Title (Units):	**COMP7220 Special Topics in Artificial Intelligence (3,3,0)**

Course Aims: To learn state-of-the-art topics in Artificial Intelligence.

Prerequisite: The pre-requisite depends on the specific topics covered. The pre-requisite and the chosen topics will be announced before the semester starts.

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

No.	Course Intended Learning Outcomes (CILOs)
	Knowledge
1	Explain the importance of the selected topics in artificial intelligence.
2	Describe the problems involved in the selected topics and explain the solutions to these problems.
	Professional Skill
3	Master problem solving and/or practical skills relevant to the selected topics.

Calendar Description: Students will learn state-of-the-art topics in artificial intelligence. Emphases will be placed on the latest development of related methodologies and/or practice. After completing this course, students will understand some current topics and methodologies in the area of artificial intelligence.

Teaching and Learning Activities (TLAs):

CILOs	Type of TLA
1-3	The teaching and learning activities depend on the specific topics covered. These activities may include: (i) Students will learn the key concepts and principles of the subject via lectures; (ii) Tutorials will be conducted to clarify concepts and to have a deeper understanding of the teaching materials, where real-world cases will be studied and problems will be given to students for in-depth discussion; (iii) Students will learn the practical aspects of the topics covered via assignments/term papers/projects to consolidate and apply what they have learnt.

Assessment:

No.	Assessment Methods	Weighting	CILOs to be addressed	Description of Assessment Tasks
1	Continuous Assessment	40%	1-3	Continuous assessments are designed such that students apply what they have learned to solve the problems involved in the selected topics in artificial intelligence.
2	Examination	60%	1-3	Final examination questions are designed to assess students' understanding in the concepts and their ability in applying these concepts to solve problems.

Assessment Rubrics:

	Excellent (A)	Good (B)	Satisfactory (C)	Fail (F)
Models And Methodologies business analytics	Can describe and explain the state-of-the-art models and methods of artificial intelligence, and	Can describe and explain the state-of-the-art models and methods of artificial intelligence	Can describe the state-of-the-art methods of artificial intelligence and/or models with a moderate	Cannot describe the state-of-the-art methods of artificial intelligence

	Excellent (A)	Good (B)	Satisfactory (C)	Fail (F)
	can do a critical comparison and evaluation	with a high level of effectiveness	level of effectiveness	and/or models
Problem solving skills	Can effectively and correctly apply artificial intelligence methods covered to solve a given problem	Can correctly apply artificial intelligence methods covered to solve a given problem	Can apply artificial intelligence methods covered to solve a given problem with some degree of effectiveness	Cannot apply artificial intelligence methods covered to solve a given problem
Software tools	Able to use artificial intelligence software tool(s) to solve a problem with a high degree of effectiveness	Able to use artificial intelligence software tool(s) to solve a problem with a considerable degree of effectiveness	Able to use artificial intelligence software tool(s) to solve a problem with some degree of effectiveness	Unable to use artificial intelligence software tool(s) to solve a problem

Course Content and CILOs Mapping:

Content		CILO No.
I	Some selected topics in Artificial Intelligence:	1-3

References:
- Selected articles from journals, magazines, conference proceedings, research monographs, etc.

Course Content:

Topic

I.   Some selected topics in Artificial Intelligence:
- Advanced Machine Learning Techniques, e.g., Deep Reinforcement Learning, Open-world Machine Learning, etc.
- Problem Solving, e.g., Search, Planning, Constraint Satisfaction
- Knowledge Discovery, Representation and Reasoning
- Natural Language Processing
- Large Language Models (LLMs)
- Generative AI
- Computer Vision
- Robotics and Perception
- Collective Intelligence
- Affective Computing
- Novel Applications, e.g., in Sustainability, Health care, Transportation, etc.