City University of Hong Kong
Course Syllabus

offered by College/School/Department of Electrical Engineering
with effect from Semester B in 2017/2018

Part I   Course Overview

Course Title: Engineering Training I for Computer and Data Engineering

Course Code: EE4290

Course Duration: One Summer Semester

Credit Units: 0

Level: B4

Proposed Area:
(for GE courses only)
☐ Arts and Humanities
☐ Study of Societies, Social and Business Organisations
☐ Science and Technology

Medium of Instruction: English

Medium of Assessment: English

Prerequisites:
(Course Code and Title)   EE2000 Logic Circuit Design

Precursors:
(Course Code and Title) Nil

Equivalent Courses:
(Course Code and Title) Nil

Exclusive Courses:
(Course Code and Title) Nil

Part II Course Details

1. **Abstract**

   This course aims to provide students with relevant practical training for the Computer Engineering discipline. It emphasizes hands-on experiences that complement the theoretical studies covered in the regular taught courses.

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.	Use computer-aided tools to design PCB, assembly and debug basic electronic circuit		√	√	
2.	Recognize the technologies used in IT and computer industry through the practical experience gained in the course		√	√	

* If weighting is assigned to CILOs, they should add up to 100%. 100%

 # Please specify the alignment of CILOs to the Gateway Education Programme Intended Learning outcomes (PILOs) in Section A of Annex.

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.)

TLA	Brief Description	CILO No.						Hours/week (if applicable)
		1	2					
Continuous Assessment	Lab work, diagrams drawing, electronic assembly and demonstration	√	√					2 weeks (7 hrs x 10 days, 70 contact hours)

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						
Continuous Assessment: <u>100%</u>								
Experiments/Tests/ Quizzes / Assignments	√	√					100%	

* The weightings should add up to 100%.

100%

Remark:

The assessment is purely on a pass/fail basis. To pass the course, students are required to have a laboratory attendance of 100% recorded.

5. Assessment Rubrics

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

Assessment Task	Criterion	Pass (P)	Failure (F)
1. Coursework	Achievements in CILOs	Reach the required levels	Not even reaching marginal levels

6. Constructive Alignment with Major Outcomes

(Please state how the course contribute to the specific MILO(s))

MILO	How the course contribute to the specific MILO(s)
1, 2, 3, 5, 10	This training course imparts students to some of the necessary skills and tools required for computer engineering design work and measurement, in particular, use of computer aided design from a circuit diagram to wire-wrapping a prototype of electronic assembly is practiced.
6, 8, 9	By exposing students to a simulated in-house training environment as in the industry, they are expected to be aware of the importance of life-long learning. They are expected to gain knowledge in contemporary issues and be aware of the impact of engineering solutions in a broad, global and societal context. They will also realize their professional and ethical responsibilities under the guidance of the training supervisors.

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

1. **Keyword Syllabus**

   <u>CAD Training and Wire-wrapping of Prototype</u>
   Work will be based around a schematic design and a PCB design using CAD software. The students are required to create the netlist, auto-route and manual route the PCB layout. They are also required to implement their design by means of wire-wrapping a prototype, trouble-shoot, test and demonstrate an electronic assembly.

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.)

1.	Training Manual

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

1.	Nil