

Subject Code	MM5426
Subject Title	Business Applications of Blockchain
Credit Value	3
Level	5
Pre-requisite/ Co-requisite/ Exclusion	None
Objectives	<p>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 in blockchain projects. This course will <i>not</i> require students to code lengthy programs except for short business logics in the form of smart contracts.</p> <p>This subject contributes to the achievement of the MSc BA Programme Outcome 2 (Demonstrate the ability to think critically and creatively within the domain of business analytics and be proficient in analytics tools, such as data mining techniques as provided in SAS and IBM SPSS modeler).</p>
Intended Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none"> 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, and the typical benefits to obtain and common challenges to overcome. c. Know the core concepts, methods, techniques, and tools for 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 business of various industrial sectors.
Subject Synopsis/ Indicative Syllabus	<ol style="list-style-type: none"> 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	<table border="1" data-bbox="480 360 1431 902"> <thead> <tr> <th data-bbox="480 360 783 562" rowspan="2">Specific assessment methods/tasks</th> <th data-bbox="783 360 943 562" rowspan="2">% weighting</th> <th colspan="6" data-bbox="943 360 1431 495">Intended subject learning outcomes to be assessed (Please tick as appropriate)</th> </tr> <tr> <th data-bbox="943 495 1023 562">a</th> <th data-bbox="1023 495 1102 562">b</th> <th data-bbox="1102 495 1182 562">c</th> <th data-bbox="1182 495 1262 562">d</th> <th data-bbox="1262 495 1342 562">e</th> <th data-bbox="1342 495 1431 562"></th> </tr> </thead> <tbody> <tr> <td data-bbox="480 562 783 629">1. Attendance</td> <td data-bbox="783 562 943 629">10%</td> <td data-bbox="943 562 1023 629">✓</td> <td data-bbox="1023 562 1102 629">✓</td> <td data-bbox="1102 562 1182 629">✓</td> <td data-bbox="1182 562 1262 629">✓</td> <td data-bbox="1262 562 1342 629">✓</td> <td data-bbox="1342 562 1431 629"></td> </tr> <tr> <td data-bbox="480 629 783 696">2. Assignments</td> <td data-bbox="783 629 943 696">20%</td> <td data-bbox="943 629 1023 696">✓</td> <td data-bbox="1023 629 1102 696">✓</td> <td data-bbox="1102 629 1182 696">✓</td> <td data-bbox="1182 629 1262 696">✓</td> <td data-bbox="1262 629 1342 696">✓</td> <td data-bbox="1342 629 1431 696"></td> </tr> <tr> <td data-bbox="480 696 783 763">3. Group Project</td> <td data-bbox="783 696 943 763">30%</td> <td data-bbox="943 696 1023 763">✓</td> <td data-bbox="1023 696 1102 763">✓</td> <td data-bbox="1102 696 1182 763">✓</td> <td data-bbox="1182 696 1262 763">✓</td> <td data-bbox="1262 696 1342 763">✓</td> <td data-bbox="1342 696 1431 763"></td> </tr> <tr> <td data-bbox="480 763 783 831">4. Final Exam</td> <td data-bbox="783 763 943 831">40%</td> <td data-bbox="943 763 1023 831">✓</td> <td data-bbox="1023 763 1102 831">✓</td> <td data-bbox="1102 763 1182 831">✓</td> <td data-bbox="1182 763 1262 831">✓</td> <td data-bbox="1262 763 1342 831">✓</td> <td data-bbox="1342 763 1431 831"></td> </tr> <tr> <td data-bbox="480 831 783 902">Total</td> <td data-bbox="783 831 943 902">100 %</td> <td colspan="6" data-bbox="943 831 1431 902"></td> </tr> </tbody> </table> <p data-bbox="480 920 1431 987">Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <p data-bbox="480 1010 1431 1077">Individual assignments, a group project, and the final exam will provide an all-round assessment of students' learning outcomes.</p>								Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)						a	b	c	d	e		1. Attendance	10%	✓	✓	✓	✓	✓		2. Assignments	20%	✓	✓	✓	✓	✓		3. Group Project	30%	✓	✓	✓	✓	✓		4. Final Exam	40%	✓	✓	✓	✓	✓		Total	100 %								
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Reading List and References	<p data-bbox="480 1585 1431 1653">Lecture slides, tutorial materials and other readings will be distributed throughout the semester.</p> <p data-bbox="480 1686 1431 1809">Textbook: <i>Mastering Blockchain: A deep dive into distributed ledgers, consensus protocols, smart contracts, DApps, cryptocurrencies, Ethereum, and more</i>, 3rd Edition, by Imran Bashir, Packt Publishing Ltd.</p> <p data-bbox="480 1843 1431 1877">Reference Materials:</p> <ul data-bbox="480 1888 1431 1955" style="list-style-type: none"> • <i>Course reading materials will be augmented by articles from journals and by whitepapers and other materials.</i> 																																																															