Form 2B

City University of Hong Kong

Information on a Course offered by Department of Electronic Engineering with effect from Semester B 2012/13

Part I

Course Title:	Modern Power Electronics
Course Code:	EE6427
Course Duration:	One Semester (13 weeks)
No. of credits:	3
Level:	6
Medium of Instruction:	English
Prerequisites *:*	Nil
Precursors *:*	EE4101 Modern Power Electronics; or equivalent
Equivalent Course :	Nil
Exclusive Courses:	Nil

Part II

Course Aims:

This course aims to enable students to gain an understanding of the principles and industrial applications of modern power electronics. International regulations concerning all modern electronic equipment and the latest technology to meet these regulations will be presented.

Course Intended Learning Outcomes (CILOs)
Upon successful completion of this course, students should be able to:

No.	CILOs
1.	Identify the practical characteristics of power electronic devices and circuit components
2.	Analyse, design and implement switching methods for AC-DC and DC-AC power converters
3.	Acquire power conversion concepts to power system applications
4.	Describe international regulations related to electromagnetic compatibility and techniques to meet them

Teaching and Learning Activities (TLAs)

(Indicative of likely activities and tasks designed to facilitate students' achievement of the CILOs. Final details will be provided to students in their first week of attendance in this course)

CILO 1	Lecture, design and implementation examples of PWM techniques for power converters
CILO 2	Laboratory
CILO 3	Class tutorial
CILO 4	Design techniques and examples in meeting international standards

Timetabling Information

Pattern	**Hours**
Lecture:	*26*
Tutorials:	*13**
Laboratory:	
Other activities:	

*Some tutorials will be conducted in the laboratory.

Assessment Tasks/Activities

(Indicative of likely activities and tasks designed to assess how well the students achieve the CILOs. Final details will be provided to students in their first week of attendance in this course)

	Type of assessment tasks	*Weighting (if applicable)*
Continuous Assessment	Laboratory	30%
Examination	Written exam	70% 2 hours

Remarks: To pass the course, students are required to achieve at least 35% in course work and 35% in the examination.

Grading of Student Achievement:

Refer to Grading of Courses in the Academic Regulations for Taught Postgraduate Degrees.

Letter Grade	**Grade Point**	**Grade Definitions**
A+ A A-	4.3 4.0 3.7	Excellent
B+ B B-	3.3 3.0 2.7	Good
C+ C C-	2.3 2.0 1.7	Adequate
D	1.0	Marginal
F	0.0	Failure

Constructive Alignment with Programme Outcomes

PILO	**How the course contribute to the specific PILO(s)**
1, 2	To understand the latest technology and trends in power electronic technology
1, 2, 3, 4	To analyze power electronic circuits and systems

Part III

Keyword Syllabus: power electronics

Recommended Reading:
N Mohan, T M Undeland and W P Robins: Power Electronics : Converters, Applications and Design, (2nd Edition, John Wiley & Sons, 1995)

Online Resources (if any)
Nil