



FAKULTI PENGURUSAN DAN INDUSTRI HALAL

PROGRAM	Diploma in Halal Product Manufacturing
COURSE NAME	Introduction To Manufacturing
COURSE CODE	DHM 2003
CREDIT HOUR	3
SYNOPSIS	This subject is aim to provide the students with knowledges of types and materials which used in mass production, and also their characteristics. From there, student will able to understand the manufacturing process which involving different process for types of products.
COURSE STRUCTURE	
CHAPTER	TOPICS
1	Introduction and Overview of Manufacturing 1.1 What is Manufacturing 1.1.1 Definition 1.1.2 Manufacturing industries and productTypes of computer and purpose 1.2 Materials in Manufacturing 1.2.1 Metals 1.2.2 Ceramics 1.2.3 Polymers 1.2.4 Composites 1.2.5 Bone, skin, hair of animal 1.2.6 Pigs and their products 1.3 Manufacturing Process 1.3.1 Processing operations 1.3.2 Assembly operations
2	Mechanical Properties of Materials 2.1 Stress-strain Relation 2.1.1 Tensile properties 2.1.2 Compression properties 2.1.3 Shear properties 2.2 Hardness 2.2.1 Hardness test 2.2.2 Hardness of various materials 2.3 Fluid properties 2.3.1 Viscosity 2.3.2 Viscosity in manufacturing



<p>3</p>	<p>Physical Properties of Materials</p> <p>3.1 Volumetric and Melting Properties</p> <p>3.1.1 Density</p> <p>3.1.2 Melting characteristics</p> <p>3.2 Thermal Properties</p> <p>3.2.1 Specific heat and thermal conductivity</p> <p>3.2.2 Thermal properties</p> <p>3.3 Mass Diffusion</p>
<p>4</p>	<p>Dimensions, Surfaces and Their measurement</p> <p>4.1 Dimensions, tolerances and related attributes</p> <p>4.1.1 Dimensions and tolerances</p> <p>4.1.2 Other geometric attributes</p> <p>4.2 Conventional measuring instruments and gages</p> <p>4.2.1 Precision gage blocks</p> <p>4.2.2 Measuring instruments for linear dimensions</p> <p>4.2.3 Comparative instruments</p> <p>4.2.4 Fixed gages</p> <p>4.2.5 Angular measurement</p> <p>4.3 Surfaces</p> <p>4.3.1 Characteristics of surfaces</p> <p>4.3.2 Surface texture</p>
<p>References:</p>	<ol style="list-style-type: none"> 1. Mohd Helmi Ali, Kim Hua Tan, Md Daud Ismail, 2017, A Supply chain integrity framework for Halal Food, British Food Journal, Vol. 119 Issue: 1, pp.20-38 2. Rao, M., Rizvi, S. S., Datta, A. K., & Ahmed, J. (2014). Engineering properties of food (Fourth ed.). Boca Raton: Taylor & Francis Group, LLC. 3. The Manufacturing Guides: Sustainable Materials, Process and Production, Rob Thompson and Martin Thompson (2013) 4. Introduction to Manufacturing Process, Mikell P. Groover (2012)