RESTRICTED

Professional Accreditation Handbook
For Engineering Higher Diploma Programmes

CONTENTS

2. CRITERIA FOR THE ACCREDITATION OF ENGINEERING HIGHER DIPLOMA PROGRAMMES

3. ACCREDITATION SUBMISSIONS

APPENDIX

NOMENCLATURE

1. FRAMEWORK FOR ACCREDITATION

1.1 Introduction

The Hong Kong Institution of Engineers (the HKIE) is the professional engineering qualification body for Hong Kong and has responsibility for setting and maintaining the professional and technical standards of its members.

An engineering higher diploma programme accredited by the HKIE is an acceptable academic qualification for Associate Membership of the Institution. The HKIE's process of accrediting such programmes is called professional accreditation. (A description of professional accreditation is provided in the Appendix.) This handbook sets out the HKIE's processes, mechanisms and criteria for the professional accreditation of engineering higher diploma programmes.

The HKIE views the accreditation of engineering higher diploma programmes as part of a process of working with the higher education institutions on a continuous basis, to provide help, advice and support, to ensure that the quality of engineering higher diploma programmes is high and meets the needs of the profession, employers and Hong Kong.

In undertaking accreditation of engineering higher diploma programmes, the HKIE seeks to establish appropriate international agreements for mutual recognition of qualifications.

1.2 Accreditation by Faculty or College

Essentially, the HKIE is concerned with the standards and quality of individual engineering higher diploma programmes. Consequently, it is the individual programme which receive accreditation. However, the process of professional accreditation involves the consideration of the appropriate Faculty / College in terms of its overall philosophy, objectives and resources, individual programmes then being considered in context. This has the advantages of taking into account the higher education institution’s broad principles and policy for the development of engineering education, and reducing the burden on the higher education institutions and the profession of too many discrete accreditation exercises.

Although visits will normally be to departmental groupings, there may be visits to individual departments within a Faculty / College for the purpose of provisional accreditation, to consider major modifications to a programme or to monitor a programme which has been granted accreditation for less than the normal five years.

1.3 Initiation of Accreditation Exercises

The professional accreditation of engineering higher diploma programmes in the higher education institutions is normally initiated by a higher education institution issuing an invitation to the HKIE Accreditation Committee for Higher Diploma Programmes to carry out appropriate accreditation exercises.

1.4 Consultation and Accreditation Visits

The HKIE sees its accreditation activities as a continuing process. However, the Institution is aware that from the higher education institution's perspective, professional accreditation is generally seen as an activity punctuated by visits and accreditation decisions. Notwithstanding, higher education institutions planning engineering higher diploma programmes, or restructuring existing ones are encouraged to consult the HKIE in order to ensure that the programmes can be developed to suit the requirements of all concerned.

1.5 Provisional and Full Accreditation

The HKIE has two categories of accreditation exercise, provisional accreditation to consider programmes which are developing and full accreditation for the consideration of existing programmes.

1.6 Accreditation Decisions and the Accreditation Cycle

There are three accreditation decisions (section 1.11 also refers) which the HKIE can reach, as follows:

1.6.1 Provisional Accreditation

Provisional accreditation may be granted to developing programmes, and generally the relevant accreditation exercise will be completed during the programme for the first cohort of students. Provisional accreditation provides an indication to both the higher education institution and prospective students that the programme is well structured and has very good possibilities of receiving full accreditation but should not be construed as a commitment to the granting of full accreditation.

1.6.2 Accreditation for a Period of up to Five Years

The HKIE may grant full accreditation for the normal cycle of accreditation of five years. Alternatively, the HKIE may grant full accreditation for a term of less than five years, either to bring it in line with the accreditation cycle of other programmes or to monitor a

programme early in relation to any conditions, requirements and/or concerns which may have emerged during the accreditation process.

For a newly developed programme, a full accreditation exercise is mounted, at a time agreed with the higher education institution, after the first cohort of students has graduated. Full accreditation, if granted, will be retrospective so as to apply to the first cohort of graduates.

1.6.3 Accreditation Refused or Withdrawn

If a programme is seriously at variance with the HKIE criteria (see Section 2), then accreditation can be refused or withdrawn. The HKIE considers such a decision serious and, normally, would work with the higher education institution to avoid it.

1.7 The Accreditation Panel for Engineering Higher Diplomas

The HKIE will set up an Accreditation Panel for engineering higher diploma programmes which is a list of appropriately qualified members who will participate in accreditation exercises.

1.8 Visiting Teams

Visiting teams shall be selected from the Panel for each particular accreditation exercise. The Dean or Head of Department shall be informed of the names of the proposed chairman and members of a team; objection to a team member may be made if there is a conflict of interest. (Team members are selected on the basis that they have no professional or any other association with the higher education institution, nor members of their family attending it.)

1.8.1 Team Size and Constitution

For a single discipline exercise, the team shall normally comprise a minimum of three members including the chairman. All members shall be experienced in the discipline, or associated with it.

For exercises involving two or more programmes, which may cover more engineering disciplines, there shall be one chairman, and for each programme at least two members from, or associated with, each of the disciplines.

In general, the professional engineers constituting a team shall comprise, in approximately equal numbers, academics and non-academics.

Whenever possible, members of the Accreditation Committee for Higher Diploma Programmes shall be invited to participate in the teams.

A member of the HKIE's accreditation staff shall accompany and be a member of the team in addition to those mentioned above.

In general, to ensure continuity and expertise, team chairmen shall have had considerable previous experience of professional accreditation, and most members of the team will be expected to have knowledge and experience of professional accreditation.

1.9 Accreditation Visits

Accreditation visits are an important part of an accreditation exercise. They enable the HKIE to assess, at first hand, qualitative factors, such as intellectual environment, morale, professional attitudes and the quality of staff and students.

For programmes which are being planned by a higher education institution, the HKIE will arrange consultation visits by expert(s) as appropriate in each case. On such visits, the expert(s) shall only comment and advise on the proposed programmes and shall not commit the HKIE to granting accreditation to a programme.

It should be noted that the accreditation visits are only a part of the full accreditation exercise. There is considerable preparation prior to a visit and many post visit activities.

1.9.1 Visit to Consider One Programme

Such a visit will normally take at least one day and shall include:

- meetings of the team with the appropriate senior higher education institution’s staff;
- meetings with the programme leader and other academic staff;
- meetings with the students and support staff;
- tours of the departmental facilities, including lecture theatres, laboratories, library and computing facilities;
- inspection of examination papers, laboratory instructions and reports, project reports and other material demonstrating student performance; and
- private meetings of the team.

1.9.2 Visit to Consider More than One Programme

Such a visit will normally take at least one day depending on the number of programmes. The elements of this visit are similar to the 'one programme visit', however, there is more of a focus on the complete department or Faculty/ College offering the programmes.

1.10 Accreditation Reports

Based on a consensus of opinion, ascertained at the end of a visit, the team chairman, with the assistance of the HKIE secretariat, shall draft a formal report of the visit on the observations of the team, on whether the programme(s) under investigation conform to the HKIE Accreditation Criteria.

Notes: The following procedures had already been adopted by the Accreditation Committee for Higher Diploma Programmes in dealing with the Accreditation Report.

(i) The visiting team chairman will draft the report with the assistance of members of the team and the HKIE staff.

(ii) The draft report will be sent to the visiting team members for comment.

(iii) The comments made by the members of the visiting team will be considered by the chairman.

(iv) The modified draft report will then become the final report.

(v) The final report will be sent to the Dean and/or relevant Head(s) of Departments for comment.

(vi) The comments made by the Dean and/or Head(s) will be sent to the visiting team chairman and the assessor.

(vii) The final report, and the comments made by the Dean and/or Head(s) will go to the Accreditation Committee for Higher Diploma Programmes at the decision meeting.

A copy of the final report shall be sent, by the HKIE secretariat, to the higher education institution for information (see Section 1.11). The higher education institution may make a formal response if it so desires.

The HKIE maintains strict confidentiality regarding accreditation matters. It is for the higher education institution to decide how information related to this accreditation should be released and may inform HKIE accordingly.

1.11 Accreditation Decisions

In advance of the accreditation visit, the Accreditation Committee for Higher Diploma Programmes will appoint one of its members, who can join the visit as an observer, to act as an assessor. The assessor will study all the documentation and, in consultation with the visiting team chairman, make recommendations to the Accreditation Committee for Higher Diploma Programmes for an accreditation decision. The Chairman of the Accreditation Committee for Higher Diploma Programmes will initiate the discussion on the programme(s) under consideration.

The accreditation report and higher education institution's responses, and all other relevant information and correspondence are passed to the Accreditation Committee for Higher Diploma Programmes for a decision.

The representatives of the higher education institution concerned usually the Dean and/or Head of Department may attend that part of Accreditation Committee for Higher Diploma Programmes meeting devoted to the presentation of the report. Members of the team may also be present.

At the meeting, the team chairman will present the report and representatives of the higher education institution, if present, may put forward further information and answer questions of fact. The Accreditation Committee for Higher Diploma Programmes will then conduct a private meeting at which the assessor will present recommendations. After which the Accreditation Committee for Higher Diploma Programmes may take one of the following decisions (section 1.6 refers):

a. that the programme(s) be fully accredited for a term of up to five years with or without conditions; or

b. that the developing programme(s) be granted provisional accreditation with or without conditions; or

c. that the accreditation of programme(s) be refused or terminated.

The Secretary to the Accreditation Committee for Higher Diploma Programmes will then inform the higher education institution of the decision by way of letter with a copy of the final report, in confidence, to the Vice Chancellor, President, Principal or Director, copied to the Dean or Head of Department.

1.12 Costs

Any higher education institution wishing its engineering higher diploma programmes to be accredited by the HKIE shall pay an accreditation fee on each visit. The accreditation fee charged per visit is to be determined by the

Accreditation Committee for Higher Diploma Programmes on agreement with the higher education institutions concerned.

In addition, the direct costs of each accreditation visit (travel, subsistence, accommodation) will be paid by the higher education institution concerned.

1.13 Confidentiality

All documents and other information obtained by the Accreditation Committee for Higher Diploma Programmes during the course of an exercise are kept confidential.

1.14 Appeal Procedures

In the event of a decision by the Accreditation Committee for Higher Diploma Programmes to refuse or terminate accreditation of an engineering higher diploma programme, the higher education institution concerned has the right to appeal to the Accreditation Board to review the decision.

1.15 Publication

A full list of accredited programmes and their period of accreditation is published each year, in June, with the Annual Report of the Accreditation Committee for Higher Diploma Programmes.

2. CRITERIA FOR THE ACCREDITATION OF ENGINEERING HIGHER DIPLOMA PROGRAMMES

2.1 Introduction

The HKIE undertakes professional accreditation to evaluate the standard and quality of engineering higher diploma programmes. In doing so it takes into account a number of factors about the programmes and the higher education institutions which offer them. The quality of an engineering higher diploma programme depends on more than just the curriculum and syllabus. The calibre of the academic staff, the entry standards, staffing levels, teaching methods, facilities, funding and methods of assessment are just some of the factors which influence the quality of the educational experience and the outcomes.

The following describes broad criteria which are used by the HKIE regarding appropriate engineering higher diploma programmes for the profession. In setting them out, the HKIE considers it important, both in the context of educational and professional objectives, for higher education institutions to encourage an environment which can accommodate innovative educational developments and to allow for the expression of the higher education institution's individual strengths, qualities and ideals.

2.2 Standards

In undertaking accreditation, the HKIE takes note that engineering higher diploma programmes should meet the academic requirements for the Associate Members of the HKIE.

2.3 One or More Programmes

The following criteria relate to one or more programmes, but for simplicity are presented in relation to one programme. However, for more than one programme the emphasis of the criteria is shifted to departmental or Faculty objectives, ethos and resources, which provide a context for the subsequent consideration of individual programmes.

2.4 Aims and Objectives

In its submission for accreditation of an engineering higher diploma programme, the higher education institution should be able to express the aims, objectives and ethos of the programme(s) both in relation to the appropriate standards of engineering higher diploma level education and the requirements of the profession. The higher education institution should demonstrate how its programmes meet the aims and objectives, and how they can respond to future developments.

The HKIE appreciates that engineering programmes develop and are dynamic entities which must evolve with technology and the changing needs of the profession and society. Consequently, the HKIE expects a higher education institution to be able to articulate such developments in terms of how the structure and rationale of its programmes can respond to change.

2.5 Duration

The HKIE believes that engineering higher diploma programmes should have a minimum duration of three years full-time equivalent (HKCEE entry) or two years full-time equivalent (HKALE entry), of which a one-year full-time equivalent consists normally of about 28 weeks of classroom, laboratory, workshop and related activities.

The criteria set out here provide broad guidance for a three-year full-time equivalent programme. It is accepted that a longer programme than this will enable an higher education institution to introduce subjects and activities which could contribute further to the education of engineering higher diploma students, but the onus is on the higher education institution to demonstrate that the programme contains at least the equivalent of the three year programme which meets the HKIE's requirements.

2.6 Part-time Engineering Higher Diploma Programme

If a part-time engineering higher diploma programme is offered, or if a student undertakes a programme on a part-time basis, all requirements of an accredited programme must be met. The standards of the graduates should not be affected by the mode of study.

2.7 Syllabus and Curriculum

The HKIE does not wish to impose any uniformity on higher education institutions in relation to curricula and syllabuses, but encourages them to develop courses, making the best use of resources, responding to academic and technological change, and recognising the needs of the students, community and profession. Nevertheless, the HKIE does require course content to be sufficient to enable engineering higher diploma students to acquire, within the duration of a programme, the basic knowledge and skills necessary to enable them to practise in an effective and professional manner at the level of Associate Member of the HKIE. For definition of Higher Diploma and definition of Associate Member, please refer to the Nomenclature section of this Booklet.

The HKIE accepts that it is not the best interest of the academic institutions and the validation panels to state exhaustively all essential elements and contents of a

board range of engineering courses and programmes. However, the Institution expects the curricula for engineering higher diploma programmes to have three main components, namely, mathematics and computing, engineering subjects and complementary studies, as follows:

2.7.1 Mathematics and Computing

The mathematics and computing contents of an engineering higher diploma programme should provide tools for engineering subjects, should include concepts and principles, and emphasise analysis and application. Mathematics and computing may be delivered as separate topics; however, it is desirable for mathematics and computing to be delivered within the context of their application to engineering problems and within the engineering subjects of the programme. Computing is considered an essential part of the engineering education experience, and all engineering higher diploma graduates should be computer literate, and have acquired the skills specific to their branch of engineering studies.

It is also considered that Associate Members of the HKIE of different engineering disciplines may require different levels and coverage of mathematical and computing skills. Within an engineering higher diploma programme, the mathematics and computing contents should be adequate (e.g. between 5% and 15% of the total scheduled hours).

2.7.2 Engineering Subjects

a. Engineering Sciences

The engineering sciences have their roots in mathematics and basic sciences, but carry knowledge further towards creative application. In name they may include such (courses) subjects as mechanics of solids, fluid mechanics, thermodynamics, electrical and electronic circuits, materials science, soil mechanics, aerodynamics, control systems, transport, and so on depending on the discipline.

In an engineering higher diploma programme, the HKIE expects a higher education institution to provide engineering courses for the appropriate discipline supported by others which provide an appreciation of related disciplines in a coherent and organised manner.

b. Engineering Design

The HKIE believes the importance of design is such that a separate topic on it should be established. However, it is accepted that the applied nature of this activity is relevant to almost every engineering endeavour and that its best delivery could be within the engineering science courses in a programme. The establishment of it as a separate topic can be used

to demonstrate that it is a creative, iterative and often open-ended process and to provide for discussion of general design techniques and philosophy, as well as the financial, quality, safety and environmental implications.

c. Laboratory and Field Work

Courses must be supported by laboratory work, well co-ordinated with the lecture material and supported with relevant up-to-date equipment. HKIE believes that engineering higher diploma graduates should be skilled in laboratory work and fieldwork as appropriate to the discipline and be familiar with some of the instruments and testing equipment common to that discipline.

Residential field courses in subjects such as surveying and geology are considered important where these subjects are an integral part of the programme.

d. Project

The HKIE believes that project work is an important means of introducing a professional approach to engineering studies. For this reason, the use of projects as a vehicle for the integration of subject areas is strongly recommended throughout the course. The programme should include challenging project work. Normally, students should be individually assessed. The project should pull together the many strands of the programme, particularly addressing design, synthesis, application and creativity.

Within an engineering higher diploma programme, the HKIE considers that normally about 60% of the content should be engineering subjects.

2.7.3 Complementary Studies

Studies which provide the student with an appreciation of wider issues to enable an Associate Members of the HKIE to operate responsibly in society should be fully integrated within the programme. Such studies may include management, economics, law, finance, a foreign language, and so on.

a. Practical Training

The benefits of practical experience obtained during an engineering programme are recognised. It is recommended that students aggregate significant, relevant practical training or employment. The higher education institutions should encourage this activity.

b. Health, Safety and the Environment

Appropriate exposure to health, safety and environmental considerations for workers and the general public should be integral and demonstrable components of programmes.

c. Communications

It is essential for Associate Members of the HKIE to have good communication skills. Engineering higher diploma programmes should contain instruction in the art and practice of communication by the spoken and written word, and where appropriate by drawing and sketching. It is desirable that oral presentations are included in the assessment. It is important that engineering higher diploma graduates should have an appropriate level of proficiency in English and Chinese.

d. Engineering Profession

It is considered that students should be introduced to the role of practising Associate Members of the HKIE, their social and ethical responsibilities towards the profession, colleagues, employers, clients and the public, and the impact of technology on society. Furthermore, they should be made aware of the role of the engineering institutions.

They should also be encouraged to become student members of the HKIE and to take part in its activities.

It is believed that complementary studies including language/communications, should be a significant proportion of an engineering higher diploma programme. It is likely that this proportion will vary according to the need of the discipline/industry.

2.8 Academic Staff

Important factors in determining the standard of an engineering programme are the experience, quality and commitment of the teaching staff. A significant proportion of the academic staff responsible for delivering an engineering higher diploma programme should be able to demonstrate academic attainment and capability in both teaching and engineering practice. It is preferable that members of the staff have professional experience and qualification.

The required number of academic staff depends upon a number of factors, such as:

- the number of courses, together with their content and duration;

- the number of undergraduate students;

- the expertise required to teach the range of courses provided;

- the provision of small tutorial and design groups.

The majority of staff should be full-time employees of the higher education institution although it is accepted that a certain number of practising professionals from industry, employed on a part-time basis can make a special contribution to the delivery of courses. Consequently it is recommended that local practising engineers be invited to take part in the education of the students through formal and informal lectures, involvement in design projects and/or by acting as industrial tutors.

The student/staff ratio should be sufficient for the appropriate delivery of programmes and at no time should a programme become critically dependent on one individual.

As engineering programmes also require input from non-engineering personnel, particularly in the areas of mathematics, basic and applied sciences and the humanities, it is considered that the quality of such staff should be commensurate with that of the engineering staff.

Engineering staff should have effective control of engineering programmes even if some parts of the programmes may be supported by non-engineering staff.

2.9 Resources

Engineering programmes rely on an adequate provision of support staff, administration, laboratories, information services, computing facilities, finance and other resources and there should be an adequate provision of:

2.9.1 Support Staff

There should be sufficient technicians and workshop staff to ensure the smooth and safe management of laboratories, maintenance of equipment and general support.

Administrative and secretariat staff should be sufficient to aid the academic staff.

2.9.2 Accommodation and Equipment

There must be adequate provision of lecture rooms, laboratories, workshops, drawing offices and private study areas to support the programme of lectures, tutorials and practical. Laboratories should be well equipped with adequate and modern equipment and should provide a safe working environment for the students.

2.9.3 Computing Facilities

Computing facilities should be consistent with the aim of using computers as part of the engineering education experience. These facilities must be appropriate for engineering applications such as modelling, simulation, computer aided design and laboratory work.

Students should have easy and adequate access to such facilities.

2.9.4 Information Services

The higher education institution should be able to provide adequate resources for reference and information making use of conventional and latest methods and facilities, including books, journals, tapes, films, disks and databases.

Regarding conventional library facilities, these should provide a range and variety of technical and non-technical books, and a comprehensive range of journals covering relevant engineering disciplines. The inter-library loan system should be available to all students, together with abstract and literature search facilities for project work. Students should have easy and adequate access to these facilities.

2.9.5 Finance

This should be adequate to ensure the smooth operation of a programme and the provision and maintenance of laboratory, computers, libraries and other support facilities as well as providing for the development of the programme, courses and the upgrading of equipment.

2.10 Assessment

Assessment of student performance should reflect the true performance of each student as measured by course work, laboratory work, design studies, projects, formal examinations and other forms of assessment.

The HKIE believes that an independent quality assurance system such as the independent external examiner system or equivalent, is essential to maintain the academic standards of programmes.

2.11 Entry Levels

The HKIE does not prescribe minimum qualifications for entry to engineering higher diploma programmes, but it does expect that the selection criteria are consistent with the majority of students being able to complete the programme at the expected standard. While a broadening of subjects studied prior to an

engineering higher diploma programme can be beneficial, for entry to engineering higher diploma programmes the HKIE considers it crucial that a student demonstrates ability in the subjects of Mathematics, Physics, Science or Technology at an appropriate standard. (refer 2.5 Duration)

Selection procedures which are not standard must be justified by the higher education institution.

2.12 Development

The HKIE believes it is incumbent on an academic institution to be sensitive to the requirements of society and the profession, and consequently, to develop programmes to respond to local and international requirements and to provide opportunities for staff to develop their skills so that they can deliver programmes meeting local and international professional and academic standards. In order to do this, the HKIE believes that higher education institutions have a responsibility to liaise with the engineering profession and industry in relation to engineering higher diploma programmes and their development.

2.13 Programme Amendments

It is expected that from time to time there will be evolutionary changes to a programme within the period of its accreditation. Any modification to a programme should maintain the spirit of the programme as accredited and may include such changes as:

- a change in the title of the programme;
- a change in the length of the programme;
- the addition of options and/or streams;
- a significant reduction in the provision of resources for the programme.

The higher education institution should inform the HKIE of major curriculum changes. The Accreditation Committee for Higher Diploma Programmes may then consider any subsequent actions including initiation of a visit or request of a written report.

3. ACCREDITATION SUBMISSIONS

When preparing a submission for professional accreditation, the higher education institution is advised to consider the criteria in section 2 carefully, and to consult the HKIE as appropriate.

3.1 Provisional or Full Accreditation

The following information and details which are requested relate both to provisional and full accreditation submissions. However, 'historical' information is obviously not relevant to provisional accreditation.

For the provisional accreditation of developing programmes the exercise should commence at least six months before the first cohort of students has reached the half way stage of the programme, at which time the responsible higher education institution should provide the preliminary details (section 3.2).

For the full accreditation of existing programmes, the responsible higher education institution should submit the preliminary details no later than six months before the expiry of approval.

For the full accreditation of developing programmes the exercise may commence at a date, mutually acceptable to the HKIE and the higher education institution, after the first graduates have emerged. The preliminary details should be submitted no later than six months before the visit.

In both cases, the full information requested (section 3.3) should be submitted at least six weeks before the date of any visit. If as a result of considering the submission further information is required, the chairman of the HKIE Accreditation Committee for Higher Diploma Programmes, in consultation with the chairman of the visiting team and the higher education institution may arrange to delay the timing of any visit or, in exceptional circumstances the cancellation of the exercise.

3.2 Preliminary Details

A higher education institution seeking accreditation of a programme(s) is required to submit the following introductory information:

1. title of the faculty/college or department;

2. dean, head(s) of department(s), names, qualifications and date of appointments;

3. title of the programme(s);

4. name of programme leader;

5. accreditation sought (provisional or full);

6. brief resume(s), 100 words maximum, about the programme(s) submitted;

7. provisional dates for the visit.

3.3 Full Information

The following details and documents are to be provided at least six weeks before the date of a visit:

1. if relevant, changes made to the programme(s) since any last visit. (If accredited by another professional body, the HKIE should have an opportunity of receiving the appropriate reports);

2. details of self validation procedures;

3. details of administrative and authoritative structure of the higher education institution and Faculty/College, indicating who holds ultimate responsibility for the programme;

4. the programme(s) philosophy;

5. duration of programme(s) in full-time equivalent and actual years, and in weeks per annum;

6. allocation of students' weekly work load as between lectures, tutorials, laboratory, project, etc, for each year of the programme(s);

7. details of the curriculum listing each course and subject, and the lecturer/lecturers, and giving for each subject the time-tabled hours per week for lectures, tutorials, and practical work, the total hours per week and per year. These details should be given for each year of the programme(s);

8. details of the programme including the following:
   a. syllabuses;

   b. objectives of each individual course;

   c. hours allocated to each topic listed in the content;

   d. practical experiments, drawings, fieldwork, or other practical work in relation to the syllabus;

e. lists of essential and reference text-books;

9. details of the student admission procedures including the following:
   a. minimum entry requirements (including examples of advanced standing, if any);

   b. selection criteria;

   c. number of students admitted to the programme(s) year by year;

   d. entry qualifications of students;

10. details of assessment procedures for syllabuses and for the programme(s) as a whole, including the assessment methods and attrition rate, plus the following:
   a. the marks for each subject and the percentage of these allocated to written, practical project, and continuous assessment elements of the total marks for the subject;

   b. final examination results for the past five years, or since commencement;

   c. number and duration of examinations and/or practical tests for terminal examinations in each subject;

   d. the conditions which permit a candidate to advance from one stage to the next;

   e. the basis on which candidates are permitted to repeat failed subjects and to carry exemptions in other passed subjects;

11. details of external examination, or similar monitoring;

12. details of the teaching and support staff, including the following:
   a. academic staff with curriculum vitae for each member listing the name, position, qualifications, membership of professional bodies, experience, research consultancy and publications;

   b. technical, laboratory and other support staff with details of the names, qualifications and experience;

13. details of lecture halls, laboratories, workshops, and other work areas available for the programme, listing the floor area, number of student places and equipment;

14. information services, in particular, library facilities, and books and journals available for the programme(s);

15. computer facilities available for the programme(s);

16. graduate employment;

17. external professional contact by the staff and students;

18. funding of the department, equipment and research;

19. future plans, budgets and intentions for the programme(s);

20. evidence of practical training undertaken by the students;

21. process for ensuring continuing development of staff and programmes;

22. other information which the Faculty or College may wish to supply regarding the environment for the programme.

3.4 Information to be Available During the Visit

The following material is to be made available during the accreditation visit:

1. examination question papers, specimen solutions for the last three normal examinations in each course;

2. marked examination scripts for the most recent examination in each course. For large classes the selection supplied should be representative of the range of marks;

3. course material supplied to students: course outlines, tutorial sheets, laboratory experiment instruction sheets, prescribed texts, notes etc;

4. examples of final year design, laboratory and other projects representative of the range of topics covered and the markings.

APPENDIX

NOMENCLATURE

Academic Accreditation
Any evaluation or assessment to determine whether the academic standards of an institution of higher education are comparable with internationally recognised standards. It includes course validation, course revalidation, institutional review and institutional accreditation.

Professional Accreditation
The evaluation and comparison of the academic standards of a degree or sub-degree and consideration of the appropriateness of the education component of that degree or sub-degree for professional practice.

The Accreditation Panel for Engineering Higher Diploma Programmes
Those Members of the Institution who are appointed to carry out professional accreditation visits on behalf of the HKIE.

The Accreditation Exercise
The full professional accreditation process.

The Accreditation Visit
A visit to an academic institution as an integral part of the professional accreditation exercise.

The Visiting Team
Members of the Accreditation Panel selected to carry out an accreditation exercise.

Programme
Refers to the complete curriculum of an engineering higher diploma, comprising courses/modules/credit units, assignments, workshops, projects and so on.

Course
Refers to a specific taught part of an engineering higher diploma programme (course is sometimes used to describe a whole engineering higher diploma programme, where that programme has a fixed curriculum). Courses are sometimes referred to as subjects, modules or credit units.

Definition of Higher Diploma
Higher Diploma is an academic TERMINAL award, in which the course structure and curriculum provide a self-contained body of knowledge and skills, designed to meet the needs of Technician Engineers in a specific engineering discipline.

A technician engineer is one who can apply in a responsible manner proven techniques which are commonly understood to be appropriate by those who are expert in the specific engineering discipline, and any other techniques specially prescribed by his/her professional engineer supervisors.

A technician engineer requires an education and training sufficient to enable him to understand the reasons for and purpose of the operations for which he is responsible.

Associate Members of the HKIE
A definition used by the Conference of Engineering Societies of Western Europe and the United States, was adopted by the HKIE for the class of Associate Member:

"An Associate Member is one who can apply in a responsible manner proven techniques which are commonly understood by those who are expert in a branch of engineering, or those techniques specially prescribed by professional engineers.

"Under general professional engineering direction, or following established engineering techniques, he is capable of carrying out duties which may be found among the list of examples set out below.

"In carrying out many of these duties, competent supervision of the work of skilled craftsman will be necessary. The techniques employed demand acquired experience and knowledge of a particular branch of engineering, combined with the ability to work out the details of a task in the light of well-established practice.

"An Associate Member requires an education and training sufficient to enable him to understand the reasons for and purpose of the operations for which he is responsible.

"The following duties are typical of those carried out by Associate Members under the conditions referred to above.

"Working on design and development of engineering plant and structures: erecting and commissioning of engineering equipment and structure; engineering drawing; estimating, inspecting and testing engineering construction and equipment; use of surveying instruments; operating, maintaining and repairing engineering machinery, plant and engineering services and locating defects therein; activities connected with research and development, testing of materials and components and sales engineering, servicing equipment and advising consumers."