Subject Description Form

Subject Code	ABCT1D13
Subject Title	Introduction to cancer – cause, treatment and prevention
Credit Value	3
Level	1
Pre-requisite / Co-requisite/ Exclusion	Nil
Objectives	This subject aims to introduce some general concepts about the cause of cancer, available treatment options and some general prevention measures.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: 1. Understand the scientific basis of the cause of some common cancers in Hong Kong. 2. Appreciate the options available and limitations of current cancer treatment and prevention methods. 3. Acquire an analytical and critical mind through a process of questioning and problem solving. 4. Acquire an awareness of the challenges faced by individuals living with cancer. We will instil a scientific understanding of the cause of cancer to our students. Although there is a lot of media coverage on cancer, some of them are not scientifically sound or sometimes even containing wrong information. We will explain the reasons why some common cancers are caused, for example by viruses or family history. We will introduce to our students the options available for cancer treatment including surgery, radiotherapy and chemotherapy. We hope to let our students understand that, on one hand there are developments of new cancer treatment methods but on the other, there are also many limitations. We will explore different prevention methods for cancer. A correct lifestyle, together with proper diagnostic tools should be beneficial to the students in the long run.
Subject Synopsis/ Indicative Syllabus	INTRODUCTION TO CANCER: 2 Hrs The nature of cancer COMMON CANCERS IN HK: EPIDEMIOLOGY AND ETIOLOGY 6 Hrs Nasopharyngeal carcinoma Liver Cancer Cervical Cancer Breast Cancer Colorectal Cancer Hematological Malignancies

	FUNDEMENTAL PRINCIPLES OF CANCER: 4 Hrs Brief introduction of cancer biology and cancer genetics TUMOUR VIRUSES 4 Hrs Introduction to virus Tumour viruses and oncogenes Tumour viruses and tumour suppressor genes CANCER & POLYMORPHISM 2 Hrs BASIC CONCEPTS OF ANGIOGENESIS, INVASION & METASTAIS 2 Hrs COMMON DIAGNOSTIC METHODS 3 Hrs Common practice of diagnostic methods Blood, Urine, Pap Tests, Biopsies Cytogenetics and Molecular tests CANCER TREATMENTS 4 Hrs Common treatment modalities Radiotherapy Surgery Chemotherapy Side effects of traditional chemotherapy TARGETED THERAPIES 4 Hrs What is targeted therapy? Small molecules and monoclonal antibodies Progress and future CANCER PATIENTS & THEIR CHALLENGES Awareness of the challenges faced by individuals living with cancer 2 Hrs
Teaching/Learning Methodology	**Lectures** Lectures will be used to cover some of the background biological knowledge including basic knowledge of life, cells, proteins and DNA. These come in background knowledge is needed for understanding the causes of cancer. The main part of this subject will be used to cover different examples of cancers commonly found in Hong Kong including liver, breast, lung, colon and others. We expect to invite some outside lecturers like medical doctors (to cover some clinical issues). **Tutorials** Exercises will be provided before or during tutorials. We expect the students to participate in the discussions during tutorials. We will deliver the materials prior to the tutorials in order to encourage students to participate more actively during the tutorials. We will also ask students to present some of the assigned readings during tutorials.

Assessment Methods in Alignment with Intended Learning Outcomes

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)					
		1	2	3	4		
1. Quiz	40%	✓	✓		✓		
2. Poster presentation	20%	✓			✓		
3. Written assignment	40%	✓		✓	✓		

Quiz

End-of-term quiz will cover all topics in the subject.

Group poster presentations
Students will be asked to present a topic of their choice to the whole class. The purpose is to allow more in-depth studies of sub-topics related to cancer in general.

Written assignment

Students will form a group and write an 8-10 pages essay related to their group presentation.

Student Study Effort Expected

Class contact:	
▪ Lecture ▪ Tutorial	33 h 6 h
Other student study effort:	
▪ Self study	70 h
Total student study effort	109h

Reading List and References

1. Lecture notes and support materials will be provided.
2. Recommended textbook:
   1) The Biology of Cancer by Robert Weinberg. Garland Science, Taylor & Francis Group, New York, N.Y. ISBN 0-8153-4076-1

   2) It's Not About the Bike: My Journey Back to Life by Lance Armstrong. ISBN 0-4251-796-3

   3) *Textbook of Cancer epidemiology* by Hans Adami. ISBN: 9780195311174

   4) *Everyone's Guide to Cancer Therapy* by Andrew Ko. ISBN: 978-0740768576