FORM B: COURSE PLAN (To be uploaded in Google Classroom for students)

Faculty/Centre:	FOCS	**Course Coordinator:**	Chong Voon Niang
Campus:	KL	**Other Tutors and Lecturers:**	Ms Tan Li Yin
Course Code & Course Title:	BAMS1623 Discrete Mathematics	**Moderator(s):**	Dr Tan Yan Bin
Programme(s):	RDS1(S3), REI3(S1), RSD1(S1),RSD2(S3) RSF1(S3)	**Examiner(s):**	same as course coordinator
Credit Hours:	3	**Contact hrs/sem:**	L 28 T 21 P 0 O/B 0
Session:	202005	**Course Weighting:**	CW 50 % PR 0 % EX 50 %
Academic Year:	2020/21	**Passing Threshold**	CW 50 % PR X % EX 40 %

Week		Topics	Reference Materials (Books/Titles, Journals, Web articles, etc)	Remarks
1	Lecture	Chapter 1 Fundamental • Sets and Subsets • Operations on Sets • Sequences • Induction and Recursion	• B. Kolman, R.C. Busby & S. Ross, Discrete Mathematical Structures, 6th edition, Prentice Hall (2018) • Susanna S. Epp., Discrete Mathematics with Applications, Brooks/Cole, 5th edition (2020)	
	Tutorial	Introduction	• B. Kolman, R.C. Busby & S. Ross, Discrete Mathematical Structures, 6th edition, Prentice Hall (2018) • Susanna S. Epp., Discrete Mathematics with Applications, Brooks/Cole, 5th edition (2020)	
	Practical	-	-	

Week		Topics	Reference Materials (Books/Titles, Journals, Web articles, etc)	Remarks
2	Lecture	Chapter 1 Fundamental • Division in Integers • Boolean Matrix Operations Chapter 2 Logic • Compound Statements • Conditional and Biconditional Statement	• B. Kolman, R.C. Busby & S. Ross, Discrete Mathematical Structures, 6th edition, Prentice Hall (2018) • Susanna S. Epp., Discrete Mathematics with Applications, Brooks/Cole, 5th edition (2020)	
	Tutorial	Tutorial 1: Chapter 1 Fundamental	• B. Kolman, R.C. Busby & S. Ross, Discrete Mathematical Structures, 6th edition, Prentice Hall (2018) • Susanna S. Epp., Discrete Mathematics with Applications, Brooks/Cole, 5th edition (2020)	
	Practical	-	-	
3	Lecture	Chapter 2 Logic • Tautology, Contradiction, and Contingency • Logical Equivalences	• B. Kolman, R.C. Busby & S. Ross, Discrete Mathematical Structures, 6th edition, Prentice Hall (2018) • Susanna S. Epp., Discrete Mathematics with Applications, Brooks/Cole, 5th edition (2020)	
	Tutorial	Tutorial 2 : Chapter 1 Fundamental	• B. Kolman, R.C. Busby & S. Ross, Discrete Mathematical Structures, 6th edition, Prentice Hall (2018) • Susanna S. Epp., Discrete Mathematics with Applications, Brooks/Cole, 5th edition (2020)	

Week		Topics	Reference Materials (Books/Titles, Journals, Web articles, etc)	Remarks
	Practical	-	-	
4	Lecture	Chapter 2 Logic • Logic Diagram • Normal Forms • Predicates and Quantifiers	• B. Kolman, R.C. Busby & S. Ross, Discrete Mathematical Structures, 6th edition, Prentice Hall (2018) • Susanna S. Epp., Discrete Mathematics with Applications, Brooks/Cole, 5th edition (2020)	
	Tutorial	Tutorial 3: Chapter 2 Logic	• B. Kolman, R.C. Busby & S. Ross, Discrete Mathematical Structures, 6th edition, Prentice Hall (2018) • Susanna S. Epp., Discrete Mathematics with Applications, Brooks/Cole, 5th edition (2020)	
	Practical	-	-	
	Lecture	Chapter 3 Relations and Digraphs • Product Sets and Partitions • Relations	• B. Kolman, R.C. Busby & S. Ross, Discrete Mathematical Structures, 6th edition, Prentice Hall (2018) • Susanna S. Epp., Discrete Mathematics with Applications, Brooks/Cole, 5th edition (2020)	

Week		Topics	Reference Materials (Books/Titles, Journals, Web articles, etc)	Remarks
5	Tutorial	Tutorial 4: Chapter 2 Logic	• B. Kolman, R.C. Busby & S. Ross, Discrete Mathematical Structures, 6th edition, Prentice Hall (2018) • Susanna S. Epp., Discrete Mathematics with Applications, Brooks/Cole, 5th edition (2020)	
	Practical	-	-	
6	Lecture	Chapter 3 Relations and Digraphs • Path in Relations and Digraphs • Properties of Relations	• B. Kolman, R.C. Busby & S. Ross, Discrete Mathematical Structures, 6th edition, Prentice Hall (2018) • Susanna S. Epp., Discrete Mathematics with Applications, Brooks/Cole, 5th edition (2020)	
	Tutorial	Tutorial 4: Chapter 2 Logic	• B. Kolman, R.C. Busby & S. Ross, Discrete Mathematical Structures, 6th edition, Prentice Hall (2018) • Susanna S. Epp., Discrete Mathematics with Applications, Brooks/Cole, 5th edition (2020)	
	Practical	-	-	

Week		Topics	Reference Materials (Books/Titles, Journals, Web articles, etc)	Remarks
7	Lecture	Chapter 3 Relations and Digraphs • Equivalence Relations • Computer Representation of Relations and Digraphs	• B. Kolman, R.C. Busby & S. Ross, Discrete Mathematical Structures, 6th edition, Prentice Hall (2018) • Susanna S. Epp., Discrete Mathematics with Applications, Brooks/Cole, 5th edition (2020)	
	Tutorial	Tutorial 5: Chapter 3 Relations and Digraphs	• B. Kolman, R.C. Busby & S. Ross, Discrete Mathematical Structures, 6th edition, Prentice Hall (2018) • Susanna S. Epp., Discrete Mathematics with Applications, Brooks/Cole, 5th edition (2020)	
	Practical	-	-	
	Lecture	Chapter 3 Relations and Digraphs • Operation on Relations Test	• B. Kolman, R.C. Busby & S. Ross, Discrete Mathematical Structures, 6th edition, Prentice Hall (2018) • Susanna S. Epp., Discrete Mathematics with Applications, Brooks/Cole, 5th edition (2020)	

Week		Topics	Reference Materials (Books/Titles, Journals, Web articles, etc)	Remarks
8	Tutorial	Tutorial 6: Chapter 3 Relations and Digraphs	• B. Kolman, R.C. Busby & S. Ross, Discrete Mathematical Structures, 6th edition, Prentice Hall (2018) • Susanna S. Epp., Discrete Mathematics with Applications, Brooks/Cole, 5th edition (2020)	
	Practical	-	-	
9	Lecture	Chapter 3 Relations and Digraphs • Reflexive Closure and Symmetric Closure • Transitive Closure and Warshall's Algorithm	• B. Kolman, R.C. Busby & S. Ross, Discrete Mathematical Structures, 6th edition, Prentice Hall (2018) • Susanna S. Epp., Discrete Mathematics with Applications, Brooks/Cole, 5th edition (2020)	
	Tutorial	Tutorial 7: Chapter 3 Relations and Digraphs	• B. Kolman, R.C. Busby & S. Ross, Discrete Mathematical Structures, 6th edition, Prentice Hall (2018) • Susanna S. Epp., Discrete Mathematics with Applications, Brooks/Cole, 5th edition (2020)	
	Practical	-	-	

Week		Topics	Reference Materials (Books/Titles, Journals, Web articles, etc)	Remarks
10	Lecture	Chapter 4 Functions • Properties of Functions • Functions for Computer Science • Permutations	• B. Kolman, R.C. Busby & S. Ross, Discrete Mathematical Structures, 6th edition, Prentice Hall (2018)	
	Tutorial	Tutorial 8: Chapter 3 Relations and Digraphs	• B. Kolman, R.C. Busby & S. Ross, Discrete Mathematical Structures, 6th edition, Prentice Hall (2018) • Susanna S. Epp., Discrete Mathematics with Applications, Brooks/Cole, 5th edition (2020)	
	Practical	-	-	

Week		Topics	Reference Materials (Books/Titles, Journals, Web articles, etc)	Remarks
11	Lecture	Chapter 5 Order Relations and Structures • Partially Ordered Sets • Hasse Diagrams	• B. Kolman, R.C. Busby & S. Ross, Discrete Mathematical Structures, 6th edition, Prentice Hall (2018) • Susanna S. Epp., Discrete Mathematics with Applications, Brooks/Cole, 5th edition (2020)	
	Tutorial	Tutorial 9: Chapter 4 Functions	• B. Kolman, R.C. Busby & S. Ross, Discrete Mathematical Structures, 6th edition, Prentice Hall (2018) • Susanna S. Epp., Discrete Mathematics with Applications, Brooks/Cole, 5th edition (2020)	
	Practical	-	-	
	Lecture	Chapter 5 Order Relations and Structures • Extremal Elements of Partially Ordered sets	• B. Kolman, R.C. Busby & S. Ross, Discrete Mathematical Structures, 6th edition, Prentice Hall (2018) • Susanna S. Epp., Discrete Mathematics with Applications, Brooks/Cole, 5th edition (2020)	

Week		Topics	Reference Materials (Books/Titles, Journals, Web articles, etc)	Remarks
12	Tutorial	Tutorial 9: Chapter 4 Functions Tutorial 10: Chapter 5 Order Relations and Structures	• B. Kolman, R.C. Busby & S. Ross, Discrete Mathematical Structures, 6th edition, Prentice Hall (2018) • Susanna S. Epp., Discrete Mathematics with Applications, Brooks/Cole, 5th edition (2020)	
	Practical	-	-	
13	Lecture	Chapter 6 Boolean Algebra • Operations on Boolean Algebra • Boolean Functions • Simplification of Boolean Expressions using Karnaugh Map	• B. Kolman, R.C. Busby & S. Ross, Discrete Mathematical Structures, 6th edition, Prentice Hall (2018) • Susanna S. Epp., Discrete Mathematics with Applications, Brooks/Cole, 5th edition (2020)	
	Tutorial	Tutorial 10: Chapter 5 Order Relations and Structures	• B. Kolman, R.C. Busby & S. Ross, Discrete Mathematical Structures, 6th edition, Prentice Hall (2018) • Susanna S. Epp., Discrete Mathematics with Applications, Brooks/Cole, 5th edition (2020)	
	Practical	-	-	

Week		Topics	Reference Materials (Books/Titles, Journals, Web articles, etc)	Remarks
14	Lecture	Chapter 6 Boolean Algebra • Use of Karnaugh Map up to 4 variables Revision	• B. Kolman, R.C. Busby & S. Ross, Discrete Mathematical Structures, 6th edition, Prentice Hall (2018) • Susanna S. Epp., Discrete Mathematics with Applications, Brooks/Cole, 5th edition (2020)	
	Tutorial	Tutorial 11: Chapter 6 Boolean Algebra	• B. Kolman, R.C. Busby & S. Ross, Discrete Mathematical Structures, 6th edition, Prentice Hall (2018) • Susanna S. Epp., Discrete Mathematics with Applications, Brooks/Cole, 5th edition (2020)	
	Practical	-	-	

** Any changes made in the course plan must be recorded. For replacement of classes, please refer to the Replacement record kept in Central filing.*

Continuous Assessment Type	Weighting	Week of Submisison
Test Q1-Q4	31.5	8
Test Q5-Q6	18.5	8
Assignment Q1-Q3	37.5	11
Assignment Q4	12.5	11

Prepared by Course Coordinator:

(Signature)

Date: 3.6.2020

Approved by Course Leader/Programme Leader/Associate Dean / Head of Division:

(Signature)

Name: Lee Shu Gyan

Date: 3.6.2020

Notes:

1. Upon the approval by the Course Leader/ Programme Leader/ Associate Dean,/Head of Division Form B must be uploaded onto respective online classroom and distributed to

2. Lecturers are advised to take into account the public holidays when planning the course plan.

3. Lecturers are advised to take into account the previous recommendation stated in Form J