

Subject Description Form

Subject Code	ABCT3110
Subject Title	Anatomical Pathology
Credit Value	3
Level	3
Pre-requisite	Nil
Objectives	<p>Through lectures and practical sessions:</p> <ol style="list-style-type: none"> 1. to provide students an understanding of the fundamental knowledge of diagnostic technologies and their applications in Anatomical Pathology laboratories; 2. to equip students to perform appropriate laboratory tests; and evaluate histological and cytological results for diagnosis of disease.
Intended Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none"> a. identify structure of basic tissue types and understand their functions b. recognize the normal microscopic features of major organ tissues c. understand the basic principles of various diagnostic technologies in histology and cytology. d. perform tissue and cellular specimens processing, sectioning, staining and microscopic examination with appropriate skills. e. evaluate histological and cytological test results for diagnosis of disease.
Subject Synopsis/ Indicative Syllabus	<p>Normal histology:</p> <ul style="list-style-type: none"> • Normal structure of basic tissue types and their functions • Normal tissue structure of major organ systems, such as circulatory, skin, skeletal, respiratory, digestive, lymphoreticular, urinary, reproductive and central nervous system. <p>Tissue preparation and processing:</p> <ul style="list-style-type: none"> • Fixation and preservation • Decalcification • Tissue processing • Microtomy and cryostat sectioning • Mounting <p>Laboratory techniques to demonstrate tissue structures and elements:</p> <ul style="list-style-type: none"> • General tissue structure staining techniques • Special staining techniques for demonstration of connective tissues, carbohydrates, lipids, nucleic acids, pigments, amyloid, microorganisms, bone, etc.

	<ul style="list-style-type: none"> • Immunohistochemistry (IHC) and immunocytochemistry (ICC) • Enzyme histochemistry • Molecular diagnosis in Anatomical Pathology <p>Histopathology:</p> <ul style="list-style-type: none"> • Basic concepts in identification of abnormal cells and pathological features in tumours and malignancy <p>Cytology:</p> <ul style="list-style-type: none"> • Sample collection and processing • Cytological smear preparation and staining • Cytological features of normal cellular constituents, common changes shown in cells in relation to disease and associated malignancy 																																								
<p>Teaching/Learning Methodology</p>	<p>Lecture: to introduce and reinforce knowledge, principles and concepts</p> <p>Practical session: to perform laboratory tests and result evaluation</p> <p>Tutorial: to relate theories to clinical practice through discussion</p>																																								
<p>Assessment Methods in Alignment with Intended Learning Outcomes</p>	<table border="1"> <thead> <tr> <th rowspan="2">Specific assessment methods/tasks</th> <th rowspan="2">Percentage weighting</th> <th colspan="5">Intended subject learning outcomes to be assessed</th> </tr> <tr> <th>a</th> <th>b</th> <th>c</th> <th>d</th> <th>e</th> </tr> </thead> <tbody> <tr> <td>1. Laboratory assignments</td> <td>30%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>2. Quizzes / Tests</td> <td>30%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>3. Examination</td> <td>40%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>Total</td> <td>100%</td> <td colspan="5"></td> </tr> </tbody> </table> <p>Laboratory assignments will assess students' laboratory skills and the ability to evaluate the test results for diagnosis of disease.</p> <p>Quizzes and tests will assess students' the ability to identify tissue structures and cell elements; the understanding of basic concepts of histological and cytological techniques.</p> <p>Students are required to attend at least 75% of scheduled sessions for subjects. Failure to fulfill the attendance requirement would result in a failing grade in this subject.</p>	Specific assessment methods/tasks	Percentage weighting	Intended subject learning outcomes to be assessed					a	b	c	d	e	1. Laboratory assignments	30%	✓	✓	✓	✓	✓	2. Quizzes / Tests	30%	✓	✓	✓	✓	✓	3. Examination	40%	✓	✓	✓	✓	✓	Total	100%					
Specific assessment methods/tasks	Percentage weighting			Intended subject learning outcomes to be assessed																																					
		a	b	c	d	e																																			
1. Laboratory assignments	30%	✓	✓	✓	✓	✓																																			
2. Quizzes / Tests	30%	✓	✓	✓	✓	✓																																			
3. Examination	40%	✓	✓	✓	✓	✓																																			
Total	100%																																								
<p>Student Study Effort Expected</p>	<table border="1"> <tr> <td>Class contact:</td> <td></td> </tr> <tr> <td>▪ Lectures</td> <td>18 Hrs.</td> </tr> </table>	Class contact:		▪ Lectures	18 Hrs.																																				
Class contact:																																									
▪ Lectures	18 Hrs.																																								

	<ul style="list-style-type: none"> ▪ Tutorials / Laboratory Practical 	21 Hrs.
	Other student study effort:	
	<ul style="list-style-type: none"> ▪ Self and Guided Study 	70 Hrs.
	<ul style="list-style-type: none"> ▪ Assignments 	20 Hrs.
	Total student study effort	129 Hrs.
Reading List and References	<p><i>Cellular Pathology: an introduction to techniques and applications.</i> (2015) 3rd Ed. Cook J, Warren PJ. Scion Publishing Ltd. Oxfordshire UK.</p> <p><i>Theory and Practice of Histological Technique.</i> (2013) Suvarna KS, Layton C, Bancroft JD. 7th Ed. Churchill Livingstone: Edinburgh.</p> <p><i>Practical Principles of Cytopathology Revised.</i> (2007) Demay RM. American Society for Clinical Pathology Press: Washington.</p> <p><i>Wheater's Functional Histology: a text and colour atlas.</i> (2013) Young B, Woodford P, O'Dowd G. 6th Ed. Churchill Livingstone: Edinburgh.</p>	