



UNIVERSITI TEKNOLOGI MARA

PMA512: PRINT MEDIA MATERIALS

Course Name (English)	PRINT MEDIA MATERIALS APPROVED
Course Code	PMA512
MQF Credit	2
Course Description	This course is design to enable the student to understand the various printing substrate for different printing products in the printing's industries. The students will also be exposing to the theory of paper manufacturing processes, types of paper & board and their usage. This course will help students to interact and manage the printed sheet during printing process. The students will be exposed how to make the proper material handling.
Transferable Skills	Knowledge on paper and ink
Teaching Methodologies	Lectures, Blended Learning, Lab Work, Field Trip
CLO	CLO1 Determine how paper pulp is prepared and the process of papermaking. CLO2 Organise the appropriate paper for various printing jobs. CLO3 Explain the ingredients in printing inks and the factors that influence the quality of printing jobs
Pre-Requisite Courses	No course recommendations
Topics	
1. History of papermaking 1.1) Overview of the paper and board Industry 1.2) Paper products	
2. Source of raw material for paper manufacturing 2.1) Wood Plants 2.2) Non wood plants 2.3) Recycle fibre	
3. Pulping process 3.1) Chemical Pulping 3.2) Mechanical pulping 3.3) Semi Chemical pulping 3.4) Bleaching and refining process	
4. Other ingredients in paper 4.1) Fillers 4.2) Sizing 4.3) Dyes and pigments	
5. Papermaking machine 5.1) Fourdrinier Papermaking machine 5.2) Forming the paper (Wet End) 5.3) Dandy Roll 5.4) Press Rolls 5.5) Finishing (Dry End)	
6. Paper properties 6.1) Grain Direction 6.2) Opacity 6.3) Brightness 6.4) Weight 6.5) Finish 6.6) Flatness	

7. Paper requirement

- 7.1) Sheet - fed paper requirement
- 7.2) Web - fed paper requirement

8. Lithographic inks

- 8.1) Ingredients of ink
- 8.2) Manufacturing of printing ink
- 8.3) Properties of printing inks
- 8.4) Formulation of inks
- 8.5) Drying mechanism of ink

9. Miscellaneous Print Materials

- 9.1) Plastic
- 9.2) Fabric
- 9.3) Metal

Assessment Breakdown		%		
Continuous Assessment		100.00%		

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Assignment	Type of paper and ink	60%	CLO3
	Test	Test 1	20%	CLO1
	Test	Test 2	20%	CLO2

Reading List	Recommended Text
	<ul style="list-style-type: none"> • edited by J. C. Roberts 1996, <i>Paper chemistry</i>, Blackie Academic & Professional London [ISBN: 0751402362] • <i>The Printing ink manual</i>, London ; Blueprint, 1993. [ISBN: 9780948905810] • Monica Ek, Goran Gellerstedt (Editor), Gunnar Henriksson (Editor), <i>Paper Products Physics and Technology</i>, De Gruyter [ISBN: 3110213451] • Josep Asunci?n 2003, <i>The complete book of papermaking</i>, Lark Books New York [ISBN: 1579904564]
Article/Paper List	This Course does not have any article/paper resources
Other References	This Course does not have any other resources