



## UNIVERSITI TEKNOLOGI MARA

### MLT544: CLINICAL CHEMISTRY I

<b>Course Name (English)</b>	CLINICAL CHEMISTRY I <b>APPROVED</b>
<b>Course Code</b>	MLT544
<b>MQF Credit</b>	3
<b>Course Description</b>	This course introduces the principles of clinical chemistry with emphasis in the laboratory testing methods pertaining to each of the topic discussed. Diagnostic and laboratory test procedures and interpretations will be detailed for the routinely ordered tests and selected special tests. The clinical significance of these tests is addressed for the commonly ordered tests to serve as a guide and reference for accurate reporting of results.
<b>Transferable Skills</b>	Practical skills, Communication skills, Social skills, and Leadership skills.
<b>Teaching Methodologies</b>	Lectures, Case Study, Practical Classes
<b>CLO</b>	CLO1 Explain analytes and amino acids regulation in pathological and non-pathological samples. CLO2 Display routine analytes and amino acids tests in pathological and non-pathological samples. CLO3 Evaluate the clinical significances of analytes and amino acids.
<b>Pre-Requisite Courses</b>	No course recommendations
<b>Topics</b>	
<b>1. Electrolyte and Water Balance</b> 1.1) N/A	
<b>2. Osmolality</b> 2.1) N/A	
<b>3. Blood Gases and Acid Base Balance</b> 3.1) N/A	
<b>4. Amino Acids and Proteins</b> 4.1) N/A	
<b>5. Aminoacidurias</b> 5.1) N/A	
<b>6. Enzymes</b> 6.1) N/A	
<b>7. Glucose Abnormalities</b> 7.1) N/A	
<b>8. Lipids, Apolipoproteins and Lipoproteins</b> 8.1) N/A	
<b>9. Mineral Metabolism</b> 9.1) N/A	

Assessment Breakdown	%
Continuous Assessment	100.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Assignment	Creative Presentation	20%	CLO3
	Practical	Practical Exam	20%	CLO2
	Test	Test 1	30%	CLO1
	Test	Test 2	30%	CLO1

Reading List	Recommended Text	<ul style="list-style-type: none"> <li>Burtis, C.A., Ashwood, E.R., &amp; Bruns, D.E. 2008, <i>Tietz fundamentals of clinical chemistry</i>, Saunders WB Company St. Louis, Missouri</li> </ul>
	Reference Book Resources	<ul style="list-style-type: none"> <li>Burtis, C.A., Ashwood, E.R., &amp; Bruns, D.E. 2012, <i>Tietz textbook of clinical chemistry and molecular diagnostics</i>, 5 Ed., Saunders St Louis Missouri</li> <li>Dasgupta, A., &amp; Wahed, A. 2014, <i>Clinical chemistry, immunology and laboratory quality control: a comprehensive review for board preparation, certification and clinical practice</i> Elsevier USA</li> <li>Chatterjea, M.N., &amp; Chawla, R. 2010, <i>Clinical chemistry: (organ function test, laboratory investigations and inborn metabolic diseases)</i>, Jaypee Brothers Medical Publishers Delhi</li> <li>Marshall, W.J., Bangert, S.K., &amp; Lapsley, M. 2012, <i>Clinical chemistry</i>, Mosby, Elsevier. Edinburgh</li> </ul>
Article/Paper List	This Course does not have any article/paper resources	
Other References	This Course does not have any other resources	