

COURSE OUTLINE

Department & Faculty: Dept. of Mechanical Engineering & Management, Centre for Diploma Studies, SPACE, UTM	Page :
Course Code : Business Mathematics (DDWG 1113) Total Contact Hours : 42 hours	Semester: Academic Session:

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Synopsis : This course is design to expose students about the basic concepts, practices and the application of mathematics in their daily activity and businesses. Students need to understand the subject so that they are able to apply the business mathematics concepts in the following subjects such as finances and accounting. At the end of this course, students should gain and able to apply the interest concepts in business mathematics activities. Furthermore, students should be able to differentiate and classifies the trade and cash discount, mark up and markdown, instalment payment, and depreciation.

LEARNING OUTCOMES

By the end of the course, students should be able to:

No .	Course Learning Outcome	Programme Learning Outcome(s) Addressed	Taxanomy and Soft skills Levels	Assessment Methods
1.	Understand the basic concepts and theories in business mathematics. Calculate basic business mathematics concepts and theories in others subjects related such as in finance and accounting.	PLO1	C3	Quiz, Test, Final Exam
2.	Evaluate why trade & cash discount, markup & markdown, depreciation happens in the business activities	PLO1	C3	Quiz, Test, Final Exam
3.	Differentiate the techniques that suitable to use for some circumstances that related with simple interest, compound interest and annuity.	PLO3	P3,CTPS1	Quiz, Test, Final Exam
4.	Work as a group to display, adopt and apply the business mathematics basic knowledge in their daily activities.	PLO5 PLO7	A2, P3 TS1, KK1	Assignment & Presentation

Prepared by: Name: Mohd. Shafie bin Abd. Rashid Signature: Date:	Certified by: (Course Panel Head) Name: Hairuzzafwan bin Bukhari Signature: Date:
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STUDENT LEARNING TIME

Teaching and Learning Activities	Student Learning Time (hours)
A. Face-to-face Learning <ol style="list-style-type: none"> 1. Lecture 2. Tutorial 3. Student Centered Learning 	32 14 10
B. Self Directed Learning <ol style="list-style-type: none"> 1. Non face-to-face eg assignments 2. Revision 3. Assessment Preparation 	40 10.5 8
C. Formal Assessment <ol style="list-style-type: none"> 1. Continuous Assessment 2. Final Exam 	3 2.5
Total	120

TEACHING METHODOLOGY

Lecture and Discussion, Co-operative Learning, Independent Study, Individual Assignment, Group Assignments

WEEKLY SCHEDULE

Week 1 : 1.0.ARITHMETIC AND GEOMATRIC SEQUENCE

- Arithmetic sequence
- Nth tern and sum of first terms of an arithmetic sequence.
- Geometric sequence.
- Nth term and sum of first terms of a geometric sequence.

Week 2 : 1.0 ARITHMETIC AND GEOMATRIC SEQUENCE

- Arithmetic sequence
- Nth tern and sum of first terms of an arithmetic sequence.

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- Geometric sequence.
- Nth term and sum of first terms of a geometric sequence.

Weeks 3 : 2.0 SIMPLE INTEREST

Quiz 1

- Interest
- Simple interest formula
- Simple amount formula
- Four basic concepts
- Present value
- Equation of value

Weeks 4 : 3.0 COMPOUND INTEREST

- Time value of money
- Compound interest
- Some important terms
- Compound interest formula
- Effective, nominal and equivalent rates.
- Relationship between effective and nominal rates.
- Relationship between two nominal rates.
- Present value
- Equation of value.
- Continuous compounding.

Weeks 5 : 3.0 COMPOUND INTEREST

- Time value of money
- Compound interest
- Some important terms
- Compound interest formula
- Effective, nominal and equivalent rates.
- Relationship between effective and nominal rates.
- Relationship between two nominal rates.
- Present value
- Equation of value.
- Continuous compounding.

4.0 ANNUITY

Weeks 6

Quiz 2

- Future value of ordinary annuity certain
- Present value of ordinary annuity certain
- Solving R, n and i.
- Amortization
- Amortization schedule
- Sinking fund
- Annuity with continuous

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Weeks 7

4.0 ANNUITY

- Future value of ordinary annuity certain
- Present value of ordinary annuity certain
- Solving R, n and i.
- Amortization
- Amortization schedule
- Sinking fund
- Annuity with continuous

Weeks 8

MID TERM BREAK

Weeks 9

5.0 TRADE AND CASH DISCOUNTS

- Trade discount
- Formula for finding the net price.
- Chain discount
- Formula for finding the net price for a chain discount.
- Single discount equivalent
- Cash discount
- Borrowing to take advantage of the cash discount.
- Partial payment of invoice.
- Trade and cash discounts.

Week 10

: 6.0 MARKUP AND MARKDOWN.

Test 1

Quiz 3

- Markup
- Markup percent
- Conversion of markup percent
- Markdown
- Profit and loss.

Weeks 11

7.0 PROMISSIORY NOTE

- Promissory note
- Bank discount
- Simple interest rate equivalent to bank discount rate
- Discounting promissory notes.

Weeks 12

: 8.0 INSTALLMENT PURCHASES

- Instalment purchases

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- Quiz 4**
- Interest charge based on reducing balance.
 - Interest change based on original balance.
 - Unequal instalment payments and repayments schedules.
 - Rule of 78 in Hire Purchase Act (1976)

Weeks 13 : 8.0 INSTALLMENT PURCHASES

- Instalment purchases
- Interest charge based on reducing balance.
- Interest change based on original balance.
- Unequal instalment payments and repayments schedules.
- Rule of 78 in Hire Purchase Act (1976)

Weeks 14 : 9.0 DEPRECIATION

- Depreciation
- Straight line method
- Declining balance method
- Sum of years digits method.

Weeks 15 : 9.0 DEPRECIATION

- Depreciation

Test 2

- Straight line method
- Declining balance method

Quiz 5

- Sum of years digits method.

TEXT BOOK

:

Lau Too Kya and Phang Yook Ngor Wee Kok Kiang (2015). 'Business Mathematics for UiTM 5th Edition'. Kuala Lumpur. Penerbit Fajar Bakti Sdn Bhd.

(ISBN:9676594253)

(PANGGILAN: HF5691L38 2001)

REFERENCE : S

Cleaves, Cherly & Hobbs, Margie (2002). 'Business Math: 6th Edition'. New York. Prentice Hall

Zulkarnain Zakaria (2000). 'Matematik Perniagaan'. Skudai. Penerbit UTM.

Miller, Salzman and Clendenen (2003). 'Business Mathematics: 9th Edition'. USA. Addison Wesley

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GRADING

No.	Assessment	Number	% Each assessment percentage	Overall %	Dates
1	Assignments	2	5	10	
2	Quizzes	5	2	10	
5	Test	2	10	20	
	Assignments & Quizzes	3	10	30	
6	Final Exam	1	50	50	
	Overall Total			100	