## Subject Description Form

Subject Code	ABCT1D04/ABCT1101					
Subject Title	Introductory Life Science					
Credit Value	3					
Level	1					
Pre-requisite / Co-requisite/	Exclusion: ABCT1D04 and ABCT1101 mutually exclusive.					
Exclusion	<ul> <li>Students with the following academic qualifications are not allowed to take the subject ABCT1D04.</li> <li>i. HKDSE: Level 4 or above in Biology as a single Science subject or component of the Combined Science (sub-score)</li> <li>ii. GCEAL: Grade B or above in Biology</li> <li>iii. IB: 6 or above in Biology (HL)</li> <li>iv. JEE: students who had attended the JEE Exam of Biology or Integrated Science</li> <li>v. Others: will be considered by the subject lecturer case by case</li> </ul>	a a				
Objectives	In this subject, students will be introduced to the very basic background knowledg and concepts in biology, together with some recent advances in biotechnology. The main aim of this subject is to arouse students' interest in biological developments so that they can appreciate the impact of biotechnology.	;e 1e 30				
Intended Learning	Upon completion of the subject, students will be able to:					
Outcomes	(a) have a basic understanding of the biological world					
	(b) appreciate the importance of the biological world to human					
	(c) appreciate the recent biotechnological advancement and their impacts					
Subject Synopsis/	Contact Hour	rs				
Indicative Syllabus	The basics of life forms:6 Hrs					
	(1) The different forms of biological organisms, i.e. Viruses, Bacteria, Protozoa, Algae, Fungi, Plants, Animals					
	(2) The involvement of these different organisms in our daily life and the importance of ecology and biodiversity.					
	The organization and functions of complex biological organisms: 6 Hrs					
	(1) The structure and functions of plants and the importance of plants					
	(2) The structure and functions of animals – human as an example					
	(3) Organization of tissues, organs and functional systems in human					
	The cell: 6 Hrs					
	(1) The building blocks of biological organisms					
	(2) Structure and functions of Subcellular organelles					
	(3) Different types of cells					
	(4) Cell division and proliferation					
	The heredity: 6 Hrs					

	(1) The genetic material; General structure of DNA and RNA									
	(2) The genetic information in the form of genes									
	(3) Expression of genetic information									
	(4) Passing of genetic information to offspring									
	Modern biotechnology:					6 Hrs				
	(1) Major developments:									
	In vitro fertilization; Gene cloning; GM foods; GM organisms;									
	Human genome project; Gene therapy; Stem cell therapy; Human cloning									
	(2) Impacts of biotechnology on our life and the environment									
	(3) Ethical, social and legal issues									
Teaching/Learning	In the lectures, the basic concepts and knowledge will be delivered to the students. These knowledge and concepts will be further enhanced through tutorial evening and concepts will be further enhanced through tutorial evening and concepts will be further enhanced through tutorial evening and concepts will be further enhanced through tutorial evening and concepts and									
Methodology	discussions and debates during tutorials, and through assessments.									
		I	1							
Assessment Mothods in	Specific assessment % Intended				d subject learning outcomes to					
Alignment with	methods/tasks	weighting	be ass	sessed (	Please	e tick as	3 appro	priate)		
Intended Learning	1 Classwork or Class	50%	a V	D V	c v		+			
Outcomes	participation	570	-	-						
	2. Mid Term Test 1	17.5%	✓	~						
	3. Mid Term Test 2	17.5%	✓	✓						
	4. Written assignment	10%	✓	✓	✓		<u> </u>			
	5. Final Exam	50%	✓	$\checkmark$	$\checkmark$					
	Total	100 %								
	Classwork or class participa	asswork or class participation includes in-class tutorial questions which will be								
	used to draw students' interest, improve their understanding and to participate in classroom discussion. Each student will also be required to read broadly and to complete a written assignment in which an understanding of some of the majo							cipate in		
								ne major		
	concepts and knowledge has	to be demons	strated.	In this	writter	n assign	iment, a	a student		
	will also need to express his/her critical evaluation of the impacts of a new development in biotechnology. This assignment will be in the form of a critical							a critical		
	review essay.									
	A student will also need to take two tests (Mid term Test 1 & 2) which will gauge									
	their learning outcomes at two separate stages of the subject. These assessments									
	will also allow students to get feedbacks on their performance and how well the are achieving the learning outcomes.							i they		
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	learning outcomes. This will	subject asses most likely	sment be in th	which vie form	will ass of an	sess all examin	of the lation.	Iour		
Student Study	Class contact:									
Effort Expected	<ul> <li>Lectures</li> </ul>					34Hrs.				
	Tutorials					5Hrs.				
	Other student study effort:									

	<ul> <li>Self Study</li> </ul>	80Hrs.	
	Total student study effort	119Hrs.	
Reading List and References	nd Eric J. Simon, Jean L. Dickey, Jane B. Reece Campbell Essential Biology with Physiology Fifth Edition Pearson 2014		