

EE4090: ENGINEERING TRAINING

Effective Term

Semester B 2022/23

Part I Course Overview

Course Title

Engineering Training

Subject Code

EE - Electrical Engineering

Course Number

4090

Academic Unit

Electrical Engineering (EE)

College/School

College of Engineering (EG)

Course Duration

One Semester

Credit Units

0

Level

B1, B2, B3, B4 - Bachelor's Degree

Medium of Instruction

English

Medium of Assessment

English

Prerequisites

(EE2000 Logic Circuit Design
or EE2301 Basic Electronic Circuits
or EE2005 Circuits and Devices I)
and CS2311 Computer Programming

The above pre-requisite requirements only apply to Part B In-house Training.

Precursors

Nil

Equivalent Courses

EE4091 and EE4092

or

EE4093 and EE4095

or

EE4096 and EE4097

or
EE4290 and EE4291

Exclusive Courses

Nil

Part II Course Details

Abstract

This course aims to enable students to gain practical experience under the Industrial Attachment Scheme (IAS)/ Overseas Internship Scheme (OIS) (Part-A) or the in-house training scheme (Part-B).

Part A (Industrial Attachment Scheme (IAS) / Overseas Internship Scheme (OIS))

The aim is to enable students to gain practical experience and learn new technologies from an industrial / research environment while nurturing students' spirit of professionalism.

Part B (In-House Training)

The aim is to provide relevant practical training to electronic and electrical engineering, computer and data engineering and information engineering. It emphasizes hands-on experiences that complement the theoretical studies covered in the regularly taught courses.

Course Intended Learning Outcomes (CILOs)

CILOs		Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	For Part A (IAS/OIS) Gain practical working experience from an industrial / research environment		x	x	
2	For Part A (IAS/OIS) Nurture the spirit of professionalism and develop professional ethics in a real-life environment		x		
3	For Part A (IAS/OIS) Aware of the technologies used in a modern industrial / research setting			x	
4	For Part A (IAS/OIS) Communicate their ideas and present their work effectively		x	x	
5	Part B (In-House Training) Gain practical experience from an in-house environment		x	x	
6	Part B (In-House Training) Solve real-world problems by applying proper engineering tools and analysis techniques			x	
7	Part B (In-House Training) Aware of the technologies used in a modern industrial setting		x		
8	Part B (In-House Training) Communicate their ideas and present their work effectively		x	x	

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 real-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.

Teaching and Learning Activities (TLAs)

	TLAs	Brief Description	CILO No.	Hours/week (if applicable)
1	For Part A Laboratory	Students will be assigned to work in a company. A mentor in the company / research institute will provide an induction for students, assign jobs, and supervise them throughout the training.	1, 2, 3, 4	At least 40 hours/week (IAS: 6 weeks, OIS: 9-13 weeks)
2	For Part B Laboratory	Students are required to complete the selected modules described in Part III.	5, 6, 7, 8	40 hours/week(2 weeks)

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Part A (IAS/OIS) -Log-book -Demonstration and Presentation -Co-supervisors comments Part B (In-House Training) -Log-book -Quizzes or assignments -Demonstration and presentation	1, 2, 3, 4, 5, 6, 7, 8	100	CILO No. 1-4 for Part A Weightings: Log-book(34%); Demonstration and Presentation (33%); Co-supervisors comments(33%) CILO No. 5-8 for Part B Continuous Assessment: 100% Please refer to the additional document for EE4090 Assessment Components for In-House Training.

Continuous Assessment (%)

100

Examination (%)

0

Additional Information for ATs

Remark:

Part A: The assessment is purely on a pass/fail basis. To pass the course, students must complete the training with satisfactory performance recommended by the training mentor as well as CityU co-supervisor.

Part B: Please refers to the EE4090 Assessment Components for In-House Training as attached.

Assessment Rubrics (AR)

Assessment Task

Continuous assessment on the progress of assigned tasks or group project

Criterion

Achievements in CILOs

Pass (P)

Reach the required level

Failure (F)

Not even reaching the marginal level

Part III Other Information

Keyword Syllabus

Part A: Industrial Attachment Scheme (IAS)/ Overseas Internship Scheme (OIS)

Structure and content

Students must take six weeks of IAS/nine to thirteen weeks of OIS of training in a company / research institute related to the electronic, electrical, computer, or IT industry. The training of each student is subject to the availability of engineering training programs for the individual company / research institute.

Supervision and Assignment

A mentor of the company / research institute will be assigned to be responsible for giving guidance and advice to the student and assessing the student's performance during the training. Academic staff from the Department of Electrical Engineering, City University of Hong Kong, will be appointed to co-supervise and monitor the student's progress. Students are required to report their work in a logbook every week. The assessment is based on the logbook and the performance of their work. Students will be required to give a presentation on their work at the end of the attachment.

Part B: In-house Training

Students must complete two out of four modules below, covering practical electronic and electrical, computer hardware and software, computer system administration, and networking.

Electronic and Electrical Practice Training

Design circuit layouts for electrical and electronic sub-systems. Use a professional PCB developer, Altium Designer, to output layout designs. Integrating and soldering a PCB circuit board. Basic Electrical installation Practices.

Raspberry Practice Training

Set-up, configure a Raspberry Pi computer system and develop applications based on its hardware and software.

Computer System Administration Practice Training

Set-up, configure a Linux and Window system according to specific requirements

Networking Practice Training

Set-up, configure, test, and monitor a network according to specific requirements.

Reading List

Compulsory Readings

Title	
1	Nil

Additional Readings

	Title
1	Nil