

Form 2B

City University of Hong Kong

Information on a Course

offered by Department of Architecture and Civil Engineering
with effect from Semester A in 2014/2015

Part I

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|-------------------------------|---|
| Course Title: | Building Electrical & Electronic Engineering |
| Course Code: | CA6605 |
| Course Duration: | 1 Semester (Some courses offered in Summer Term may start a few weeks earlier than the normal University schedule. Please check the teaching schedules with CLs before registering for the courses.) |
| Credit Units: | 3 |
| Level: | P6 |
| Medium of Instruction: | English |
| Prerequisites: | Nil |
| Precursor: | Nil |
| Equivalent Courses: | BC6605 Advanced Electrical & Elevator Engineering |
| Exclusive Courses: | Nil |

Part II

Course Aims:

To provide a thorough understanding of new electrical distribution systems, building electronics and control in modern buildings; to discuss the problems related to design, operation and maintenance on electrical systems and elevators.

Course Intended Learning Outcomes (CILOs):

Upon successful completion of this course, students should be able to:

| No. | CILOs | Weighting (if applicable) |
|-----|--|---------------------------|
| 1. | discuss the impact of power quality problems in electrical distribution systems; | --- |
| 2. | appraise new technologies of modern building electronics and electrical systems and keep updated of the recent developments; | --- |
| 3. | discover the modern building electronic and control systems; | --- |
| 4. | create approaches for power quality investigation. | --- |

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)

Semester Hours: 3 hours per week

Lecture/Tutorial/Laboratory Mix: Lecture (2); Tutorial (1); Laboratory (0)

| CILO No. | TLAs | Total Hours (if applicable) |
|----------|--|-----------------------------|
| CILO 1 | <ul style="list-style-type: none">Lectures and tutorials | 6 |
| CILO 2 | <ul style="list-style-type: none">Lectures and laboratory visits | 12 |
| CILO 3 | <ul style="list-style-type: none">Lectures and tutorials | 12 |
| CILO 4 | <ul style="list-style-type: none">Lectures and workshops | 9 |

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)

Coursework: 50%

Examination: 50% (Examination duration = 3 hours)

To pass a course, a student must obtain minimum marks of 30% in both coursework and examination components, and an overall mark of at least 40%.

| CILO No. | Type of assessment tasks/activities | Weighting (if applicable) | Remarks |
|----------|--|---------------------------|---|
| CILO 1 | <ul style="list-style-type: none">Quiz and Examination | --- | <ul style="list-style-type: none">Nil |
| CILO 2 | <ul style="list-style-type: none">Quiz and ExaminationAssignment to work on a case study and submit a full report | --- | <ul style="list-style-type: none">Nil |
| CILO 3 | <ul style="list-style-type: none">Assignment and Examination | --- | <ul style="list-style-type: none">Nil |
| CILO 4 | <ul style="list-style-type: none">Assignment and Examination | --- | <ul style="list-style-type: none">Nil |

Grading of Student Achievement:

Grading Pattern:

Standard

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

Part III

Keyword Syllabus:

Ordinances, regulations and codes of practice of electrical installations in Hong Kong and Mainland China; concerns regarding design, installation, operation, commissioning and maintenance of electrical systems in buildings including both low voltage, extra low voltage and high voltage; power quality and electromagnetic compatibility; new technologies of electrical systems and elevator systems; building electronics and control.

Recommended Reading:

- **Texts:**
 1. Electrical and Mechanical Services Department (2003) Code of Practice for the Electricity (Wiring) Regulations, Hong Kong SAR.
 2. Richard, D.C. (ed) (1997) The Electrical Engineering Handbook, 2nd Edition, CRC Press, U.S.A.
 3. Whitfield, J. (1999) The Electrician's Guide to the 16th Edition of the IEE Wiring Regulations, BS 7671, EPA Press, Wendens Ambo.
 4. Reeves E.A. (1992) Cable Management Systems, Blackwell, Cambridge.
 5. Dugan R.C., McGranaghan M.F., Beaty H.W. (1996) Electrical Power Systems Quality, McGraw Hill, N.Y.
 6. Albert Ting-pat So, Wai Lok Chan. Intelligent building systems. Boston, Mass. : Kluwer Academic, c1999.
 - **Online Resources:**
 1. <http://www.ieee.org>
 2. <http://www.theiet.org>
 3. <http://www.hkie.org.hk>
 4. <http://www.elevcon.com>
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