Subject Code	MM5426
Subject Title	Business Applications of Blockchain
Credit Value	3
Level	5
Pre-requisite/ Co-requisite/ Exclusion	None
Objectives	The goal of this course is to offer students a solid foundation covering major problems, challenges, concepts, and techniques in blockchain technology and business applications. This course will help students get to know the concepts of blockchain, understand how blockchain will become the foundation of the digital economy, and become capable of writing business plans for blockchain projects. This course will *not* require students to code lengthy programs except for short business logic in the form of smart contracts.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: a. Understand the fundamental concepts in blockchain and its applications such as cryptocurrency and consensus algorithms, and be able to read and argue about blockchain issues in a professional setting. b. Appreciate the role and use of blockchain in organizations and institutions, the typical benefits to obtain and common challenges to overcome. c. Know the core concepts, methods, techniques, and tools for the development of blockchain solutions for various business contexts such as finance, healthcare, and manufacturing. d. Understand key existing blockchain platforms. e. Critically evaluate current trends in blockchain technology and their manifestation in the business of various industrial sectors.
Subject Synopsis/ Indicative Syllabus	1. Blockchain Overview and Use Cases 2. Consensus Mechanisms & Smart Contract Processing 3. Blockchain and Fintech 4. Blockchain in Healthcare and Other Fields 5. Blockchain Application Design and Deployment 6. Blockchain as a Service 7. Blockchain Architecture and Platforms 8. Blockchain Best Practices 9. Future Trends of Blockchain
Teaching/Learning Methodology	This course is project-based. Students will be able to work as in groups to design high-level prototypes of blockchain applications by using a blockchain platform such as Ethereum. Students will also conduct their own research into the fast-evolving sector of business applications of blockchain in various fields.

Assessment Methods in Alignment with Intended Learning Outcomes	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)					
			a	b	c	d	e	
	Continuous Assessment*	**100%**						
	1. Attendance	10%	✓	✓	✓	✓	✓	
	2. Assignments	20%	✓	✓	✓	✓	✓	
	3. Group Project	30%	✓	✓	✓	✓	✓	
	4. Essay Assignment	40%	✓	✓	✓	✓	✓	
	Total	100 %						

Weighting of assessment methods/tasks in continuous assessment may be different, subject to each subject lecturer.

To pass this subject, students are required to obtain Grade D or above in the overall subject grade.

Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:

Individual assignments and a group project will provide an all-round assessment of students' learning outcomes.

Student Study Effort Expected	Class contact:	
	▪ Lectures and Tutorials	39 Hrs.
	▪ Group Project	39 Hrs.
	Other student study effort:	
	▪ Individual Assignments	20 Hrs.
	▪ Preparation for Essay Assignment	22 Hrs.
	Total student study effort	120 Hrs.

Reading List and References	Lecture slides, tutorial materials and other readings will be distributed throughout the semester.
	Textbook: *Mastering Blockchain: A deep dive into distributed ledgers, consensus protocols, smart contracts, DApps, cryptocurrencies, Ethereum, and more*, 3rd Edition, by Imran Bashir, Packt Publishing Ltd.
	Reference Materials:
	• *Course reading materials will be augmented by articles from journals and by whitepapers and other materials.*

April 2022