**Annexure 2: Evaluation Support Forms**

*Instruction: In the right-hand column, insert a word or words that indicate the team’s judgement of the programme against the criterion or item. For example:*

*Yes/No Complies Concern exists Partly compliant Non-compliant No evidence*

*Not Applicable*

*Comment as required or use the spaces marked with < > to insert prose notes on potential deficiencies or concerns. Such entries support but do not remove the need for a properly reasoned account in the main body of the report.*

*xx refer to the credits defined for the qualification,*

**Criterion 1: Structure, content and knowledge breakdown**

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| **Question 1.1:** Does the programme purpose statement indicatethe primary purpose of meeting the educational requirements for <Category>? | Yes/No |
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| **Question 1.2:** Does the programme comprise a minimum of <required credits> (as defined in the relevant standard document with at least 120 credits at the exit level? | **Yes/No** |
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| **Question 1.3:** Does the programme breakdown by knowledge area conform to the minima specified in the relevant standard? Use columns three and four in the table below for reporting |
| Knowledge area | MinimumCredits perStandard | Actual Credits | ComplianceYes/No |
| Mathematics | xx |  |  |
| Natural Sciences | xx |  |  |
| Engineering Sciences | xxx |  |  |
| Design and Synthesis | xx |  |  |
| Complementary studies | xx |  |  |
| Subtotal | xxx |  |  |
| For reallocation | ≥xxx |  |  |
| Total | ≥xxx |  |  |
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| **Question 1.4:** Does the programme have a coherent coreconsistent with the Level Descriptor and Range Statement of GA 2? | Yes/No |
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| **Question 1.5:** Does the programme have specialised study asdescribed in the relevant standard document. | Yes/No |
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| **Question 1.6:** Does the programme have a designation(qualifier/s) that is consistent with the programme’s purpose and the engineering science content? | Yes/No |
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| **Question 1.7:** Does the programme have explicit rules ofcombination and progression? | Yes/No |
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| **Question 1.8:** Does the programme have explicit horizontal andvertical articulation options? |  |
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**Criterion 2: Assessment of graduate attributes**

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| **Questions 2.1 and 2.2:** Does the assessment process withinthe programme* ensure that all graduates satisfy each graduate attributes defined in the relevant standard document?

use a documented set of assessment criteria and processes, which taken together demonstrate that the outcomes are satisfied at the level indicated by the range statement? | **Team’s Evaluation***Complies Concern exists Partly compliant Non-compliant No evidence**Not applicable* |
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**Exit-Level Outcomes**

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| **2.1: Problem-solving***Learning outcome:* Identify, formulate, analyse and solve *complex/broadly defined/well defined engineering* problems. (See the relevant standard document for level descriptor) |  |
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| **2.2: Application of scientific and engineering knowledge***Learning outcome:* Apply knowledge of mathematics, natural sciences, engineering fundamentals and an engineering speciality to solve *complex/broadly defined/well defined* engineering problems. (See the relevant standard document for Level Descriptor and Range Statement) |  |
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| **2.3: Engineering design***Learning outcome:* Perform creative, *procedural* and *non-procedural* design and synthesis of components, systems, engineering works and products or processes. (See Range Statement for GA 3) |  |
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| **2.4: Investigations, experiments and data analysis***Learning outcome:* Demonstrate competence to design and conduct investigations and experiments. (See Range Statement for GA 4) |  |
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| **2.5: Engineering methods, skills and tools, including****information technology***Learning outcome:* Demonstrate competence to use appropriate engineering methods, skills and tools, including those based on information technology. (See Range Statement for GA 5) |  |
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| **2.6: Professional and technical communication***Learning outcome****:*** Demonstrate competence to communicate effectively, both orally and in writing, with engineering audiences and the community at large. (See Range Statement for GA 6) |  |
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| **2.7: Sustainability and impact of engineering activity***Learning outcome****:*** Demonstrate *critical awareness* of the sustainability and impact of engineering activity on the social, industrial and physical environment. (See Range Statement for GA 7) |  |
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| **2.8: Individual, team and multidisciplinary work***Learning outcome****:*** Demonstrate competence to work effectively as an individual, in teams and in multidisciplinary environments. (See Range Statement for GA 8) |  |
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| **2.9: Independent learning ability***Learning outcome:* Demonstrate competence to engage in independent learning through well-developed learning skills. (See Range Statement for GA 9) |  |
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| **2.10: Engineering professionalism***Learning outcome:* Demonstrate *critical awareness* of the need to act professionally and ethically and to exercise judgement and take responsibility within own limits of competence. (See Range Statement for GA 10) |  |
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| **2.11: Engineering management***Learning Outcome:* Demonstrate knowledge and understanding of engineering management principles and economic decision-making. (See Range Statement for GA 11) |  |
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| **2.12: Work Integrated Learning (where applicable)***Learning Outcome:* Demonstrate an understanding of workplace practices to solve engineering problems consistent with academic learning achieved. (See range statement for GA 12) |  |
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**Criterion 3: Quality of teaching and learning**

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| **Question 3:** What is the team's assessment of theprogramme in providing an effective teaching and learning process towards achievement of the outcomes as evidenced by the following? | **Evaluation***Complies Concern exists Partly compliant Non-compliant No evidence**Not Applicable* |
| **3.1:** The content, learning objectives, expected outcomes andmethod of assessment for each module of the programme are defined and documented and are available to staff and students. |  |
| < > |  |
| **3.2:** For each graduate, the information considered in 3.1 clarifies the modules in which the graduate attribute assessment takes place, the method of assessing the graduate attribute, the level of achievement required of the students and the consequences for the student of not satisfying the graduate attribute. |  |
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| **3.3:** The teaching and learning strategy and methodology is designed to achieve the outcomes of the programme with students who meet the stated admission criteria. |  |
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| **3.4:** Suitable learning opportunities are provided to facilitate the acquisition of knowledge and skills specified in the programme outcomes. |  |
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| **3.5:** The programme is effectively coordinated. |  |
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| **3.6:** The learning process encourages independent learningattitudes and abilities, and an appropriate mix and balance between different teaching and learning methods is maintained to encourage active participation of students in the teaching and learning process. |  |
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| **3.7:** The learning progress of students is appropriatelymonitored and where necessary, academic development support is provided to students through structured and monitored interventions. |  |
| < > |  |
| **3.8:** Assessment practices and procedures provide feedback to students at regular intervals. |  |
| < > |  |
| **3.9:** An internal process including moderation ensures that allforms of summative assessment of student performance within the programme are effective, fair and rigorous and address the stated learning objectives and outcomes. |  |
| < > |  |
| **3.10:** Graduate attribute assessment is subject to external moderation. |  |
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| **3.11:** The teaching and learning process is monitored by aneffective quality assurance process that supports continuous improvement. |  |
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| **3.12:** Student retention and throughput rates are monitored, and measures are taken to identify and address factors that adversely affect throughput both overall and for distinct groups. |  |
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| **3.13:** Where the rules of the programme require work-basedlearning for credit towards the qualification, the academic provider ensures that such learning is executed effectively and includes the following: |  |
| 1. The learning objectives and outcomes to be achieved are

defined and agreed upon with the workplace provider.1. Effective placement of students and ongoing communication in the workplace takes place.
2. Suitably qualified mentors who are technically competent in the discipline and the art of mentoring are available in the workplace.
3. Students are mentored in the workplace, and their performance is monitored and recorded in relation to specified objectives.
4. The student’s performance and competence are assessed through a rigorous process; this assessment is the responsibility of the academic provider.

Quality assurance of work-based learning processes by the academic provider ensures achievement of the objectives defined in (a) above. |  |
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| **3.14:** Additional accreditation criteria required for online programmes. |  |
| **3.14.1** All online material is available to students on a stable and affective network connection.  |  |
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| **3.14.2** The dedicated LMS makes provision for consultation, async and sync collaboration, communication, and feedback. |  |
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| **3.14.3** The LMS makes provision for virtual simulation and WIL where required. |  |
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| **3.14.4** The multipliers used for calculation of credits also account for async interaction with the learning material |  |
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| **3.14.5** The virtual contact in async lecturing mode is clearly specified and is verifiable through the timetable, learning guides and LMS records. |  |
|  < > |  |
| **3.14.6** The learning progress of students is appropriately monitored for success, and where necessary academic development support is provided through structured and monitored online interventions. |  |
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| **3.14.7** The method of assessment for each module is defined and documented in order to achieve and ensure assessment integrity. |  |
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| **3.14.8** Method of identity verification for each student is defined and documented to achieve and ensure assessment integrity. |  |
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| **3.14.9** The complexity of assessment making use of continuous evaluation is at the correct NQF level and the evaluation can be externally moderated. |  |
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| **3.14.10** The integrity of assessment of Graduate Attributes conducted online, is demonstrated. |  |
| < > |  |
| **3.14.11** Institutional assistance with computer literacy is provided to students where required. |  |
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| **3.14.12** Institutional intervention with data availability and internet access is provided for students where necessary. |  |
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| 3.14.13 The academic staff responsible for the programme are IT literate and competent to offer the programme using the LMS and Proctoring software available at the engineering education provider.  |  |
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| **3.14.14** The evidence of the online interaction between students and academic staff is provided.  |  |
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**Criterion 4: Resources and sustainability and capacity for improvement**

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| **Question 4.** What is the team's assessment of the programme in regard to the programme being adequately planned, resourced, led and executed to ensure that it is sustainable over the period of accreditation as evidenced by the statements below? | **Evaluation***Complies Concern exists Partly compliant Non-compliant No evidence**Not applicable* |
| **4.1:** The level of selection of students is commensurate with the programme’s academic requirements. |  |
| < > |  |
| **4.2:** The number of students admitted takes into account the capacity of the programme to offer quality education and to meet professional requirements. |  |
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| **4.3:** The selection and admission of students is linked to the institution’s equity and diversity plans. |  |
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| **4.4:** The staff members responsible for leadership, planning and assessment at the exit level are professionally and technically competent in the respective disciplines. Registration with the ECSA in the appropriate professional category provides the norm for professional standing. |  |
| < > |  |
| **4.5:** A strategy for recruitment, development and retention of academic staff is in place and is aligned with the diversity plan of the institution. |  |
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| **4.6:** The academic staff responsible for the programme are suitably qualified and have sufficient relevant experience and teaching and assessment competence. |  |
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| **4.7:** The number of academic and support staff is sufficient for the programme. |  |
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| **4.8:** The academic staff members possess a range of specialities and abilities to teach at the fundamental and specialist levels required by the programme. |  |
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| **4.9:** Staff members have research profiles relevant to theprogramme (See document **E-03-P**, Research ethos and university attitude to research and funding). |  |
| < > |  |
| **4.10:** Appropriate research development opportunities andprogrammes for staff members are in place. |  |
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| **4.11:** The allocation of funds and necessary resources to the school or department where the programme is located together with the appropriate utilisation of these resources by the school or department forms part of the institutional planning and quality assurance processes. |  |
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| * 1. **:** Budgetary allocations for the programme are adequate and are effectively utilised:
* Staffing budgets and resulting packages
* Laboratory equipment
* Computing and networking
* Hybrid learning requirements
* Running expenses
* Library facilities
* Work-based learning where applicable
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| **4.13:** Office, teaching and laboratory accommodation andequipment are adequate. |  |
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| **4.14:** Studies on the effectiveness of the programme in meeting its objectives are undertaken at regular intervals. The results are used to improve programme design, delivery and resourcing and where necessary are used for staff development and student support. |  |
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| * 1. **:** Where academic development programmes for

students are offered within or are associated with the programme, the following are fulfilled:* + 1. The programme is designed to meet student state of preparation and progression towards the main programme.
		2. Staff responsible for the academic development programme are adequately qualified, experienced and skilled.
		3. Funding for the programme is adequate.
		4. Realistic criteria are applied for acceptance of students into the academic development programme.

The academic development programme is quality assured. |  |
| < *>* |  |
| **4.16** Additional Resource requirements for online programmes |  |
| **4.16.1** Is the following ICT infrastructure available and suitable for the task |  |
| * Computing
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| < > |  |
| * Networking
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| * Security and integrity
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| * Software
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| < > |  |
| * Licenses
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| * Suitability
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| * Invigilation
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| * Maintenance
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| **4.16.2** Are the budgetary allocations for capital and maintenance for the programme adequate and effectively used for; |   |
| * Computing
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| < > |  |
| * Networking
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| < > |  |
| * Software
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| < > |  |
| * Licenses
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| < > |  |
| * Updates and replacements
 |  |
| < > |  |
| * Maintenance
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| **4.16.3** Logistical requirements for remote Accreditation of online programmes, |  |
| * Access to the internet through a fast and reliable internet connection is provided for use by the Team members.
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| * Access to IT support is available, at all times, to assist Team members.
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| * Assess to all online teaching platforms (LMS) in use is provided for Team members where required.
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| * Access to suitable video conferencing/communication software and network is provided for stable communication between Team members, staff and students when necessary.
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| * Communication between Team members, and Dean and HOD’s, is available at all times, during the remote Accreditation. Staff are available for remote interview purposes as far as possible during the accreditation, where required.
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| * Live online video and pre-recorded videos are available to provide evidence of activities during the accreditation.
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| * If applicable, live on-line video tours of students in action in laboratories are available during the accreditation, preferably allowing interaction between students, staff, and team members
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| * Pre-recorded video evidence of layout and equipment in the laboratory’s is provided.
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| **Criteria 1–4**: If the programme is free from the deficiencies covered in Questions 1–4, is the programme capable of sustaining acceptable outcomes until the next regular accreditation? | Yes/No |
| If deficiencies are identified in Questions 1–4, is the provider judged to be capable of and committed to remedying the deficiencies to the required level within one, two or three years? | Yes/No |

**Criterion 5: Response to previously identified deficiencies and concerns, capacity for improvement and programme review**

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| **Question 5.1:** In the case of concerns identified at theprevious accreditation, have these been addressed by the university? | Yes/No |
| If not, does any previously identified concern rank as a deficiency? | Yes/No |
| *If not, identify the unresolved concerns here and assess the consequences of lack of resolution.* |
| **Question 5.2:** In the case of an Interim Report, Interim Accreditation or Final Accreditation, are there outstanding deficiencies from the previous accreditation report? | Yes/No |
| *If present, identify the unresolved concerns here and assess the consequences of lack of resolution* |
| < *>* |