



FAKULTI PENGURUSAN DAN INDUSTRI HALAL

PROGRAM	Diploma in Halal Product Manufacturing
COURSE NAME	Mathematics For Manufacturing
COURSE CODE	DHM 2012
CREDIT HOUR	2
SYNOPSIS	This subject provides an introduction to common applications of mathematics within manufacturing. A study of arithmetic, algebraic, geometry, trigonometry, metric system applied to manufacturing circumstances as well as statistics are studied in this subject
COURSE STRUCTURE	
CHAPTER	TOPICS
1	Basic Mathematic Skills 1.1 Addition and Subtraction 1.2 Multiplication 1.3 Division 1.4 Exponents
2	Decimals, Fractions, Percent's and Ratios 2.1 Introduction to decimals 2.2 Working with tolerances 2.3 Decimal and fraction conversions 2.4 Mixed fractions 2.5 Reducing fractions 2.6 Fractions and time 2.7 Fraction operations and ratios 2.8 Multiplying and dividing fractions 2.9 Working with mixed fractions 2.10 Application of fractions in calculating tolerances 2.11 Decimals and percentages 2.12 Fractions and percentages
3	Basic Algebra 3.1 Introduction to Algebra 3.1.1 Evaluate algebraic expressions 3.1.2 Simplify algebraic expressions 3.1.3 Signed numbers 3.2 Solving basic algebraic equations 3.3 Solving for a variable



	3.4 Ratios, proportion and percent practice 3.5 The slope of a line
4	The Metric System 4.1 Introduction to metric system 4.2 Metric prefixes 4.3 Converting between imperial and metric unit 4.4 Adding and subtracting numbers with units 4.5 Working with measurement tools
5	Basic Geometry 5.1 Introduction to geometry 5.2 Geometric shapes and formulas
6	Basic Trigonometry 6.1 Introduction to trigonometry 6.2 Pythagorean theorem 6.3 Trigonometric functions
7	Statistics 7.1. Introduction to statistics 7.2. Mean, median and standard deviation 7.3. Average and range 7.4. X-bar and R charts
References:	<ol style="list-style-type: none"> 1. Zinul Huda, 2021, Manufacturing: Mathematical Models, Problems and Solution, 1st edition, CRC Press, ISBN 9780367781279 2. Ray Pendargast, 2019. Math for Manufacturing: student workbook, Chicago 3. Mark DeLonge, 2016, Math for Manufacturing, 2016, Openstax CNX