



UNIVERSITI TEKNOLOGI MARA

WTE162: PHYSICAL AND CHEMICAL PROPERTIES OF WOOD

<b>Course Name (English)</b>	PHYSICAL AND CHEMICAL PROPERTIES OF WOOD <b>APPROVED</b>
<b>Course Code</b>	WTE162
<b>MQF Credit</b>	2
<b>Course Description</b>	This lesson covers the physical and chemical properties of wood. Physical properties refer to density and moisture relations that affect its use. Chemical properties refer to the chemical components that build wood. Physically, wood is strong and stiff but, compared to a material like steel, it's also light and flexible. It has another interesting property too.
<b>Transferable Skills</b>	Lecture
<b>Teaching Methodologies</b>	Lectures
<b>CLO</b>	CLO1 Describe the properties of wood for selected wood species CLO2 Identify the physical and chemical properties for selected wood species CLO3 Determine the principles and concepts properties for selected wood species
<b>Pre-Requisite Courses</b>	No course recommendations
<b>Topics</b>	
<b>1. Introduction to Wood Properties</b> 1.1) n/a	
<b>2. Cell types and orientation</b> 2.1) n/a	
<b>3. Density and specific gravity</b> 3.1) n/a	
<b>4. Wood and Water Relation</b> 4.1) n/a	
<b>5. Wood Permeability</b> 5.1) n/a	
<b>6. Wood chemistry</b> 6.1) n/a	

Assessment Breakdown	%
Continuous Assessment	60.00%
Final Assessment	40.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Assignment	Assignment 1	15%	CLO2
	Assignment	Assignment 2	15%	CLO2
	Test	Test 1	15%	CLO1
	Test	Test 2	15%	CLO1

Reading List	Recommended Text	<ul style="list-style-type: none"> <li>• Harold Ernest Desch 1981, <i>Timber: Its Structure, Properties and Utiliza</i>, Ed., , Timber Press Oregon [ISBN: ]</li> <li>• Sjostrom, Eero 1981, <i>Wood Chemistry, Fundamentals and Applications</i>, Ed., , Academic Press New York [ISBN: ]</li> <li>• Antonio Pizzi 1989, <i>Wood Adhesive Chemistry and Technology, Vol. , Ed., , Marcel Dekker Inc. New York [ISBN: ]</i></li> </ul>
	Reference Book Resources	<ul style="list-style-type: none"> <li>• Suhaimi Muhammed dan Halimahton Hj. Mansor 1994, <i>Kimia Kayu Padu (Terjemahan)</i>, Ed., , Dewan Bahasa dan Pustaka [ISBN: ]</li> <li>• Siau, J.F. 1971, <i>Flow in Wood</i>, Ed., , Syracuse University Press [ISBN: ]</li> <li>• Torgovnikov G. 2012, <i>Dielectric Properties of Wood and Wood-based Materials</i>, Springer Science &amp; Business Media</li> <li>• Shmulsky, R. &amp; Jones P.D. 2011, <i>Forest Products and Wood Sciences</i>, John Wiley &amp; Sons</li> </ul>
Article/Paper List	This Course does not have any article/paper resources	
Other References	This Course does not have any other resources	