Subject Code	LGT5431 / MM5431
Subject Title	Digital Transformation and Business Analytics
Credit Value	3
Level	5
Pre-requisite/ Co-requisite/ Exclusion	**Exclusion:** Digital Transformation and Business Analytics (LGT5431 / MM5431) (The two subject codes are exclusions of each other.)
Objectives	This subject contributes to the achievement of the MBA Outcomes by enabling students to understand theories and frameworks, which help to formulate the digital transformation and business analytics strategy of a firm, to analyze business case and solve multi-faceted business problems in big data in a critical manner and to demonstrate an understanding on the applications and implications of the latest technologies to practices and decisions in business issues (MBA Outcome 1). Ability to listen, understand, and assess others' ideas and opinions and to deliver and communicate reasoned arguments clearly and effectively, both in speech and in writing, is also addressed (MBA Outcome 4). Through equipping students with a solid understanding and critical thinking mindset of the principles, methods and technologies for digital transformation and business analytics, students can apply business intelligence analytical tools to effectively address various issues faced by organizations, as well as be aware of the possible challenges and ethical issues related to business analytics.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: a. formulate real-world business and operational problems into business analytics problems; b. implement efficient digital transformation and business analytics strategies to solve business and operational problems; c. compare and contrast different business analytics techniques; d. identify, evaluate, and capture digital transformation and business analytic opportunities that create values; e. discuss the current trend of digital transformation and business analytics and be aware of the ethical issues related to business analytics.
Subject Synopsis/ Indicative Syllabus	**Foundations of Digital Transformation and Business Analytics** Introduction to digital transformation and business analytics **Descriptive Analytics and Modeling** Statistical measures, description, and estimation Introduction to modeling and business analytics methods such as regression analysis, logistics analysis and other modeling tools **Business Case Understanding and Application** Discussion on business analytics cases Brief introduction to programming/tools used for business analytics
Teaching/Learning Methodology	There will be a mix of lectures, discussions, case studies, and laboratories. Mini-group discussion and projects will be carried out on some business cases in depth and reports are produced at the end of the term. Hands-on experiences of using business analytics tools, and programming will also be provided to the students to enhance their understanding on the applications of the latest digital transformation and business analytical technologies.

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 and class discussions	20%	✓	✓	✓	✓	✓	
	2. Quiz	10%	✓	✓	✓	✓	✓	
	3. Individual Homework assignment and case report	30%	✓	✓	✓	✓	✓	
	4. Final group project	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:

Students will develop critical thinking and decision-making skills (Outcome 1) by preparing for the term quiz (item 2), conducting data analysis when completing the individual homework assignment (item 3), and analyzing the complex issues involved in data analytics and digital transformation in the case assignment and final project (items 3 and 4). Meanwhile, students will develop effective communication skills (Outcome 4) through class discussions (item 1), and in preparing the individual homework assignment and case report (item 3). In addition, the final group report (item 4) offers students the opportunity to communicate effectively in groups.

To reflect the significant technology content in this subject, 10% (or more) of the overall weighting of this subject is based on individual assessment concerning technology-related knowledge.

Student Study Effort Expected	Class contact:	
	▪ Lectures	39 Hrs.
	Other student study effort:	
	▪ Preparation for lectures	39 Hrs.
	▪ Preparation for individual assignment / group project	52 Hrs.
	Total student study effort	130 Hrs.

Reading List and References	Recommended Textbooks Provost, F., & Fawcett, T. (2013). *Data Science for Business: What you need to know about data mining and data-analytic thinking*. O'Reilly Media, Inc. Evans, J. (2021). *Business Analytics: Methods, Models, and Decisions* (3rd ed.). Boston: Pearson. Reference Books Albright, S.C. and W.L. Winston (2019). Business Analytics: Data Analysis & Decision Making, 7th Edition, Cengage Learning. Camm, J.D. (2016). Essentials of Business Analytics (2nd ed.). Boston, MA: Cengage Learning. Linoff, G.S. and Berry, M.J.A. (2011). Data Mining Techniques: For Marketing, Sales, and Customer Relationship Management (3rd ed.). Indianapolis, Ind: Wiley Pub. Ragsdale, C. (2021). Spreadsheet Modeling & Decision Analysis: A Practical Introduction to Business Analytics (9th ed.). Stamford, CT: Cengage Learning. Shmueli, G., Bruce, P. C., Gedeck, P. G., & Patel, N. P. (2019). *Data Mining for Business Analytics: Concepts, Techniques and Applications in Python*. John Wiley & Sons. James, G., Witten, D., Hastie, T., & Tibshirani, R. (2013). *An Introduction to Statistical Learning: with Applications in R*. New York: springer. *Journals* (Selected papers are recommended for students' readings where appropriate) MIS Quarterly Marketing Science Management Science Production and Operations Management Information Systems Research Journal of Machine Learning Research

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