



# Course Specification

## — (Bachelor)

Course Title: **Selected Topics in Digital Transformation**

Course Code: **IS1467**

Program: **Bachelor of Information Systems**

Department: **Information systems**

College: **College of Computer and Information Sciences**

Institution: **Imam Mohammad Ibn Saud Islamic University**

Version: **2**

Last Revision Date: **August 2<sup>nd</sup>, 2025**

Approved: 24/08/2025



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## A. General information about the course:

### 1. Course Identification

1. Credit hours: 3 credit hours (lectures:3)

#### 2. Course type

A. ☐ University ☐ College ☒ Department ☐ Track ☐ Others  
B. ☐ Required ☒ Elective

3. Level/year at which this course is offered: Level 7/Fourth Year

#### 4. Course general Description:

This course explores advanced and emerging topics in Digital Transformation, allowing students to delve into emerging trends, challenges, and innovations shaping the digital landscape. The course covers diverse areas such as digital business models, digital ecosystems, AI-driven transformation, cybersecurity, ethical considerations, and the role of emerging technologies (e.g., IoT, blockchain, and cloud computing). Through case studies and real-world applications, students will better understand how organizations leverage digital strategies to remain competitive.

#### 5. Pre-requirements for this course (if any):

CS1322 – Operating Systems

#### 6. Co-requisites for this course (if any):

No Co-requisites

#### 7. Course Main Objective(s):

- Provide students with an in-depth understanding of key emerging topics in digital transformation.
- Examine the role of disruptive technologies such as AI, blockchain, and IoT in reshaping industries.
- Analyze the challenges and opportunities of digital transformation from strategic, operational, and ethical perspectives.
- Develop students' ability to critically assess and implement digital transformation strategies in various business contexts.
- Foster practical skills through real-world case studies and projects focused on digital transformation initiatives.





## 2. Teaching mode (mark all that apply)

| No | Mode of Instruction                                                                                | Contact Hours | Percentage |
|----|----------------------------------------------------------------------------------------------------|---------------|------------|
| 1  | Traditional classroom                                                                              | 3 hours/week  | 100%       |
| 2  | E-learning                                                                                         |               |            |
| 3  | Hybrid <ul style="list-style-type: none"> <li>Traditional classroom</li> <li>E-learning</li> </ul> |               |            |
| 4  | Distance learning                                                                                  |               |            |

## 3. Contact Hours (based on the academic semester)

| No    | Activity          | Contact Hours |
|-------|-------------------|---------------|
| 1.    | Lectures          | 45            |
| 2.    | Laboratory/Studio |               |
| 3.    | Field             |               |
| 4.    | Tutorial          |               |
| 5.    | Others (specify)  |               |
| Total |                   | 45            |

## B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

| Code | Course Learning Outcomes                                                                                 | Code of CLOs aligned with program | Teaching Strategies            | Assessment Methods       |
|------|----------------------------------------------------------------------------------------------------------|-----------------------------------|--------------------------------|--------------------------|
| 1.0  | Knowledge and understanding                                                                              |                                   |                                |                          |
| 1.1  | Describe and explain key emerging technologies that drive digital transformation in modern organizations | K1(P)                             | Class Lectures<br>Case Studies | Final Exam<br>Assignment |
| 1.2  | Comprehend how digital ecosystems and business models                                                    | K3(P)                             | Lectures,<br>Discussions       | Midterm<br>Final Exam    |





| Code | Course Learning Outcomes                                                                                     | Code of CLOs aligned with program | Teaching Strategies    | Assessment Methods   |
|------|--------------------------------------------------------------------------------------------------------------|-----------------------------------|------------------------|----------------------|
|      | are evolving due to technological advancements                                                               |                                   |                        |                      |
| 1.3  | Understand cybersecurity and ethical considerations in digital transformation                                | K2(P)                             | Lectures               | Quiz<br>Assignment   |
| 2.0  | <b>Skills</b>                                                                                                |                                   |                        |                      |
| 2.1  | Evaluate the impact of AI, blockchain, and IoT on operational efficiency and innovation across industries.   | S1(P), S3(I)                      | Lectures, Case Studies | Project Reports      |
| 2.2  | Develop and apply digital transformation frameworks to propose solutions for real-world business challenges. | S2(I), S4(P)                      | Lectures, Case Studies | Assignments, Project |
| 3.0  | <b>Values, autonomy, and responsibility</b>                                                                  |                                   |                        |                      |
| 3.1  | Demonstrate an understanding of responsible digital transformation                                           | V2(P)                             | Lectures, Discussions  | Project              |
| 3.2  | Collaborate effectively in analyzing digital transformation strategies                                       | V1(P), V3(I)                      | Lectures, Case Studies | Project              |





### C. Course Content

| No    | List of Topics                                                 | Contact Hours |
|-------|----------------------------------------------------------------|---------------|
| 1.    | Introduction to Digital Transformation Trends                  | 5             |
| 2.    | Digital Business Models and Ecosystems                         | 5             |
| 3     | AI and Machine Learning in Digital Transformation              | 5             |
| 4     | Blockchain, IoT, and Cloud Computing                           | 5             |
| 5     | Digital Customer Experience and Personalization                | 5             |
| 6     | Digital Transformation Governance and Risk Management          | 5             |
| 7     | Cybersecurity and Ethical Challenges in Digital Transformation | 5             |
| 8     | Measuring Digital Transformation Success                       | 5             |
| 9     | Future Trends and Case Studies                                 | 5             |
| Total |                                                                | 45            |

### D. Students Assessment Activities

| No | Assessment Activities * | Assessment timing (in week no) | Percentage of Total Assessment Score |
|----|-------------------------|--------------------------------|--------------------------------------|
| 1. | Quiz                    | 4,11                           | 10%                                  |
| 2. | Midterm Exam            | 8                              | 20%                                  |
| 3. | Assignment              | 7                              | 10%                                  |
| 4  | Group Project           | 15                             | 20%                                  |
| 5  | Final Exam              | 16                             | 40%                                  |

\*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).

### E. Learning Resources and Facilities

#### 1. References and Learning Resources

|                          |                                                                                                                                                                                                             |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Essential References     | <p>"Digital Transformation: Survive and Thrive in an Era of Mass Extinction" by Thomas M. Siebel (2019)</p> <p>"Digital Business Models: Concepts, Models, and the Alphabet" by Annabeth Aagaard (2019)</p> |
| Supportive References    | Industry reports from McKinsey, Gartner, and Forrester on digital transformation trends.                                                                                                                    |
| Electronic Materials     | Blackboard                                                                                                                                                                                                  |
| Other Learning Materials | N/A                                                                                                                                                                                                         |





## 2. Required Facilities and equipment

| Items                                                                                     | Resources                                                                                                        |
|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| <b>facilities</b><br>(Classrooms, laboratories, exhibition rooms, simulation rooms, etc.) | 1. At least 30 seats<br>2. A projector connected to a PC preferably with Internet connection<br>3. Sliding board |
| <b>Technology equipment</b><br>(projector, smart board, software)                         |                                                                                                                  |
| <b>Other equipment</b><br>(depending on the nature of the specialty)                      | N/A                                                                                                              |

## F. Assessment of Course Quality

| Assessment Areas/Issues                     | Assessor             | Assessment Methods                                         |
|---------------------------------------------|----------------------|------------------------------------------------------------|
| Effectiveness of teaching                   | Students             | Indirect using course evaluation survey                    |
| Effectiveness of Students assessment        | Faculty members      | Direct method using TOS file                               |
| Quality of learning resources               | Students and Faculty | Indirect using course evaluation survey and faculty survey |
| The extent to which CLOs have been achieved | Faculty members      | Direct method using TOS file                               |
| Other                                       |                      |                                                            |

**Assessors** (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify))

**Assessment Methods** (Direct, Indirect)

## G. Specification Approval

|                           |                                                                      |
|---------------------------|----------------------------------------------------------------------|
| <b>COUNCIL /COMMITTEE</b> | IS CURRICULUM APPROVAL & DEVELOPMENT COMMITTEE IS QAC / / IS COUNCIL |
| <b>REFERENCE NO.</b>      |                                                                      |
| <b>DATE</b>               |                                                                      |

