THE HONG KONG INSTITUTION OF ENGINEERS

**SUBMISSION FOR
ACCREDITATION OR REACCREDITATION OF
COMPUTER SCIENCE PROGRAMME(S)
TO MEET THE HKIE'S ACADEMIC REQUIREMENTS FOR
CORPORATE MEMBERSHIP IN THE INFORMATION DISCIPLINE
AT THE SEOUL ACCORD LEVEL**

Submitted by

_____

Name of University/Institution

Faculty:

Department(s):

Programmes(s):

Date of Visit:

Signed By:

_____   _____

Dean/Head of Department   Date

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GUIDANCE NOTES

FOR

COMPLETION OF THE QUESTIONNAIRE

This questionnaire is designed to assist academic departments in the preparation of their submission for a professional accreditation exercise and the Visiting Teams in the assimilation of the information required.

The information requested is set out below and references the HKIE's Professional Accreditation Handbook for Computer Science Programmes. It is strongly recommended that this handbook should be studied carefully before completion of the questionnaire.

Contents

The questionnaire is set out as follows:

Part 1: General information related to the university/institution

Part 2: General information related to the department

Part 3: Information related to the Computer Science programme(s) – general

Part 4: Information related to the Computer Science programme(s) – criteria specific

Part 2 is required for each department and Part 3 and Part 4 should be completed for each programme for which accreditation was requested.

To avoid duplication of information and effort, provide information only once and thereafter clearly state under which heading it is to be found.

Completion

The questionnaire is provided in soft copies. Please enter the response after the description of information required in each clause and complete the tables.

Please do **not** change the wording, sequence or format of the sections, clauses, headings or tables.

Six copies of the submission should be sent to the HKIE in hard copy and in CD ROMs at **least six weeks before** the visit. Major attachments should be placed at the end of the appropriate section of the completed questionnaire.

Two copies of the latest edition of the calendar/prospectus should also be included with the questionnaire.

PART 1

GENERAL INFORMATION

RELATED TO THE UNIVERSITY/INSTITUTION

1.1   **Vice Chancellor, President or Director**

Title:

Name:

1.2   **Dean**

Name:

Date of appointment:

1.3   **Structure of the University/Institution**

Provide details of the organisational structure of the university including its major academic and administrative components. An organisational chart may be attached if appropriate.

1.4   **Funding**

Describe the funding arrangements for the university.

PART 2

GENERAL INFORMATION

RELATED TO THE DEPARTMENT

Note: A copy of this section should be completed and submitted for each department hosting a programme being accredited.

2.1 Structure of the Department hosting the programme

Provide details of the major organisational structure of the Department including its major academic administrative components. An organisational chart may be attached if appropriate.

2.2 Administrative Responsibilities

Describe the authority of the Dean, Head of Department and others within the Department who hold the ultimate responsibility for the programme(s) to be accredited.

2.3 Other Departments/Supporting Units

Provide details and describe the relationship with other Departments/Supporting Units that provide courses for the computer science programme.

PART 3

INFORMATION RELATED TO THE

COMPUTER SCIENCE PROGRAMME(S) – GENERAL

Note: A copy of this section should be completed and submitted for each programme being accredited.

3.1   **Title of the programme**

Please use the name as specified in the calendar/prospectus.

3.2   **Programme structure**

Mode of operation: (Full Time/ Part Time)

Other (please specify):

3.3   **Starting date and date of last major revision**

Date of first intake of students:
Date of last major revision:
Date the HKIE notified of revision:

3.4   **Other Information**

Please provide other information which is considered relevant to the accreditation exercise.

3.5   **Future Plans**

Provide details for the future plans and budget for the programme.

3.6   **Previous accreditation/validation record**

Date on which last professional accreditation exercise took place:

Outcome of the exercise:

Please provide a copy of the report and decision letter of the last accreditation exercise.

3.7   **Amendments to the programme**

Please provide details of any changes made to the programme since the last professional accreditation exercise.

PART 4

INFORMATION RELATED TO THE

COMPUTER SCIENCE PROGRAMME(S) – CRITERIA SPECIFIC

Note: A copy of this section should be completed and submitted for each programme being accredited.

4.1 **Aims and Objectives**

Provide details of the programme educational objectives and their relationship to the university/institution, college, department and programme mission statements. Provide details of the following:

• The applicable institutional, college, departmental, and programme Mission Statements and documents where they are published.

• The Programme Educational Objectives and state where these are published.

• How the Programme Educational Objectives are consistent with the Mission of the university/institution, in the form of a matrix below.

Relationship of Programme Objectives to University/Institution Mission

Programme Objectives	University/Institution Mission Elements						
	1	2	3	4	5		
1							
2							
3							
4							
5							
6							

* Please mark "X" to the appropriate boxes in the above matrix to indicate their relationship.

• The Programme outcomes that describe what students are expected to know and to do by the time of graduation. These must include (Note 1):

(a) An ability to apply knowledge of computing and mathematics appropriate to the programme outcomes and to the discipline

(b) An ability to apply knowledge of a computing specialisation, and domain knowledge appropriate for the computing specialisation to the abstraction and conceptualisation of computing models

(c) An ability to analyse a problem, and identify and define the computing requirements appropriate to its solution

(d) An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs with appropriate consideration for public health and safety, social and environmental considerations

(e) An ability to function effectively on teams to accomplish a common goal

(f) An understanding of professional, ethical, legal, security and social issues and responsibilities

(g) An ability to communicate effectively with a range of audiences

(h) An ability to analyse the local and global impact of computing on individuals, organisations, and society

(i) Recognition of the need for and an ability to engage in continuing professional development

(j) An ability to use current techniques, skills, and tools necessary for computing practice with an understanding of the limitations.

Note 1: The graduate attributes are reproduced from the HKIE accreditation criteria for computer science programmes. The interpretation of these graduate attributes should be consistent with the requirements of the Seoul Accord and a copy of the Seoul Accord Graduate Attributes is enclosed at the end of the Professional Accreditation Handbook for Computer Science Programmes.

If the programme under consideration has different set of outcomes than the above, please present

(i)   the list of programme outcomes
(ii)   the matching between these outcomes to the HKIE required outcomes

- Present the relationship between the programme educational objectives and programme outcomes in the form of a matrix below.

Relationship of Programme Outcomes to Programme Objectives

PROGRAMME OUTCOMES	PROGRAMME OBJECTIVES						
	1	2	3	4	5	6	
1							
2							
3							
4							
5							
6							
7							
8							

9							
10							

* Please mark "X" to the appropriate boxes in the above matrix to indicate their relationship.

Present the measurement dimension of each programme outcome

(1)
(2)
(3) ……

<u>Example</u>:
Ability to communicate effectively (Graduate attribute)

Measurement Dimension

1) An ability to comprehend and write effective reports on complex* computing activities.

2) An ability to comprehend and write clear design documentation on complex* computing activities.

3) An ability to make effective presentations on complex* computing activities to the computing community and the society at large.

4) An ability to give and understand clear instructions on complex* computing activities.

* Description for complex computing activities provided in the Seoul Accord graduate attributes at the end of the Professional Accreditation Handbook for Computer Science Programmes.

4.2 **Duration**

Provide the following:

Programme duration

Weeks per annum (excluding examination and study time):

Number of years: actual:

Full Time Equivalent:

4.3 **Syllabuses and Curriculum**

4.3.1 **Programme structure**

Provide a block diagram for the programme structure clearly showing core and **optional** course titles, and all possible routes through the programme.

4.3.2 **Curriculum**

(i) For each course/module/subject within the programme, please provide the following:

name of course/module/subject leader
syllabus (with the date of last major and minor revision)
statement of objectives/outcomes
list of essential and reference text-books
relationship of course to Programme Outcomes
assessment details

(ii) Describe the provisions for any co-operative education that is used to satisfy curricular requirements.

(iii) Provide a matrix showing the contribution of courses/modules/subjects to programme outcomes. Indicate how a programme outcome is met through teaching, practice and measurement.

Please use the following indication to mark on the matrix.

T – Teach
P – Practice
M – Measured

		Programme Outcomes										
		1	2	3	4	5	6	7	8	9	10	
Course/Module/Subject	ABCXXX											
	ABCXXX											
	ENGXXX											
	ENGXXX											
	ENGXXX											
	ENGXXX											
	HUMXXX											
	HUMXXX											
	MATHXXX											
	COMPXXX											
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(iv)   Provide curriculum details using the format below for each year of the programme.

4.3.2a **Curriculum Details**

Year _____

Course/Module/Subject (Indicate core subject and options)	Timetabled work in hours per week			No of teaching weeks	Total hours	Total credits	Assessment Components and their weightings	Academic staff member responsible for the course/ module/ subject
	Lect	**Tut**	**Pract**					
TOTAL:								

4.3.2b **Curriculum Details**

Year _____

Course/Module/Subject	Term	Hours			Indicate the number of credits in the programme contributed to the following curriculum contents		
		Lect	Lab/tut	Other	Mathematics and Sciences	Computer Science and Engineering Subjects	Complementary Electives
TOTAL:							

4.3.2 c   **Design Elements**

Please provide details of the courses/modules/subjects in the programme which exhibit elements of engineering design.

Course/Module/Subject Title	Design content in course work	Design Project(s)	Design content in Laboratories

Please mark "X" to indicate the presence of the specific elements in the course/module/subject.

4.3.2 d   **Projects**

Please provide details of the use of project work within the programme.

Outline the arrangements for project allocation in final year.

Please make available for the Visiting Team examples of projects representing the range of topics covered and the marking, including details showing how the final project mark was achieved.

Please provide a list of project titles and marks (or grades) in the table below **for the most recent year available.**

Title	Supervisor	Student	Mark/Grade

4.3.2 e   **Practical Training**

Please describe the form of provision made for the practical training of students, whether they are offered in the form of workshop training, internship or industrial attachment.

For the last three years, please indicate the proportion of graduates who have:

Year of graduation			
Received practical training			
Did not receive practical training			

Provide details of the nature of the practical training received.

4.3.2 f   **Award of the Degree**

Provide details of the classification of degrees. What are the conditions for the award of:

> an honours degree
> a pass degree

Please indicate, for each of the past five years, the number of awards in the table below, and the total number of students who were admitted to the corresponding first year of the programme.

Year of Graduation						
The total number of students admitted to the programme in the **corresponding first year**						
The total number of students admitted to the programme in the **corresponding second and subsequent years**						
The number of these students graduating with honours degrees	1st					
	2/1					
	2/2					
	3rd					
The number of these students graduating with pass degrees						
The number of these students leaving the programme						
The number of these students who are still studying in the programme						

4.4 **Academic Staff**

4.4.1 Identify the programme director/leader and describe in detail his/her responsibilities.

4.4.2 Describe the composition, size, credentials, experience, and workload of the academic staff that support this programme.

4.4.3 Describe the competencies of the academic staff and how they are adequate to cover the curricular areas of the programme.

4.4.4 Please provide information on the number of staff within the Department

Staff	Academic Year		
Full-time Academic			
Part-time Academic			

Full-time office/administration			
Part-time office/administration			
Full-time technical			
Part-time technical			
Teaching assistant (hours)			
Other support staff			
TOTAL			
Academic staff on sabbatical leave			
Total establishment academic staff			
Number of academic staff vacancies			

For the full time academic staff, please provide the distribution of age demographics.

	Grade/Rank of Position			
Age	Chair Professor	Professor	Associate Professor	Others (please specify)
below 30				
31-40				
41-50				
51-60				
above 60				

4.4.5   **Part-time Staff**

Describe how the part-time staff are supervised and evaluated in relation to the delivery of the required course content, competence in teaching and availability to students.

4.4.6   **Academic Staff Vitae**

For each academic staff member in the Department and other servicing Departments who are supporting the programme, complete a copy of the form below. A curriculum vitae may be submitted provided it supplies all the information requested on the form.

Name: **Present Position:**

Date: a) joining the University/Institution   b) present appointment

Academic Qualifications

Degree   University/Institution   Date

Member of the HKIE

Other Professional Qualifications

Sabbatical Leave/Industrial Attachment/Other Activities Supporting Professional Development

Year   Organisation   Location

Courses/modules/subjects taught in the past three years

Undergraduate   Postgraduate

Present teaching courses/modules/subjects and student contact hours per course/module/subject per year

Number of student projects/theses supervised

	Undergraduate	Masters	PhD
Completed (last 3 years)			
Completed (lifetime)			
In progress			

Publications	Refereed Journals	Refereed Conference	Other (identify)
Number (last five years)			
Number (lifetime)			

Consultancy

Number in progress
Total (last five years)

Funding	Research	Non research
In progress		
Total (last five years)		

Professional/Scholarly Activity

Provide a brief description of main areas of interest - technical and research interests, offices held in professional and technical organisations etc.

Industrial and related experience

Provide a brief resume.

Signed: _____ **Date:** _____
Member of Academic Staff

4.4.7 **HKIE Membership and Other Professional Qualifications**

Please provide information on the percentage of academic staff members who are members of the HKIE _____%.

Please provide information on the percentage of academic staff members who are members of relevant professional bodies _____%.

4.4.8 **Publications**

(i)   Provide a collated list of refereed research publications over the past five years. Where multiple authors are involved, indicate the principal author by underlining or by the use of bold type. If available, the departmental research report may be sent as an alternative to completing this section.

(ii)   Please provide brief details of externally sponsored research and development and/or consultancy work undertaken by the Department during the last three years. As an alternative to completing this section, copies of the departmental research report can be sent if available.

Title	Sponsoring Organisation	Names of academic staff primary involved	Total value of contract and period of contract

4.4.9 **Academic Staff Development**

Describe the policy for ensuring the continued teaching competence and the professional development of the teaching staff. In addition, describe the policy on:

Sabbatical Leave/Industrial Attachment

Research and Development

Consultancy

4.4.10 **Support Staff**

Please list all technical, laboratory and other support staff giving their positions, qualifications and brief details of their experience. Differentiate between permanent (P), part-time (PT) and short-term research staff (R). An additional page may be used as required.

Name	Qualifications	Experience

4.4.11 **Development**

Please provide details of any proposed development, change in staff, new equipment, new facilities, etc, within the programme.

4.5 **Resources**

4.5.1 **Space**

Detail the programme facilities available and indicate any limitations that impact the ability to achieve the programme's desired outcomes. Include information for the following:

> Lecture halls
> Laboratories and equipment (stating the courses/modules/subjects that are relevant for the corresponding laboratories and equipment listed)
> Offices
> Student work areas

4.5.2 **Computer Facilities**

Provide details of the computer facilities available for the programme. Specify any limitations that impact the ability to achieve the programme's desired outcomes.

4.5.3 **Library Facilities**

Provide details of the library facilities available for the programme. Specify any limitations that impact the ability to achieve the programme's outcomes. Include information on the adequacy of the collections and information services as it relates to the programme's desired outcomes. Include the process used to ensure that the facilities available will be prepared to meet the changing nature of the programme's needs.

4.5.4 **Finance**

Detail the process used to establish the programme budget. Provide evidence of the continuity of support for the programme. Include both institutional and other funding sources.

(i)   Committed to teaching and teaching support

Year ⟍ Category				
Operating: Teaching Office supplies Other Maintenance				
Equipment (Specify) Maintenance				
Capital (Specify)				
Others / Acquisitions				
Total HK$				

(ii)   Committed to research support

Years Funding Source				
UGC				
Other research bodies				
Industry				
Other (Specify)				
Total HK$				

Discuss the adequacy of the budget in achieving the programme's desired outcomes. Address at least the following areas:

Facilities and equipment
Academic staff development
Library and information resources
Support personnel

4.6   **Assessment**

Provide details of process used to assure an effective quality assurance system. Describe both the internal and external processes used.

Include at least the following:

(a)   The list of Programme Constituencies.

(b)   The process used for establishing and revising Programme Outcomes.

(c)   How the Programme Outcomes lead to the achievement of the Programme Educational Objectives.

(d)   Describe the relationship of the curriculum to the Programme's desired outcomes.

(e)   Describe any processes that document periodically the degree to which the intended programme outcomes are attained. Describe the level of achievement of intended programme outcomes relative to the desired levels of those outcomes. Present evidences on measurement of programme outcomes through courses/modules/subjects assessment or other activities.

(f)   Describe the information and processes commonly used in making decisions regarding programme improvements.

(g)   Describe actions taken to improve the programme since the last general review. Indicate why, i.e., the basis for taking action, and when each action was implemented and the results of the implementation.

(h)   Provide details of any advisory committees. Indicate their structure, how often they meet, and the purpose relative to setting and/or evaluating desired programme objectives and outcomes.

(i)   If external examiners are used as part of the assessment process, provide details on how often they visit the department and the objectives of their visits. If they are used as an independent assessment of the programme to which desired programme outcomes are met, how they are included in the process that establish the requirements. Please attach copies of the external examiner's reports for the past three years.

4.7   **Entry Levels**

4.7.1   **Admission Requirements**

Specify minimum requirements on the basis of which admission has been made over the last five years. Explain the basis for setting these standards.

4.7.2   **Student Numbers**

Please provide the total number of students in each year of the programme:

Year 1	Year 2	Year 3	Year 4	Total

4.8   **Development**

Describe how the programme incorporates the requirements of society and the profession. Describe how the programme responds to local and international requirements.