

REGULATIONS FOR THE DEGREE OF BACHELOR OF ENGINEERING (COMPUTER SCIENCE) (BEng[CS]) AWARDED IN CONJUNCTION WITH THE DEGREE OF BACHELOR OF BUSINESS ADMINISTRATION (INFORMATION SYSTEMS) (BBA[IS])

(See also General Regulations)

ISCS 1 Admission Requirements

To be eligible for admission to the programme leading to the Degree of Bachelor of Engineering in Computer Science under these regulations, a candidate shall

- (a) comply with the General Regulations; and
 - (b) hold the degree of BBA(IS) from the University of Hong Kong.
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ISCS 2 Length of Study

The curriculum shall normally extend over one academic year of full-time study.

ISCS 3 Curriculum Requirements

To be eligible for the award of the Degree of Bachelor of Engineering in Computer Science, a candidate shall

- (a) comply with the General Regulations;
 - (b) complete the curriculum and satisfy the examiners in accordance with these regulations; and
 - (c) satisfy the examiners in no less than 66 credit-units of courses as prescribed in the syllabuses.
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ISCS 4 Candidates shall normally select not less than 33 and not more than 39 credit-units of courses in each semester, unless otherwise permitted or required by the Board of the Faculty. Candidates who have overloaded in preceding semesters will be allowed to reduce the load by up to the equivalent number of credit-units they have passed in excess of the normal load in a subsequent semester without having to seek prior approval.

ISCS 5 Candidates with unsatisfactory academic progress may be required by the Board of the Faculty to take a reduced study load.

ISCS 6 Selection of Courses

Candidates shall select their courses in accordance with these regulations and the guidelines specified in the syllabuses before the beginning of each academic year.

ISCS 7 Assessment and Grades

Candidates shall be assessed for each of the courses which they have registered for, and assessment may be conducted in any one or any combination of the following manners: written examinations or tests, continuous assessment, laboratory work, field work, project reports, or in any other manner as specified in the syllabuses. Grades shall be awarded in accordance with UG 5 of the Regulations for the First Degree Curricula.

ISCS 8 Written examinations or tests shall normally be held at the end of each semester unless otherwise specified in the syllabuses. A candidate who fails in any course may be required to repeat the same course in a subsequent semester, or to take a special examination at a time specified by the Board of the Faculty. The grades for all the attempts made will be recorded in the transcript. Candidates shall not be permitted to repeat a course for which they have received a grade D or above for upgrading purposes.

ISCS 9 A candidate will normally be recommended for discontinuation if

- (a) his/her yearly average of Semester GPA is unsatisfactory for two consecutive academic years;
 - (b) he/she has failed in a core course twice; or
 - (c) he/she has accumulated less than half of the credit-units expected of a normal load for two consecutive years.
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ISCS 10 Degree Classification

The degree of Bachelor of Engineering in Computer Science shall be awarded under these regulations in five divisions:

First Class Honours
Second Class Honours Division One
Second Class Honours Division Two
Third Class Honours
Pass

ISCS 11 The classification of honours shall be determined by the Board of the Faculty at its full discretion based on 180 credit-units selected in the manner specified in the syllabus for the degree of BEng(CS) awarded in conjunction with the degree of BBA(IS).

**SYLLABUSES FOR THE DEGREE OF BACHELOR OF ENGINEERING
(COMPUTER SCIENCE) AWARDED IN CONJUNCTION WITH THE DEGREE OF
BACHELOR OF BUSINESS ADMINISTRATION (INFORMATION SYSTEMS)**

This syllabus applies to students admitted to the BBA(IS)/BEng(CompSc) programme in the academic year 2005-2006.

YEAR FOUR: PROGRAMME STRUCTURE

To complete the curriculum, a candidate must pass all courses listed in the following table:

<i>Course code</i>	<i>Course title</i>	<i>Credit-units</i>
BUSI0009	Business policy	6
BUSIxxxx	IS Elective ¹	12
CSIS0259	Principles of programming languages	6
CSIS0801	Final year project	12
CSISxxxx	CS Elective ²	12
ELEC2803	Engineering and society	3
XXXXxxxx	FBE Elective ³	6
XXXXxxxx	Broadening course ⁴	6
CSIS1410	Industrial training	3

¹ Elective courses in Information Systems offered by the School of Business

² Elective courses offered by the Department of Computer Science, excluding Research Internship and Industrial Seminars

³ Elective courses offered by the Faculty of Business and Economics, including IS electives

⁴ Courses offered outside this degree curriculum

In addition, a candidate must satisfy any other requirements as stipulated in the University or Faculty of Engineering regulations.

The degree classification shall be based on the best 180 credit-units from:

- All core courses in computer science and information systems (84 credit-units);
- All compulsory complementary studies courses (24 credit-units);
- Systems integration project (6 credit-units) and Final year project (12 credit-units); and
- The best 54 credit-units of elective courses, including 24 credit units of elective courses in Computer Science (but excluding Research Internship and Industrial Seminars), 24 credit units of elective courses in Information Systems and 6 credit units of FBE electives taken in Year 4.

For the purposes of degree classification, courses are grouped as follows:

<p>Core (84 credit-units)</p>	<ul style="list-style-type: none"> • Computer programming • Mathematical foundations of computer science • Introduction to data structures and algorithms 	<ul style="list-style-type: none"> • Principles of operating systems • Introduction to database management systems <i>or</i> Database development and management
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	<ul style="list-style-type: none"> • Machine organization and assembly language programming • Engineering mathematics • Object-oriented programming and Java • Information systems development and project management I • Information systems development and project management II 	<ul style="list-style-type: none"> • Introduction to software engineering • Computer and communications networks <i>or</i> Data communications and networking management • Design and analysis of algorithms • Principles of programming languages
Complementary Studies (24 credit-units)	<ul style="list-style-type: none"> • Business communication • Professional and technical communication for computer science • Practical Chinese language course for business, economics and finance students 	<ul style="list-style-type: none"> • Engineering and society • Business Policy • Broadening course(s) (Year 4) (6 credit-units)
Projects (18 credit-units)	<ul style="list-style-type: none"> • System integration project 	<ul style="list-style-type: none"> • Final year project
Elective Courses (54 credit-units)	<ul style="list-style-type: none"> • CS electives (24 credit-units)⁵ • IS electives (24 credit-units)⁷ 	<ul style="list-style-type: none"> • FBE elective (Year 4) (6 credit-units)⁶
Training (6 credit-units)	<ul style="list-style-type: none"> • Workshop Training 	<ul style="list-style-type: none"> • Industrial Training

⁵ CS elective courses are elective courses offered by the Department of Computer Science, excluding Research Internship and Industrial Seminars

⁶ FBE elective courses are elective courses offered by the Faculty of Business and Economics, including IS electives

⁷ IS elective courses are FBE elective courses in Information Systems offered by the School of Business

CSIS1xxx courses in the syllabuses are level 1 courses, and CSIS0xxx courses are of level 2.

COMPULSORY COURSES

BUSI0009. Business policy (6 credit-units)

The course will review the analysis and implementation of strategic corporate decisions which encompass all functional areas of business. Students will be split into small groups and will be required to write a mini-project of not more than 5,000 words outlining the desired corporate strategy for a given corporate problem.

CSIS0259. Principles of programming languages (6 credit-units)

Syntax and semantics specification; data types; data control and memory management; expressions, precedence and associativity of operators; control structures; comparative study of existing programming languages; advanced topics such as polymorphism, programming paradigms, exception handling and concurrency.

Prerequisites: CSIS1119; and CSIS1120 or ELEC1401 or ELEC1613

CSIS0801. Final year project (12 credit-units)

Student individuals or groups, during the final year of their studies, undertake full end-to-end development of a substantial project, taking it from initial concept through to final delivery. Topics range from applied software development to assignments on basic research. In case of a team project, significant contribution is required from each member and students are assessed individually, such that each student is given a separate project title. Strict standards of quality will be enforced throughout the project development.

ELEC2803. Engineering and society (3 credit-units)

Interaction between engineers and society; impact of technologies on society; environmental and safety issues; professional conduct and responsibility; contract law; law of tort; professional negligence and intellectual property law.

CSIS1410. Industrial training (3 credit-units)

Industrial Training requires students to spend a minimum of six weeks employed, full-time, as IT interns or trainees. During this period, they are engaged in work of direct relevance to their programme of study. CSIS1410 provides students with practical, real-world experience and represents a valuable complement to their academic training.

ELECTIVE COURSES IN INFORMATION SYSTEMS OFFERED BY THE SCHOOL OF BUSINESS**ELECTIVE COURSES OFFERED BY THE FACULTY OF BUSINESS AND ECONOMICS****ELECTIVE COURSES OFFERED BY THE DEPARTMENT OF COMPUTER SCIENCE**

- Level 2 and “Applications” courses offered by the Department of Computer Science.

SYLLABUSES FOR THE DEGREE OF BACHELOR OF ENGINEERING (COMPUTER SCIENCE) AWARDED IN CONJUNCTION WITH THE DEGREE OF BACHELOR OF BUSINESS ADMINISTRATION (INFORMATION SYSTEMS)

This syllabus applies to students admitted to the BBA(IS)/BEng(CompSc) programme in the academic year 2006-2007 and thereafter.

YEAR FOUR: PROGRAMME STRUCTURE

To complete the curriculum, a candidate must pass all courses listed in the following table:

<i>Course code</i>	<i>Course title</i>	<i>Credit-units</i>
BUSI0009	Business policy	6
BUSIxxxx	IS Elective ¹	12
CSIS0250	Design and analysis of algorithms	6
CSIS0801	Final year project	12
CSIS1410	Industrial training	3
CSIS1421	Engineering mathematics	6
CSISxxxx	CS Elective ²	12
ELEC2803	Engineering and society	3
XXXXxxxx	Broadening course ³	6

¹ Elective courses in Information Systems offered by the School of Business

² Elective courses offered by the Department of Computer Science, excluding Research Internship and Industrial Seminars

³ Courses offered outside this degree curriculum

In addition, a candidate must satisfy any other requirements as stipulated in the University or Faculty of Engineering regulations.

The degree classification shall be based on the best 180 credit-units from:

- (a) All Core courses in computer science and information systems (72 credit-units);
- (b) All compulsory Complementary Studies courses (24 credit-units);
- (c) Systems integration project (6 credit-units) and Final year project (12 credit-units); and
- (d) The best 66 credit-units of Elective Courses, including at least 18 credit units of elective courses in Computer Science (but excluding Research Internship and Industrial Seminars) and at least 18 credit units of elective courses in Information Systems.

For the purposes of degree classification, courses are grouped as follows:

<p>Core (72 credit-units)</p>	<ul style="list-style-type: none"> • Computer programming I • Computer programming II • Mathematical foundations of computer science 	<ul style="list-style-type: none"> • Principles of operating systems • Introduction to database management systems <i>or</i> Database development and
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	<ul style="list-style-type: none"> • Introduction to data structures and algorithms • Machine organization and assembly language programming • Engineering mathematics • Object-oriented programming and Java 	<ul style="list-style-type: none"> • Introduction to software engineering • Computer and communications networks <i>or</i> Data communications and networking management • Design and analysis of algorithms
Complementary Studies (24 credit-units)	<ul style="list-style-type: none"> • Business communication • Professional and technical communication for computer science • Practical Chinese language course for business, economics and finance students 	<ul style="list-style-type: none"> • Professionalism and ethics • Engineering and society • Business Policy • Broadening course(s) (Year 4) (6 credit-units)
Projects (18 credit-units)	<ul style="list-style-type: none"> • System integration project 	<ul style="list-style-type: none"> • Final year project
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Elective Courses (66 credit-units)	<ul style="list-style-type: none"> • CS⁴/FBE⁵ elective courses, including at least 18 credit units of CS electives and at least 18 credit units of IS⁶ electives 	
Training (6 credit-units)	<ul style="list-style-type: none"> • Workshop Training 	<ul style="list-style-type: none"> • Industrial Training

⁴ CS elective courses are elective courses offered by the Department of Computer Science, excluding Research Internship and Industrial Seminars

⁵ FBE elective courses are elective courses offered by the Faculty of Business and Economics, including IS electives

⁶ IS elective courses are FBE elective courses in Information Systems offered by the School of Business

CSIS1xxx courses in the syllabuses are level 1 courses, and CSIS0xxx courses are of level 2.

COMPULSORY COURSES

BUSI0009. Business policy (6 credit-units)

The course will review the analysis and implementation of strategic corporate decisions which encompass all functional areas of business. Students will be split into small groups and will be required to write a mini-project of not more than 5,000 words outlining the desired corporate strategy for a given corporate problem.

CSIS0250. Design and analysis of algorithms (6 credit-units)

The course studies various algorithm design techniques, such as divide and conquer, and dynamic programming. These techniques are applied to design highly non-trivial algorithms from various areas of computer science. Topics include: advanced data structures; graph algorithms; searching algorithms; geometric algorithms; overview of NP-complete problems.

Pre/Co-requisite: CSIS1119 or ELEC1501

CSIS0801. Final year project (12 credit-units)

Student individuals or groups, during the final year of their studies, undertake full end-to-end development of a substantial project, taking it from initial concept through to final delivery. Topics range from applied software development to assignments on basic research. In case of a team project, significant contribution is required from each member and students are assessed individually, such that each student is given a separate project title. Strict standards of quality will be enforced throughout the project development.

CSIS1410. Industrial training (3 credit-units)

Industrial Training requires students to spend a minimum of six weeks employed, full-time, as IT interns or trainees. During this period, they are engaged in work of direct relevance to their programme of study. CSIS1410 provides students with practical, real-world experience and represents a valuable complement to their academic training.

CSIS1421. Engineering mathematics (6 credit-units)

Linear algebra, probability and statistics, calculus, and ordinary differential equations.

ELEC2803. Engineering and society (3 credit-units)

Interaction between engineers and society; impact of technologies on society; environmental and safety issues; professional conduct and responsibility; contract law; law of tort; professional negligence and intellectual property law.

ELECTIVE COURSES IN INFORMATION SYSTEMS OFFERED BY THE SCHOOL OF BUSINESS**ELECTIVE COURSES OFFERED BY THE FACULTY OF BUSINESS AND ECONOMICS****ELECTIVE COURSES OFFERED BY THE DEPARTMENT OF COMPUTER SCIENCE**

- Level 2 and “Applications” courses offered by the Department of Computer Science.