GE2340: ARTIFICIAL INTELLIGENCE – PAST, PRESENT, AND FUTURE

Effective Term
Semester A 2025/26

Part I Course Overview

Course Title
Artificial Intelligence – Past, Present, and Future

Subject Code
GE - Gateway Education
Course Number
2340

Academic Unit
Computer Science (CS)

College/School
College of Computing (CC)

Course Duration
One Semester

Credit Units
3

Level
B1, B2, B3, B4 - Bachelor's Degree

GE Area (Primary)
Area 3 - Science and Technology

Medium of Instruction
English

Medium of Assessment
English

Prerequisites
Nil

Precursors
Nil

Equivalent Courses
Nil

Exclusive Courses
Nil

Part II Course Details

Abstract

This AI course aims to firstly provide an overall view of what is AI, its developments over the past decades, its current trends, and a look at potential future directions. It will cover impact of AI to society and business. Through case studies, students gain a better insight on different AI technologies and how they can be used to address a wide range of social and business needs. The course will broaden students' understanding of current state-of-the-art in AI and future trends, as well as how various needs of different industries can be addressed through innovative use of AI. The second objective of this course is to help students become creative innovators in applying "AI first" concepts to solving real-world problems through project-based work. This course will be useful for students from any discipline and will give insights to the value of AI across industries from a global point of view as well as issues related to their ethical use. To make this course as widely accessible to as many people as possible from any background, no programming will be required and no prior programming skills are assumed.

Course Intended Learning Outcomes (CILOs)

	CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Explain examples of how AI benefits everyday life through innovative solutions.	35	x		
2	Explore and analyze the use and impact of AI in different industries around the world and current trends in AI.	35		x	
3	Design and prototype an application of AI to solve current business, industry, or social need.	30			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)

	LTAs	Brief Description	CILO No.	Hours/week (if applicable)
1	Lecture & In-Class Discussion	Case studies of AI applications and how they change the way we work and play throughout history and present day will be covered in lectures. Current trends will be explored. Students will further strengthen what they learned in class with in-class discussions. Students are expected to share what they learned with others during in-class presentations and participations. Students will be given opportunities to learn with hands-on experience on AI applications related to the lecture.	1, 2, 3	3 hours/week
2	Tutorial	Work on hands-on exercises and labs related to the key concepts taught in lectures. In particular, they will have group discussions to perform critical assessment of the case study, and each group is required to complete a take-home exercise, in the form of a brief report of their discussion results in each tutorial session.	1, 2, 3	8 hours/semester
3	Course Project	Team project assigned to student to explore different AI related topics. The list of possible topics are provided, including programming-oriented topics, application-oriented topics and the investigate of AI's impact on society. Students are encouraged to think AI techniques critically and write a report about their unique experience about the AI technique studied.	1, 2, 3	After class

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks ("-" for nil entry)	Allow Use of GenAI?
1	Exercises on Canvas	1, 2, 3	10	-	Yes
2	In-class Quiz	1, 2, 3	30	-	No
3	Team Project	1, 2, 3	30	-	Yes

Continuous Assessment (%)

70

Examination (%)

30

Examination Duration (Hours)

2

Minimum Examination Passing Requirement (%)

30

Additional Information for ATs

For a student to pass the course, at least 30% of the maximum mark for the examination must be obtained.

For the Team Project: Team project assigned to student to explore different AI related topics. The list of possible topics are provided, including programming-oriented topics, application-oriented topics and the investigate of AI's impact on society. Students are encouraged to think AI techniques critically and write a report about their unique experience about the AI technique studied.

For the Examination: the alignment with the CILOs will be as follows:

The final examination questions will cover each of the CILOs roughly similarly, i.e. one-third each:

CILO#1 - Explain examples of how AI benefits everyday life through innovative solutions.

There will be questions to assess students' knowledge of what AI can do and how it can be used to solve daily problems and needs as well as be able to identify specific benefits offered by AI.

CILO#2 - Explore and analyze the use and impact of AI in different industries around the world.

There will be questions to assess students' knowledge of various real-world applications of AI, what problems it solve, benefits it brings as well as potential challenges and issues.

CILO#3 - Understand current trends in AI, and design and prototype an application of AI to solve current business, industry, or social need.

There will be questions to assess students' knowledge of current new trends and directions in AI, as well as questions related to their projects and the role and importance AI plays.

Assessment Rubrics (AR)

Assessment Task

Exercises on Canvas

Criterion

1.1 ABILITY to articulate answer in a very clear and precise manner, demonstrating a firm knowledge of the subject.
1.2 DEMONSTRATE ability for critical thinking and analysis
1.3 PROVIDE rich and strong evidence and arguments to support and justify answer.
1.4 SHOW good command of English.

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
In-class Quiz

Criterion
2.1 ABILITY to understand the concepts delivered in class.
2.2 ABILITY to do simple calculations based on the algorithms introduced in class.
2.3 CAPACITY to analyze to pros and cons of different methods introduced in class.
2.4 SHOW good command in English.

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
Team Project

Criterion
3.1 ABILITY to provide thorough summary of current AI development with good highlights of significant people / technology / incidents / events. Variety of example cases is included to exemplify the current development with critical comparison and analysis.
3.2 ABILITY to describe in-depth possible industrial / societal needs and the social impact of AI. Provide relevant statistics and figures to substantiate the impact.
3.3 ABILITY to make real connections between the study and own experience and learning and CAPACITY to demonstrate new perspectives and insights from the study. Every idea is logically supported by relevant facts, and includes judgment of the reliability of data.
3.4 ABILITY to report in an organised way and use of sections is logical and allows easy navigation through the document. All graphical documents, sketches and maps are creative, professional and strongly support the text. All sources correctly and thoroughly documented. All ideas borrowed are duly acknowledged in the text. Appropriate citation forms are utilized throughout. Reference section complete, comprehensive and follows standard format.

3.5 ABILITY to present in a clear, logical, interesting sequence which audience can follow. Use of creative and effective visual aids that easily hold audience's attention. Delivery should be clear, concise, correct and complete.

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
Examination

Criterion
4.1 ABILITY to articulate answer in a very clear and precise manner, demonstrating a firm knowledge of the subject.
4.2 DEMONSTRATE ability for critical thinking and analysis
4.3 PROVIDE rich and strong evidence and arguments to support and justify answer.
4.4 SHOW good command of English.

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

Part III Other Information

Keyword Syllabus
Turing test, artificial neural network, expert systems, intelligent search, natural language understanding, chatbot, big data/data mining, game playing, deep learning, evolutionary algorithms, machine learning, computer vision, predictive analytics, reinforcement learning, supervised/unsupervised learning, robotics, planning, scheduling, optimization, AI applications in medicine/health, fintech, smart city, lawtech, insurtech, etc.

Reading List

Compulsory Readings

	Title
1	All material will be from online resources.

Additional Readings

	Title
1	Freely available Web-based resources will be used.

Annex (for GE courses only)

A. Please specify the Gateway Education Programme Intended Learning Outcomes (PILOs) that the course is aligned to and relate them to the CILOs stated in Part II, Section 2 of this form:

Please indicate which CILO(s) is/are related to this PILO, if any (can be more than one CILOs in each PILO)

PILO 1: Demonstrate the capacity for self-directed learning

1, 2, 3

PILO 2: Explain the basic methodologies and techniques of inquiry of the arts and humanities, social sciences, business, and science and technology

1, 2, 3

PILO 3: Demonstrate critical thinking skills

1, 2, 3

PILO 4: Interpret information and numerical data

2

PILO 5: Produce structured, well-organised and fluent text

1, 2, 3

PILO 6: Demonstrate effective oral communication skills

1, 2, 3

PILO 7: Demonstrate an ability to work effectively in a team

1, 2, 3

PILO 9: Value ethical and socially responsible actions

1, 2, 3

PILO 10: Demonstrate the attitude and/or ability to accomplish discovery and/or innovation

1, 2, 3

B. Please select an assessment task for collecting evidence of student achievement for quality assurance purposes. Please retain at least one sample of student achievement across a period of three years.

Selected Assessment Task

Semester team project Final Report and Presentation file on the use of AI to solve social or industry needs.