

ENGINEERING ACCREDITATION COUNCIL

Checklist of Documents for Accreditation */Approval of New Programme ** and Relevant Information

Please tick:

| | |
|---------------------------|--|
| Accreditation | |
| Approval of New Programme | |

*** For accreditation of programme only, please fill out the table below for qualifying requirements:**

| | Qualifying Requirements for Application Programme Accreditation | Yes/No |
|---|---|---------------|
| 1 | Outcome-based Education (OBE) implementation. | |
| 2 | A minimum 135 credits of which 90 credits must be engineering courses offered over a period of four years. (Based on SLT) | |
| 3 | Integrated design project. | |
| 4 | Final year project (minimum six (6) credits). | |
| 5 | Industrial training (minimum of eight (8) weeks). | |
| 6 | Full-time academic staff (minimum of eight (8)) with at least three (3) Professional Engineers registered with the BEM or equivalent. | |
| 7 | Staff: student ratio of 1: 20 or better | |
| 8 | External examiner's report. | |

Failure to meet any one of the qualifying requirements will mean that the programme shall not be assessed for accreditation, and the process shall stop here and no submission to the EAC can be made by the IHL. IHLs are advised to ensure all requirements are fulfilled by the programme before re-applying for accreditation.

**** For Approval of a New Programme, please fill respond to this Appendix wherever applicable.**

INTRODUCTION

This Appendix contains checklist of Documents for Accreditation/Approval of New Programme and Relevant Information as follows:

All sections are to be submitted online (<https://eac.org.my/online/public/>). Hardcopies are required when requested by AD.

A GENERAL INFORMATION

| No. | Refer to Section 7.3.1 | To be filled out by the IHL where applicable | Checked by EAD |
|-----|--|--|----------------|
| 1 | Name of IHL. | | |
| 2 | Address of IHL. | | |
| 3 | Name of Faculty/School/Department. | | |
| 4 | Name and phone number of Staff to be Contacted. | | |
| 5 | Programme for Accreditation. (For new programme, the IHL needs to discuss the rationale for introducing the programme). | | |
| 6 | EAC Reference Number. | | |
| 7 | Degree to be Awarded and Abbreviation. | | |
| 8 | IHL Awarding the Degree: (if different from A1). | | |
| 9 | Mode of Study [Full-Time/Twinning/Part-Time/Others (please specify)]. | | |
| 10 | Duration of Programme (in years). | | |
| 11 | Medium of Instruction of Programme Evaluated. | | |
| 12 | Language Available for Reference Materials. | | |
| 13 | IHL Academic Session. | | |
| 14 | URL Address; IHL website. | | |

B PROGRAMME ACCREDITATION HISTORY

| No. | Refer to Section 7.3.1 | To be filled out by the IHL where applicable | Checked by EAD |
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| 1 | Introduction Year of Programme. | | |
| 2 | Year of Last Accreditation for this Programme. | | |
| 3 | Conditions (if any) from Previous Accreditation. | | |

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| 4 | Action Taken on the Conditions Above | | |
| 5 | Major Changes (Self-Initiated) Reasons and Year of Changes. | | |

C CRITERION 1: PROGRAMME OBJECTIVES (PEOs)

| No. | Refer to Sections 6.1 and 7.3.2 | Indicate the location of these items in the submitted SAR | Checked by Evaluation Panel |
|-----|---|---|-----------------------------|
| 1 | State the vision and mission of the IHL and/or faculty. | | |
| 2 | List the PEOs and state where they are published or publicised. | | |
| 3 | Describe the processes used to formulate or review, define performance targets, and evaluate the level of attainment of the PEOs. This includes describing graduates/alumni database and tools (survey, meetings, interviews, etc.) used in the processes, frequency of activities and timelines. | | |
| 4 | Describe the attainment of the PEOs and elaborate how the feedback and are being used for the CQI of the programme. Elaborate how the various stakeholders are involved in the CQI process. | | |

D CRITERION 2: PROGRAMME OUTCOMES (POs)

| No. | Refer to Sections 6.2 and 7.3.3 | Indicate the location of these items in the submitted SAR | Checked by Evaluation Panel |
|-----|--|---|-----------------------------|
| 1 | List down the POs and state where are they published or publicised. | | |
| 2 | Describe how the POs relate to the PEOs and are consistent with the 12 EAC's POs of Section 6.2. | | |
| 3 | Describe the OBE model adopted in your programme. <ul style="list-style-type: none"> • Where is each PO assessed? • How is each PO assessed? • What is the satisfactory attainment? | | |
| 4 | Describe the attainment of the POs and elaborate how the feedback and results are being used for the CQI of the programme. | | |

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| | Elaborate how the various stakeholders are involved in the CQI process. | | |
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E CRITERION 3: ACADEMIC CURRICULUM

| No. | Refer to Sections 6.3 and 7.3.4 | Indicate the location of these items in the submitted SAR | Checked by Evaluation Panel |
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| 1 | Describe the programme structure and course contents to show how they are appropriate and consistent to support the development of the range of intellectual and practical skills according to Knowledge Profile, Complex Problem Solving and Complex Engineering Activities. | | |
| 2 | Discuss the programme delivery and assessment methods to support the development of the range of intellectual and practical skills according to Knowledge Profile, Complex Problem Solving and Complex Engineering Activities. | | |
| 3 | <p>The information required in items 1 and 2 above should include but is not limited to the following:</p> <ul style="list-style-type: none"> ○ A matrix linking courses to POs to identify and track the contribution of each course to the POs. IHL may adopt the sample overall ‘Courses to POs’ mapping matrix included in Appendix G of this Manual to identify and track the contribution of the courses to the POs may be referred to as a guiding template. IHL may, however, adopt own mapping strategy that may be different from the sample template. ○ Distribution of the engineering courses according to areas specific to each programme referring to Appendix B underpinning Engineering Sciences, Principles, and Applications) for traditional courses (Civil, Mechanical, Electrical, Chemical and Electronics), and areas obtained from benchmarking exercises with established programme elsewhere for non-conventional programmes. | | |

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| | <ul style="list-style-type: none"> ○ Mapping of the courses to the Knowledge Profile in Appendix B. ○ Distribution of the related non-engineering (general education) courses. ○ Distribution of the courses offered according to semester. <p>(Note: Samples of table formats are available in Appendix G).</p> | | |
| 4 | Describe laboratory exercises, related POs, and approach to deliver and assess. Give examples of open-ended laboratory activities. | | |
| 5 | Describe industrial training scheme and relate it to POs using appropriate examples. | | |
| 6 | Describe exposure to professional practice and relate it to POs. Cite examples of exposure to professional practice activities. | | |
| 7 | Describe Final Year Projects (FYP), related POs, and how FYP fulfils the specific requirements stipulated in the Manual as well as addressing Complex Problem Solving and Complex Engineering Activities characteristics. | | |
| 8 | Describe Integrated Design Projects (IDP), related POs, and how IDP fulfils specific requirements stipulated in the Manual as well as addressing Complex Problem Solving and Complex Engineering Activities characteristics. | | |
| 9 | Describe how the programme has met the 'Condition for Passing Courses' as stipulated in the Manual. | | |
| 10 | Describe how benchmarking and other feedback from the various stakeholders (from EAC, IAP, alumni, External Examiner, etc.) are involved in the curriculum development and CQI process. | | |

F CRITERION 4: STUDENTS

| No. | Refer to Sections 6.4 and 7.3.5 | Indicate the location of these items in the submitted SAR | Checked by Evaluation Panel |
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| 1 | Describe the requirement and process for admission of students to the programme. | | |
| 2 | Describe the policies and processes for credit transfer/exemption. | | |
| 3 | Describe students' counselling services available. | | |
| 4 | Describe formal or informal feedback platform/channel to obtain students feedback and suggestions for further programme improvement, and how have the feedback resulted in programme improvement. | | |
| 5 | Describe students' workload. | | |
| 6 | Describe students' activities and involvement in student organisations and relevant professional engineering bodies that provide experience in management and governance, representation in education and related matters and social activities. | | |
| 7 | <p>The information required in items 1 to 6 above should include but is not limited to the following:</p> <ul style="list-style-type: none"> ○ The distribution of students' enrolment for all academic years for the past four years (Table 6 in Appendix G). ○ The entry qualifications of final year students of the current semester (Table 7 in Appendix G). | | |
| 8 | Describe how the students have demonstrated the attainment of all the POs from overall holistic perspective involving both curricular and co-curricular activities (design competitions, public speaking activities, community services, etc). | | |
| 9 | Describe CQI strategies implemented in relation to students' development. | | |

G CRITERION 5: ACADEMIC AND SUPPORT STAFF

| No. | Refer to Sections 6.5 and 7.3.6 | Indicate the location of these items in the submitted SAR | Checked by Evaluation Panel |
|-----|---|---|-----------------------------|
| 1 | <p>Discuss the adequacy and competencies of the academic staff in covering all areas of the programme, and in implementing the Outcome-based approach to education. The overall competence of Academic staff is viewed from their diversity of background, academic qualification, academic and professional practice experiences, including their track record in teaching, research, publications, administration and service to the society, ability to communicate, enthusiasm for developing more effective programmes, level of scholarship, participation in professional societies and attainment of Professional status as stipulated in the Manual.</p> | | |
| 2 | <p>Discuss how the overall staff workload enables effective teaching, student-staff interaction, student advising and counselling, IHL service and research activities, professional development and interaction with industry.</p> | | |
| 3 | <p>Discuss the sufficiency and competency of technical and administrative staff in providing adequate support to the educational programme.</p> | | |
| 4 | <p>The information required in items 1 to 3 above should include but is not limited to the following:</p> <ul style="list-style-type: none"> ○ A breakdown in terms of numbers of academic staff (full-time, part-time and inter-programme) by year for the past four years (Table 8 in Appendix G). ○ An analysis of all academic staff (Table 9 in Appendix G). ○ A summary of the academic qualifications of academic staff (Table 10 in Appendix G). ○ A summary of the professional qualifications and membership in professional bodies/societies of academic staff (Table 11 in Appendix G). This shall | | |

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| | <p>also include registration with Board of Engineers Malaysia (BEM) in line with the requirement.</p> <ul style="list-style-type: none"> ○ A summary of the posts held by full time academic staff (Table 12 in Appendix G). ○ A summary of teaching workload of academic staff for the current semester (Table 13 in Appendix G). ○ An analysis of all support staff (Table 14 in Appendix G). ○ A summary of the posts held by support staff (Table 15 in Appendix G). ○ The staff: student ratio by year for all academic years for the past four years (Table 16 in Appendix G). ○ A listing of lecturers/invited speakers from industry/public bodies and their level of involvement. | | |
| 5 | Describe the implemented professional training scheme and incentives for academic staff. List down academic staff who have undergone or still undergoing training. Provide future projected professional training programme. | | |
| 6 | Describe participation of academic staff in consultancy activities. | | |
| 7 | Describe participation of academic staff in research and development activities. | | |
| 8 | Describe CQI strategies to be implemented in relation to Academic and Support Staff development. | | |

H CRITERION 6: FACILITIES

| No. | Refer to Sections 6.6 and 7.3.7 | Indicate the location of these items in the submitted SAR | Checked by Evaluation Panel |
|-----|---|---|-----------------------------|
| 1 | Discuss the adequacy of teaching and learning facilities such as classrooms, learning-support facilities, study areas, information resources (library), computing and information-technology systems, laboratories and workshops, and associated equipment to cater for multi-delivery modes. | | |

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| 2 | For programmes offered wholly or partly in distance mode, or at multiple or remote locations, describe how the facilities provided are equivalent to those provided for on-campus students. | | |
| 3 | Describe the adequacy of support facilities such as hostels, sport and recreational centres, health centres, student centres, and transport in facilitating students' life on campus and enhancing character building. | | |
| 4 | <p>The information required in items 1 to 3 above should be provided in the supporting documents but is not limited to the following:</p> <ul style="list-style-type: none"> ○ A summary, in tabulated form, of the lecture facilities (give number, capacity, and audio video facilities available). ○ A summary, in tabulated form, of the laboratories (list down the equipment available in each laboratory). ○ A summary, in tabulated form, of the workshops (list down the equipment/machinery available in each workshop). ○ A summary, in tabulated form, of the computer laboratories (list down the hardware and software available). ○ A summary, in tabulated form, of the other supporting facilities such as the library (list down the titles of books/journals/magazines/standards of relevance to the programme). ○ A summary, in tabulated form, of recreational facilities. ○ A summary, in tabulated form, of information on recent improvements and planned improvements in these facilities. | | |
| 5 | Describe maintenance and calibration aspects of teaching facilities and equipment/apparatus. | | |
| 6 | Discuss procedures and monitoring of health, safety and environmental aspects of facilities | | |

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| | including lecture halls, laboratories, equipment, etc managed by the IHL. | | |
| 7 | Describe CQI strategies implemented in relation to facilities. | | |

I CRITERION 7: QUALITY MANAGEMENT SYSTEMS (QMS)

| No. | Refer to Sections 6.7 and 7.3.8 | Indicate the location of these items in the submitted SAR | Checked by Evaluation Panel |
|-----|---|---|-----------------------------|
| 1 | Describe the Quality Management Systems and organisational structure of the IHL as well as the structure within the faculty/department/programme. Discuss the commitment and level and adequacy of institutional support, operating environment, financial resources, constructive leadership, policies and mechanisms for attracting, appointing, retaining and rewarding well-qualified staff and provision of professional development, and provision of infrastructure and support services to achieve the PEOs and POs and assure continuity/sustainability of the programme. All relevant policies are to be made available during the visit. | | |
| 2 | Discuss the mechanism for the following: programme planning; curriculum development; curriculum and content review; responding to feedback and inputs from various stakeholders (Industry Advisory Panel (IAP), students, alumni, etc.); tracking the contribution of courses to the POs; tracking outcomes of performance from assessment; responding to External Examiners comments; reviewing of PEOs and POs; and Continual Quality Improvement (CQI). | | |
| 3 | Summarise feedback obtained from various stakeholders (External Examiner, IAP, students, alumni, etc.) and how CQI was carried out. | | |
| 4 | Summarise benchmarking reports and how CQI was carried out. | | |
| 5 | Describe how the Quality Management System (QMS) of the IHL provides quality assurance covering (not limited to) the following: | | |

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| | <ul style="list-style-type: none"> ○ System for Examination Regulations including Preparation and Moderation of Examination Papers: The programme has established a working system for examination regulations including preparation and moderation of examination papers. ○ System of Assessment for Examinations, Projects, and Industrial Training: The programme has established a working system for assessment of examinations, projects, industrial training and other forms of learning delivery. The scope of assessment is wide enough to cover the achievement of POs. ○ System for student admission and teaching and learning: The programme has established a working system for student admission and teaching and learning. | | |
| 6 | Describe the management system and enculturation of safety, health and environment. | | |
| 7 | Describe CQI strategies implemented in relation to QMS. | | |

J SUPPORTING DOCUMENTS

All evidences are to be provided.