

**City University of Hong Kong  
Course Syllabus**

**offered by  
Department of Biomedical Engineering  
with effect from Semester B 2019 / 2020**

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**Part I Course Overview**

<b>Course Title:</b>	Directed Studies
<b>Course Code:</b>	BME4047
<b>Course Duration:</b>	1 semester
<b>Credit Units:</b>	3 credits
<b>Level:</b>	B4
<b>Medium of Instruction:</b>	English
<b>Medium of Assessment:</b>	English
<b>Prerequisites:</b> (Course Code and Title)	Normative 4-year degree students must complete a minimum of 54 CUs of Major Requirement to be eligible Advanced Standing I students must complete a minimum of 45 CUs of Major Requirement to be eligible Advanced Standing II students must complete a minimum of 36 CUs of Major Requirement to be eligible
<b>Precursors:</b> (Course Code and Title)	Nil
<b>Equivalent Courses:</b> (Course Code and Title)	Nil
<b>Exclusive Courses:</b> (Course Code and Title)	Nil

## Part II Course Details

### 1. Abstract

(A 150-word description about the course)

The aim of this course is to strengthen the students' creative, analytical, life-long learning, application and integration skill as well as the ability to work independently with self-motivation through studying a selected subject in biomedical engineering under the supervision of an academic member who has the subject knowledge, without attending regular lectures & tutorial/laboratory at the University. An individual is allowed to enrol in this course subject to approval and used only for special occasions such as for those who participate in the Co-operative Education Scheme or Student Exchange.

### 2. Course Intended Learning Outcomes (CILOs)

(CILOs state what the student is expected to be able to do at the end of the course according to a given standard of performance.)

No	CILOs	Weighting* (if applicable)	Discovery-enriched curriculum related learning outcomes (please tick where appropriate)		
			A1	A2	A3
1.	Define the key outcome of proposed project.		✓	✓	
2.	Explain the key aspects of the subject.			✓	
3.	Integrate new knowledge gained to produce required outcomes.			✓	✓
4.	Communicate a subject area to layman effectively.			✓	
* If weighting is assigned to CILOs, they should add up to 100%.		N.A.			

**A1: Attitude**

*Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.*

**A2: Ability**

*Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to self-life problems.*

**A3: Accomplishments**

*Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.*

**3. Teaching and Learning Activities (TLAs)**

*(TLAs designed to facilitate students' achievement of the CILOs.)*

a. Project Track

The TLAs are flexible and depending on nature of the directed studies in the area of biomedical engineering as specified by the supervisor and the work may be carried out without any requirement to attend regular lecture/tutorial/laboratory classes.

b. Course Track

Alternatively, typical syllabus of a course in the area of biomedical engineering that was not already completed by the student(s) or equivalent topic(s) may be prescribed and the assessment criteria are established, adopting standards used for a regular taught course, prior to the commencement of the course.

**4. Assessment Tasks/Activities (ATs)**

*(ATs are designed to assess how well the students achieve the CILOs.)*

Assessment Tasks/Activities	CILO No.				Weighting*	Remarks
	1	2	3	4		
a.	Project Track – Proposal, Report and Presentation					
	Continuous Assessment	✓	✓	✓	✓	100%
	Examination					0%
b.	Course Track – To be defined by the supervisor (tests, quizzes, examination, etc.)					
	Continuous Assessment					40% Tests and quizzes
	Examination					60% Final Examination
					100%	

\* The weightings should add up to 100%.

## 5. Assessment Rubrics

*(Grading of student achievements is based on student performance in assessment tasks/activities with the following rubrics.)*

### a. Project Track

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Fair (C+, C, C-)	Marginal (D)	Failure (F)
Proposal	Develop a project proposal in consultation with an assigned supervisor, which includes the definition of the problem and main outcomes to be accomplished.	High	Significant	Moderate	Basic	Not even reaching marginal levels
Report	Evidence of good literature review to develop a methodology to accomplish the project objectives, project execution and the results obtained, analysing the results and drawing relevant conclusions along with related discussion.	High	Significant	Moderate	Basic	Not even reaching marginal levels
Presentation	Summarize the critical aspects of the project undertaken, methodology adopted to accomplish the stated objective, and conclusions drawn showing key results in a concise manner through a presentation.	High	Significant	Moderate	Basic	Not even reaching marginal levels

### b. Course Track

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Fair (C+, C, C-)	Marginal (D)	Failure (F)
To be defined by the supervisor (tests, quizzes, examination, etc.)	To be prescribed by the supervisor in the Application Form, by adopting standards used for a regular taught course	High	Significant	Moderate	Basic	Not even reaching marginal levels

### **Part III Other Information** (more details can be provided separately in the teaching plan)

#### **1. Keyword Syllabus**

*(An indication of the key topics of the course.)*

##### **(a) Project Track:**

This mode is to undertake an in-depth study of selected literatures or other kinds of publications dealing with some advanced level topics of biomedical engineering. The proposal should not contain work that could be used directly in the student's final year project. That is, the content of the proposed work shall not bear any resemblance to the student's final year project. The supervisor shall not normally be the same person who supervises the student's final year project in order to avoid double counting of achievement.

##### **(b) Course Track:**

Typical syllabus of a course that was not already completed by the student or equivalent topic(s) may be prescribed. The syllabus has to be proposed by the supervisor, and endorsed by the course examiner.

#### **2. Reading List**

##### **2.1 Compulsory Readings**

*(Compulsory readings can include books, book chapters, or journal/magazine articles. There are also collections of e-books, e-journals available from the CityU Library.)*

For 'Project Track' case, there are no specific compulsory readings. However, the student will be guided to follow one or more books depending on the selected topic to be investigated and the relevant methodologies that could be explored to carry out this directed project.

For 'Course Track' case, the supervisor will indicate the book(s) or other reading materials to be studied for covering the selected topics.

##### **2.2 Additional Readings**

*(Additional references for students to learn to expand their knowledge about the subject.)*

For 'Project Track' case, student initiative is compulsory to search the literature and explore the topics associated with the project being undertaken through this course.