunities, and Disruption**	• **CIO.com.** What Is Digital Transformation? A Necessary Disruption • **HBR (2019) - Furr & Shipilov.** Digital Doesn't Have to Be Disruptive • **HBR (2023) - Lamarre et al.** The Value of Digital Transformation • **HBR (2022) - Beard.** Can Big Tech Be Disrupted • **McKinsey (2022).** Three New Mandates for Capturing a Digital Transformation's Full Value
	Navigating the Digital Transformation Journey	• **HBR (2022) - Furr et al.** The 4 Pillars of Successful Digital Transformations • **McKinsey (2018).** Unlocking Success in Digital Transformations • **SMR (2017) - Kane et al.** Achieving Digital Maturity

4	**Digital Transformation Resources and Capabilities**	• **SMR (2019) - Westerman et al.** Building Digital-Ready Culture in Traditional Organizations • **SMR (2019) - Kane et al.** Accelerating Digital Innovation Inside and Out • **SMR (2020) - Davenport & Redman.** Digital Transformation Comes Down to Talent in 4 Key Areas
	1st Case Discussion	• **HBR (2019) - Austin and Pelow.** Digital Transformation at GE: What Went Wrong? ○ https://store.hbr.org/product/digital-transformation-at-ge-what-went-wrong/W19499 ○ https://www.ivey.uwo.ca/publishing/podcast/2021/11/digital-transformation-at-ge-what-went-wrong/
Digital Transformation & New Business Model		
5	**Digital Business Models**	• **Forbes (2020)- Marr.** The Impact of Digital Transformation on Business Models • **HBR (2018) - Johnson.** Digital Growth Depends More on Business Models than Technology • **HBR (2016) - Kavadias.** The Transformative Business Model
	Digital Business Models	• **HBR (2020) - Iansiti & Lakhani.** Competing in the Age of AI • **HBR (2019) - Siggelkow & Terwiesch.** The Age of Continuous Connection • **SMR (2013) - Weill & Woerner.** Optimizing Your Digital Business Model
6	**Digital Platforms**	• **Parker et al (2016).** Platform Revolution: How Networked Markets Are Transforming the Economy and How to Make Them Work for You. (Chapter 1).
	Digital Platforms	• **Parker et al (2016).** Platform Revolution: How Networked Markets Are Transforming the Economy and How to Make Them Work for You. (Chapter 2).
7	**Digital Platforms**	• **Parker et al (2016).** Platform Revolution: How Networked Markets Are Transforming the Economy and How to Make Them Work for You. (Chapter 3).
	Digital Platforms	• **Parker et al (2016).** Platform Revolution: How Networked Markets Are Transforming the Economy and How to Make Them Work for You. (Chapter 4).
8	**2nd Case Discussion**	• **HBR (2021)** - The Digital Transformation of Kroger: Remaking the Grocery Business ○ https://hbsp.harvard.edu/product/TB0636-PDF-ENG?activeTab=overview&itemFindingMethod=
	Midterm Exam (October 15, 2024)	

Data Strategy & Data Governance; Digital Governance & Leadership		
9	**Data Strategy**	• **HBR (2017) - DalleMule & Davenport.** What's Your Data Strategy • **SMR (2020) - Bean.** Why Culture Is the Greatest Barrier to Data Success • **Forbes (2023) - Gordon.** How To Build and Execute a Successful Data Strategy
	Data Strategy	• **SMR (2020) - Bieda.** How Organizations Can Build Analytics Agility • **HBR (2023) - Davenport et al.** Your Data Strategy Needs to Include Everyone • **SMR (2020) - Stuart.** Becoming a Data-Driven Enterprise: Meeting the Challenges, Changing the Culture
10	**Data Governance**	• **SMR (2020) - Vial.** Data Governance in the 21st-Century Organization • **BCG (2020) - Aractingi et al.** A Show-Don't-Tell Approach to Data Governance
	Data Governance	• **BCG (2020) - Candelon et al.** Simple Governance for Data Ecosystems • **BCG (2019) - Baltassis.** Good Data Starts with Great Governance
11	**Digital Governance**	• **Weill & Ross (2004).** IT Governance: How Top Performers Manage IT Decision Rights for Superior Results (Chapter 1)
	Digital Governance	• **Weill & Ross (2004).** IT Governance: How Top Performers Manage IT Decision Rights for Superior Results (Chapter 2)
12	**Digital Governance**	• **Weill & Ross (2004).** IT Governance: How Top Performers Manage IT Decision Rights for Superior Results (Chapter 3)
	Digital Governance	• **Weill & Ross (2004).** IT Governance: How Top Performers Manage IT Decision Rights for Superior Results (Chapter 4)
13	**3rd Case Study**	• **HBR (2021)** - Tech with a Side of Pizza: How Dominos Rose to the Top, Teaching Note ○ https://hbsp.harvard.edu/product/421080-PDF-ENG?activeTab=overview&itemFindingMethod=
	No class on November 19, 2024; The First Saudi Conference on Information Systems (SaudiCIS2024)	
14	**Digital Leadership**	• **HBR (2022) - Møller et al.** Four Ways Digital Leaders are Accelerating Their Innovation Strategy • **HBR (2022) - Neeley & Leonardi.** Developing a Digital Mindset
	Digital Leadership	• **ISACA (2019) - Pearce.** Enhancing the Board's Readiness for Digital Transformation Governance • **MIT Sloan (2021) - Stachpole.** Making the Business Case for a Chief Data Officer • HBR (2023) - Bean and Sagraves. Why Chief Data and AI Officers Are Set Up to Fail

15	**Project Presentations**	
	Project Presentations	
Final Exam (Week 8-14 Material) – Excluding cases.		

* Course schedule is subject to changes