Title (Units): **COMP7260 Special Topics in Data Analytics (3,2,1)**

Course Aims: To learn state-of-the-art topics in data analytics.

Prerequisite: The pre-requisite depends on the specific topics covered. The pre-requisite and the selected 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 data analytics.
2	Describe the problems involved in the selected topics and explain the solutions to these problems.
	Professional Skill
3	Apply problem-solving and/or practical skills relevant to the selected topics.

Calendar Description: Students will learn state-of-the-art topics in data analytics. Emphasis will be placed on the current issues, methodologies and/or practice. After completing this course, students will understand the selected topics in data analytics.

Teaching and Learning Activities (TLAs):

CILOs	Type of TLA
1, 2, 3	The specific teaching and learning activities depend on the topics covered, e.g., the large language models based data analytics, graph data analytics, data privacy and security, and health informatics.. These activities may include some of the following: i) students will attend lectures to learn the principles of the topics covered, ii) they will be given open-ended tutorial questions for class discussion and in-depth learning, iii) they will attend laboratory sessions to learn the practical aspects of the topics covered, iv) they will study some real-world cases which illustrate the topics covered, v) they will work on written assignments to consolidate and apply what they have learnt, vi) they will work on a term paper and/or a project which involve information gathering, self-reading, critical thinking and creativity.

Assessment:

No.	Assessment Methods	Weighting	CILOs to be addressed	Description of Assessment Tasks
1	Continuous Assessment	50%	1, 2, 3	Continuous assessments are designed such that students apply what they have learned to solve the problems involved in the selected topics in data analytics.
2	Examination	50%	1, 2, 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:

Level of Achievement	General Presentation	Reasoning, Argumentation
Excellent (A)	• Addresses questions explicitly • Presents answers clearly and logically	• Demonstrates accurate and complete understanding of the concepts involved • Provides arguments in a consistent and thorough manner • Capable of addressing in-depth and tricky issues

Good (B)	• Addresses most questions explicitly but a few questions tangentially • Presents most answers clearly and logically	• Demonstrates good understanding of most of the concepts involved • Provides most arguments in a consistent and thorough manner
Satisfactory (C)	• Addresses some questions explicitly but other questions tangentially • Presents some answers clearly	• Demonstrates basic understanding of some of the concepts involved
Fail (F)	• Does not address most questions explicitly • Does not present most answers clearly	• Does not demonstrate basic understanding of the concepts involved

Course Content and CILOs Mapping:

Content		**CILO No.**
I	One or more state-of-the-art topics in data analytics such as (but not limited to) the following topics of large language models based data analytics, graph data analytics, data privacy and security, and health informatics.	1-3

References:

- Selected articles from journals, magazines, conference proceedings, research monographs, or advanced textbooks.

Course Content:

Topic

I. One or more state-of-the-art topics in data analytics such as (but not limited to) the following topics of large language models based data analytics, graph data analytics, data privacy and security, and health informatics.
   - Quantitative methods for data analysis
   - Exploratory data analysis and visualization
   - Data analysis on the cloud or at the edge
   - Big data analytics
   - Large language models based data analytics
   - Graph data analytics
   - Data privacy and security
   - Health informatics
   - Tools or platforms for data analysis
   - Applications for business, Fintech, or healthcare