Title (Units): **COMP7115 Digital Experience Design (3,2,1)**

Course Aims: Digital Experience Design aims to enrich human experience with the wide variety of cutting-edge technologies (e.g. AI, Immersive Technologies AR/VR, IoT, etc.) and media that are available. The course will introduce the processes, methodologies, tools and techniques needed for developing cutting-edge digital innovation projects, especially involving AI components, anticipating future needs and trends. Students will learn examples and apply skills in a broad range of contemporary industries from art, banking, entertainment, education, sports, marketing, rehabilitation, healthcare, etc.

Prerequisite: Nil

Course Intended Learning Outcomes (CILOs):
Upon successful completion of this course, students should be able to:

No.	Course Intended Learning Outcomes (CILOs)
	Knowledge
1	Describe and apply core theories, models and methodologies in digital experience design, including user journey design, interaction design, interface design.
2	Describe user-centered design cycle and explain how to practice this approach to design interactive systems.
3	Understand how ideation turns into reality, even forward looking to understand the future.
	Professional Skill
4	Conduct user research and task analysis.
5	Apply technologies to design interactive systems which could be used in real world business.
6	Critique and evaluate interactive digital experience using guidelines from human factor theories.

Calendar Description: Digital Experience Innovation aims to enrich human experience with the wide variety of cutting-edge technologies (e.g. AI, Immersive Technologies AR/VR, IoT, etc.) and media that are available. The course will introduce the processes, methodologies, tools and techniques needed for developing cutting-edge digital innovation projects, especially involving AI components, anticipating future needs and trends. Students will learn examples and apply skills in a broad range of contemporary industries from art, banking, entertainment, education, sports, marketing, rehabilitation, healthcare, etc.

Teaching and Learning Activities (TLAs):

CILOs	Type of TLA
1-6	Students will learn the concepts via lectures and in-class exercises and assignments.
1-6	Students will attend workshop, case study and fieldtrip to enhance understanding of concepts.
4-6	Students will complete projects to promote their knowledge and skills.

Assessment:

No.	Assessment Methods	Weighting	CILOs to be addressed	Description of Assessment Tasks
1	Group Project	30%	3-6	Group project is designed to evaluate students' capability to implement and evaluate a prototype of digital experience in a team. By encouraging students to work on real-world design project with real users, in a context of peer support and feedback, students apply practical processes to design new digital experience for business needs with cutting-edge technologies. Working on this project with others allows students the opportunity to engage critically with the

				theoretical and practical interdisciplinary approaches to design. The project scope could be but not limited to product prototyping, remote collaborations design, and immersive experience design, design how to command AI systems to serve people's life and work, etc.
2	Workshop exercises and Individual Assignments	30%	1-6	Workshop exercises and individual assignments are designed to evaluate students' understanding on what they learn from lectures and workshops.
3	Examination	40%	1-4	The final examination is designed to evaluate students' understanding in different parts. The questions will include fundamental, analytic and design types to distinguish different levels of understanding of digital experience design.

Assessment Rubrics:

Excellent (A)	• Achieve all the six CILOs, demonstrating an excellent mastery of both the theoretical and practical aspects of the knowledge and skills in the selected topics • Able to develop correct solutions to problems in digital experience design, accompanied by in-depth analysis and insight • Demonstrate a thorough understanding and solid knowledge of the principles and techniques of digital experience design • Able to draw on a variety of techniques and relevant knowledge and appropriately apply them to new situations and real-life problems
Good (B)	• Achieve all the six CILOs, demonstrating a good understanding of the associated concepts and underlying methodologies in the selected topics • Able to develop correct solutions to problems in digital experience design, accompanied by adequate explanations • Demonstrate a competent level of knowledge of the principles and techniques of digital experience design • Ability to make use of appropriate techniques and knowledge and apply them to new situations and problems
Satisfactory (C)	• Achieve most of the six CILOs, demonstrating a basic level of understanding of the associated concepts and underlying methodologies in the selected topics • Able to provide acceptable solutions to problems in digital experience design • Demonstrate an adequate level of knowledge of the principles and techniques of digital experience design • Ability to make use of some techniques and knowledge and apply them to familiar situations and problems
Marginal Pass (D)	• Achieve most of the six CILOs, with minimal understanding of the associated concepts and underlying methodologies in the selected topics • Able to provide solutions to simple problems in digital experience design • Demonstrate a basic level of knowledge of the principles and techniques of digital experience design • Ability to apply some techniques and knowledge to a limited number of typical situations and problems
Fail (F)	• Achieve less than four of the six CILOs, with little understanding of the associated concepts and underlying methodologies in the selected topics • Unable to provide solutions to simple problems in digital experience design • Knowledge of the principles and techniques of digital experience design falling below the basic minimum level • Unable to apply techniques or knowledge to familiar situations or problems

Course Content and CILOs Mapping:

Content		CILO No.
I	Introduction to Digital Experience Design	1,2,3
II	User-centered Design Process and Methods	1,2,3
III	Technologies for Digital Experience	5
IV	Human-AI Interaction	1,2,4,6
V	From Design to Business Implementation	4,5,6

References:

- Lean UX: Designing Great Products with Agile Teams, 3rd Edition, Jeff Gothelf with Josh Seiden, O'Reilly Media (2021)
- UX for XR User Experience Design and Strategies for Immersive Technologies, Cornel Hillmann, Spinger (2021)
- Interaction Design: Beyond Human-Computer Interaction, 4th Edition by Jenny Preece, Helen Sharp, Yvonne Rogers, John Wiley & Sons (2015)
- Designing the User Interface: Strategies for Effective Human-Computer Interaction, 6th Edition by Shneiderman, B., Plaisant, C., Cohen, M. Jacobs, S., Elmqvist, N. and Diakopoulos, Nicholas. Pearson (2016)
- Human-Centered Artificial Intelligence: Research and Applications, Chang S. Nam, Jae-Yoon Jung and Sangwon Lee, Elsevier Inc. (2022)

Course Content:

Topic

I. Introduction to Digital Experience Design
   A. Digital design theory and critique
   B. The nature of human experience and its mediation by technology
   C. Technologies for digital experience

II. User-centered Design Process and Methods
   A. Design Thinking methodology
   B. Service Design
   C. Interactivity and interaction design
   D. Interface design principles

III. Technologies for Digital Experience
   A. Artificial Intelligence
   B. Immersive technologies
   C. IoT wearable technologies

IV. Human-AI Interaction
   A. Principles and guidelines for Human-AI interaction
   B. Prompt engineering
   C. Design how to command AI assist human work
   D. Ethics in human-centered AI project

V. From Design to Business Implementation
   A. Design business scenarios with digital experience
   B. Future Thinking
   C. Digital design management and entrepreneurship