ASIIN Seal & EUR-ACE® Label

Accreditation Report

Bachelor's Degree Programmes
Information Technology
Electrical Engineering

Provided by
Royal University of Bhutan - College of Science and Technology

Version: 25 September 2026

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A About the Accreditation Process

Name of the degree programme (in original language)	(Official) English translation of the name	Labels applied for [1]	Previous accreditation (issuing agency, validity)	Involved Technical Committees (TC)[2]
Information Technology	Information Technology	ASIIN, EUR-ACE® Label	/	04
Electrical Engineering	Electrical Engineering	ASIIN, EUR-ACE® Label	/	02
Date of the contract: 31.07.2024 **Submission of the final version of the self-assessment report:** 15.02.2026 **Date of the onsite visit:** 14-15.04.2026 **at:** College of Science and Technology, Phuentsholing				
Expert panel: Prof. Dr. Ralf Müller, Friedrich-Alexander University of Erlangen–Nuremberg Prof. Dr.-Ing. Thorsten Völker, Hochschule Bremen – City University of Applied Sciences Prof. Dr. Peter Braun, Technical University of Applied Sciences Würzburg-Schweinfurt Cheni Dorji, CEO of Druk Hydro Energy Limited Hari Prasad Kafley, iTechnologies Shaja Gyeltshen, student at Jigme Namgyel Engineering College				
Representative of the ASIIN headquarter: Paulina Petracenko				

[1] ASIIN Seal for degree programmes; EUR-ACE® Label: European Label for Engineering Programmes

[2] TC: Technical Committee for the following subject areas: TC 01 – Mechanical Engineering/Process Engineering; TC 02 – Electrical Engineering/Information Technology; TC 03 – Civil Engineering, Geodesy and Architecture; TC 04 – Informatics/Computer Science; TC 05 – Materials Science, Physical Technologies; TC 06 – Engineering and Management, Economics; TC 07 – Business Informatics/Information Systems; TC 08 – Agriculture, Forestry, Food Sciences, and Landscape Architecture; TC 09 – Chemistry; TC 10 - Life Sciences; TC 11 – Geosciences; TC 12 – Mathematics; TC 13 – Physics; TC 14 – Medicine.

Responsible decision-making committee: Accreditation Commission for Degree Programmes	
Criteria used: European Standards and Guidelines as of May 15, 2015 ASIIN General Criteria, as of December 7, 2021 Subject-Specific Criteria Technical Committee 02 – Electrical Engineering/Information Technology as of September 23, 2022 Subject-Specific Criteria of Technical Committee 04 – Informatics/Computer Science as of March 29, 2018	

B Accreditation Status

Result Overview

The most recent decision for the ASIIN Seal was made by the ASIIN Accreditation Commission on 25.09.2026.

Degree Programmes	ASIIN Seal	Validity	EUR-ACE® Label	Validity
Ba Information Technology	Accredited with requirements	25.09.2026 - 16.10.2027	Suspended	/
Ba Electrical Engineering	Accredited with requirements	25.09.2026 - 16.10.2027	Accredited with requirements	25.09.2026 - 16.10.2027

Fulfilment of the Accreditation Criteria

ASIIN General Criteria / Subject-Specific Criteria	Ba Information Technology	Ba Electrical Engineering
1 Degree programme: Concept, Content & Implementation		
1.1 Objectives and learning outcomes (intended qualification profile)	**Not fulfilled** **Requirement A 3**	Fulfilled
1.2 Title of the degree programme	Fulfilled	**Not fulfilled** **Requirement A5**
1.3 Curriculum	**Not fulfilled** **Requirement A 4**	Fulfilled
1.4 Admission requirements	Fulfilled	Fulfilled
1.5 Workload and credits	**Not fulfilled** **Requirement A 1**	**Not fulfilled** **Requirement A 1**

ASIIN General Criteria / Subject-Specific Criteria	Ba Information Technology	Ba Electrical Engineering
1.6 Didactics and teaching methodology	Fulfilled	Fulfilled
2 Exams: System, Concept and Organisation		
2 Exams: System, Concept and Organisation	Fulfilled	Fulfilled
3 Resources		
3.1 Staff and staff development	Fulfilled	Fulfilled
3.2 Student support and student services	Fulfilled	Fulfilled
3.2 Funds and equipment	Fulfilled	Fulfilled
4 Transparency and Documentation		
4.1 Module descriptions	Fulfilled	Fulfilled
4.2 Diploma and Diploma Supplement	Fulfilled	Fulfilled
4.3 Relevant rules		
5 Quality Management: Quality Assessment and Development		
5 Quality Management: Quality Assessment and Development	**Not fulfilled** **Requirement A 2**	**Not fulfilled** **Requirement A 2**

Requirements

For all degree programmes

A 1. (ASIIN 1.5) Ensure that national credits are accurately converted to ECTS credits, and that subsequently, all documents display the correct number of ECTS credits.

A 2. (ASIIN 5) Ensure that students are informed about the survey results.

For the Ba Information Technology programme

A 3. (ASIIN 1.1) Reformulate the intended learning outcomes so that they are competence oriented.

A 4. (ASIIN 1.3) Strengthen the engineering focus of the curriculum, particularly by enhancing the documentation and assessment of design methodology, experimental

validation, quality assurance, professional standards and technically justified decision-making in student projects.

For the Electrical Engineering programme

A 5. (ASIIN 1.2) Ensure that the name of the degree programme, its intended learning outcomes and its content correspond with each other.

Accreditation History

The programmes have not been previously accredited by ASIIN.

C Characteristics of the Degree Programmes

a) Name	Final degree (original/English translation)	b) Areas of Specialization	c) Corresponding level of the EQF[3]	d) Mode of Study	e) Double/Joint Degree	f) Duration	g) Credit points/unit	h) Intake rhythm & First time of offer
Ba Information Technology	B.Eng.	/	6	Full time	/	8 Semester	647 RUB credits	2010, September
Ba Electrical Engineering	B.Eng.	/	6	Full time	/	8 Semester	673 RUB credits	2001, September

The College of Science and Technology

The College of Science and Technology (CST) is a constituent college of the Royal University of Bhutan (RUB) that specialises in engineering disciplines. Established in 2003, it is located in Phuentsholing in south-western Bhutan. The CST currently offers 10 bachelor's and two master's degree programmes. It currently enrols more than 1,000 students and employs 77 academic staff members.

Programme Summaries

For the Bachelor's degree programme Electrical Engineering, the institution has presented the following profile on the CST website:

"The four-year Bachelor of Engineering in Electrical Engineering prepares students to meet Bhutan's growing demand for skilled engineers in the public and private sectors. The programme emphasizes a broad engineering education with specialized learning in electrical systems, design, analysis, and problem-solving, enabling graduates to plan, design, and implement power, control, and communication systems.

Students gain practical exposure through site visits and hands-on experience, developing technical competencies, professionalism, and project management skills. Graduates will be ready for careers in civil service, corporations, and private industries, contribute to technological advancements, and pursue further studies or research in electrical engineering and related fields."

For the Bachelor's degree programme Information Technology, the institution has presented the following profile on the CST website:

[3] EQF = The European Qualifications Framework for lifelong learning

“The Bachelor of Engineering in Information Technology (BE IT) aims to develop Information Technology Professionals with specializations in Networking, Software Engineering or Information Security who will be able to contribute to the development of computing technology in the country through Research, Innovation, Creativity and Enterprise with ethical and professional responsibility.”

Summary of the Experts’ Assessment

The experts' review of the Bachelor's programmes in Information Technology and Electrical Engineering yields an overall positive assessment. Both programmes provide students with a sound education that is closely aligned with labour market needs and supported by motivated, highly committed teaching staff. The experts particularly appreciate the strong focus on teaching quality, reflected in the extensive didactic training provided to lecturers. The ongoing efforts to strengthen internationalisation constitute additional strengths of the institution.

At the same time, the experts identify several areas that require attention in order to ensure full compliance with international standards and ASIIN criteria. A key concern relates to the documentation of the programmes. The module descriptions currently contain inconsistencies and shortcomings with regard to prerequisites and literature references. Similarly, final degree documents currently lack a Diploma Supplement that aligns with ASIIN criteria. The experts also note deficiencies in the conversion and presentation of ECTS credits, which need to be corrected to ensure comparability and transparency in an international context.

Beyond these formal aspects, the experts identify a number of issues concerning the further development of teaching and learning processes. In both programmes, the range of elective modules is relatively limited, reducing students’ possibilities for individual academic specialisation. Moreover, although mobility and international exchange are generally supported by the institution, the experts believe that greater flexibility in the recognition of externally acquired credits and more active communication of mobility opportunities would further facilitate student participation in international mobility.

The experts also recommend to further strengthen the academic profile of the teaching body. While the commitment of the teaching staff is unquestionable, increasing the proportion of teachers holding doctoral degrees would enhance the institution’s research capacity and contribute to the further development of teaching. This objective should be accompanied by increased financial support for research activities, academic exchange, and laboratory infrastructure.

For the Information Technology programme, experts consider strengthening the development of scientific and technical writing competencies to be particularly important. The review of final project reports revealed considerable variation in quality, indicating that some students would benefit from more systematic training in discipline-specific research methods and academic writing. For instance, the reports revealed weaknesses in the formal presentation, such as incomplete or poorly integrated references. Furthermore, the alignment of project objectives, methodological choices, implementation steps and evaluation results was inconsistent in several reports, which made it difficult to assess the evidentiary basis of the conclusions.

The experts also encourage the programme to further modernise teaching and assessment practices, for example through the integration of AI-supported tools and a broader use of electronic examination formats. In addition, the intended learning outcomes need to be reformulated to better reflect a competence-oriented approach.

With regard to the Electrical Engineering programme, the experts note that its current content places a strong emphasis on power and energy engineering. They therefore recommend either adapting the programme title to reflect this profile more clearly or broadening the curriculum to cover additional areas of electrical engineering. Furthermore, some laboratory equipment, particularly in the fields of Power Electronics and Electrical Machines, are outdated and should be renewed so that students continue to work with appropriate and reliable technology.

Overall, the experts conclude that both programmes equip students with qualification profiles that are in high demand in the national labour market, allowing them to easily find suitable employment after graduation. The expert group is confident that the aforementioned shortcomings can be successfully addressed in the near future and that the programmes will continue to develop positively in the coming years.

D Expert Report for the ASIIN Seal[4]

1. The Degree Programme: Concept, Content & Implementation

Criterion 1.1 Objectives and Learning Outcomes of a Degree Programme (Intended Qualifications Profile)

Evidence:

- Self-Assessment Report
- Study plans
- Module descriptions
- Definitive Programme Document/Programme Handbook for Electrical Engineering
- Definitive Programme Document/Programme Handbook for Information Technology
- Learning-Objectives-Module-Matrix for each programme
- Graduate Tracer Study Analysis Report for both programmes
- Website of the EE programme: https://cst.edu.bt/electrical-engineering/
- Website of the IT programme: https://cst.edu.bt/programme-it/
- Discussion during the audit

Preliminary assessment and analysis of the experts:
The programme objectives and learning outcomes are outlined in the definitive programme documents, which are published on the CST website, as well as in the self-assessment report. Furthermore, CST has provided a Learning Objectives Module Matrix for each programme, as well as further documentation demonstrating the alignment between the respective SSCs and the programmes' intended learning outcomes. The detailed learning outcomes can be found in the appendix of this report.

According to the self-assessment report, the "Objectives and Learning Outcomes for the Bachelor of Engineering in Electrical Engineering programme are designed to equip graduates with the fundamental knowledge and skills required for successful careers in the

[4] This part of the report applies also for the assessment for the European subject-specific labels. After the conclusion of the procedure, the stated requirements and/or recommendations and the deadlines are equally valid for the ASIIN seal as well as for the sought subject-specific label.

electrical engineering domain. The profile focuses on core competencies including electrical machines, power generation, transmission and distribution, power system protection, and renewable energy integration, fostering professional ethics and leadership qualities."

The experts learn from the documents provided that the Electrical Engineering programme follows the national demand for qualified engineers, particularly in the areas of hydropower, renewable energy, construction, and industrial development. In particular, the programme aims to support Bhutan's broader human resource development objectives and ongoing infrastructure and energy initiatives. Graduate tracer studies and employment records provided by CST indicate consistently high employability of graduates, with employment rates reportedly exceeding 90%. The institution also reports positive employer feedback regarding the graduates' analytical and problem-solving abilities, as well as their capacity to work independently.

For the Bachelor of Engineering in Information Technology programme, the self-assessment report states that the programme is intended to develop graduates with competencies in areas such as networking, software engineering, and information security, while also promoting innovation, research capability, ethical responsibility, and lifelong learning. The programme further aims to prepare graduates to contribute to the development and application of computing technologies within Bhutan.

The programme documentation highlights the increasing national demand for IT professionals in connection with digital transformation initiatives, the expansion of ICT infrastructure, and the growing role of technology across public and private sectors. Career opportunities identified for graduates include roles in software development, network and system administration, cybersecurity, database management, and related IT services. According to information provided by CST, graduate employment outcomes are very positive, with the majority of graduates obtaining employment within a year of graduation.

The experts confirm that the programme objectives and intended learning outcomes are transparently and formally documented and publicly available to students, teachers, and other stakeholders.

For the assessment, the experts refer to the Subject-Specific Criteria (SSC) of the Technical Committee 02 Electrical Engineering and the Technical Committee 04 Informatics/Computer Science as a basis for judging whether the intended learning outcomes of the two programmes correspond with the competences as outlined by the SSCs.

The experts review the intended learning outcomes of both programmes and conclude that they are feasible and aligned with the respective SSCs. They further confirm that the intended learning outcomes correspond to EQF Level 6. The experts acknowledge that the

learning outcomes have been tailored to address the needs of the national industry as well as current developments in the respective fields. In their view, the outlined qualification profiles enable graduates of both programmes to take up professional activities appropriate to the qualification level and the documented career opportunities. The experts find that the results of the tracer studies support this assessment.

However, the experts observe that the intended learning outcomes of the Information Technology programme are formulated primarily as a list of technical skills rather than as a competence-oriented description of the range of competences to be achieved during the course of study. While the experts note that the overall documentation demonstrates that graduates acquire a variety of competences corresponding to the academic qualification level of a Bachelor's degree, they believe that the current formulation does not sufficiently reflect this. In this context, the experts refer to established frameworks such as Bloom's Taxonomy and the Dublin Descriptors, which differentiate between various categories of competences and could provide useful guidance for a more comprehensive presentation of the intended learning outcomes.

Since the institution has also applied for the EUR-ACE® label for the two programmes, the experts check whether the learning outcomes are aligned with the EUR-ACE® Framework Standards and Guidelines (EAFSG) for engineering programmes. The EUR-ACE® Framework Standards and Guidelines requires that engineering programs cover the following seven competence areas: Knowledge and Understanding, Engineering Analysis, Engineering Design, Investigations, Engineering Practice, Making Judgements Communication and Teamworking, and Lifelong Learning. In terms of the Electrical Engineering programme, the self-assessment report and the module descriptions illustrate that the degree programme covers all the required competence areas such as engineering analysis, design, and practice as well as communication and team-working skills. The experts are convinced that the mentioned competences are conveyed in the respective courses and, therefore, conclude that the EE programme is aligned with the EUR-ACE® Framework Standards and Guidelines (EAFSG).

With regard to the Information Technology programme, the experts find that the programme generally appears suitable for consideration under the EUR-ACE framework, since the intended learning outcomes reference the aforementioned competences. However, they note that these competences are not strongly reflected in the curriculum itself. The engineering character of the curriculum should therefore be made more explicit and evidenced more systematically. Particular attention should be paid to strengthening the documentation and assessment of design methodology, experimental validation, quality assurance, professional standards, and technically justified decision-making in student projects. In this context, the experts also refer to the partly insufficient scientific working skills

observed in the sample thesis reports, which is discussed in more detail in Chapter 2 of this report. In sum, the experts find that, for the award of the EUR-ACE label, the curriculum documentation needs to display a stronger engineering character.

In terms of internal quality assurance, the experts note that the intended learning outcomes and programme objectives are subject to regular review processes involving both internal and external stakeholders, including students, faculty members, alumni, and employers. They learn that comprehensive programme reviews are conducted on a four-year cycle, while smaller adjustments may be introduced more regularly in response to recommendations from external examiners, industry consultations, or programme teams.

During the audit discussions, industry representatives confirm that regular exchanges take place between the College and employers, including annual meetings to discuss developments in industry requirements and technological trends. They further confirm that the intended learning outcomes of both programmes are aligned with current labour market needs. In addition, the industry representatives report that they regularly recruit graduates from the two programmes and are highly satisfied with their competences and qualification profiles.

The experts welcome that the programmes, including their intended learning outcomes and objectives, are reviewed regularly and that all relevant stakeholders are involved in the process. They also appreciate the close cooperation between the College and industry partners as well as the strong confidence expressed by employers regarding both the qualification profiles of the programmes and the competences of the graduates.

Criterion 1.2 Name of the Degree Programme

Evidence:

- Self-Assessment Report
- Diploma Certificates
- Definitive Programme Document/Programme Handbook for Electrical Engineering
- Definitive Programme Document/Programme Handbook for Information Technology
- Discussions during the audit

Preliminary assessment and analysis of the experts:
The experts confirm that the titles of the two degree programmes are used consistently across all relevant documents. In the case of the Information Technology programme, they find that the programme title appropriately reflects the objectives, intended learning outcomes, and curricular content of the programme.

With regard to the Electrical Engineering programme, the experts note that the programme title generally corresponds to the curriculum and intended learning outcomes. However, they also observe that the programme content and qualification profile focus predominantly on power engineering and related areas. In the experts' view, the current title "Electrical Engineering" though suggests a broader coverage of the field and a more diversified education across the full spectrum of electrical engineering disciplines.

During the discussions with the programme coordinators, the experts learn that another college within the Royal University of Bhutan, namely Jigme Namgyel Engineering College, already offers a programme titled "Power Engineering". According to the programme representatives, the current programme title was chosen to avoid overlap with the programme offered at the other college. They further explain that the programme is not intended to focus exclusively on traditional power engineering, as it also includes topics such as smart grids.

The experts understand the institutional context and the rationale provided by the College. Nevertheless, they point out that the majority of the curriculum is clearly centred on power engineering. For reasons of transparency, particularly for external stakeholders and prospective students, the experts therefore recommend reconsidering the programme title so that it more accurately reflects the programme's actual focus, for example by using a title such as "Electrical Power Engineering". Alternatively, the experts suggest broadening the curricular scope of the programme in order to better justify the broader title "Electrical Engineering".

Criterion 1.3 Curriculum

Evidence:

- Study Plans
- Module Descriptions
- Definitive Programme Document/Programme Handbooks
- Learning-Objectives-Module-Matrices
- Self-Assessment Report
- Sample Internship Reports
- Discussions during the audit

Preliminary assessment and analysis of the experts:

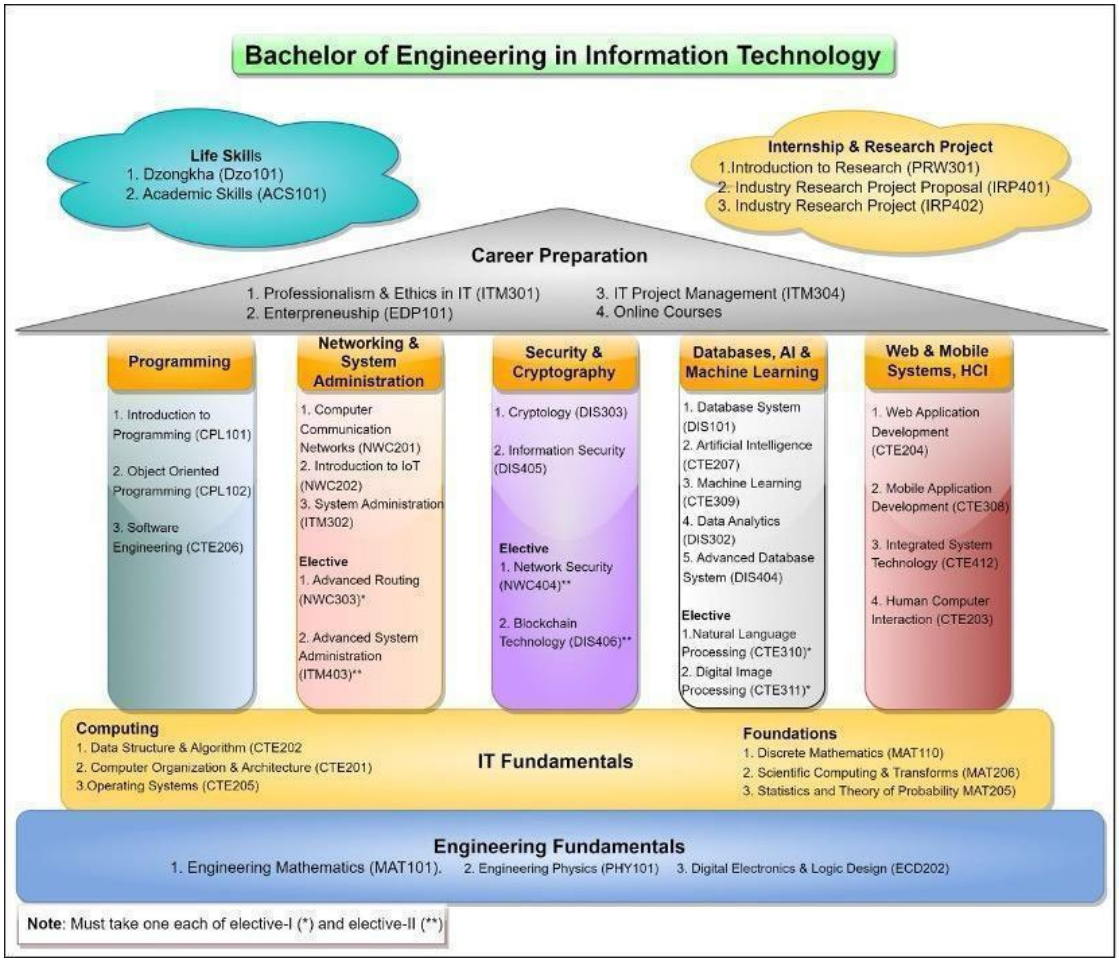
Content & Structure of the Programmes

Each of the two Bachelor's programmes is designed as an eight-semester full-time programme. The Bachelor of Engineering in Information Technology comprises 240 ECTS credits, while the Bachelor of Engineering in Electrical Engineering comprises 252 ECTS credits. According to the self-assessment report, the curricula and programme structures are developed in accordance with the Bhutan Qualifications Framework (BQF) and the relevant provisions of the Wheel of Academic Law.

The Bachelor of Engineering in Information Technology programme is structured progressively. According to the self-assessment report, the early semesters focus on building fundamental knowledge and skills in core areas such as programming, networking and systems, security and cryptography, databases, artificial intelligence and machine learning, as well as human-computer interaction, mobile systems, and web technologies. In the later semesters, students engage with advanced and emerging topics and further develop professional and practical competences.

The programme includes two elective modules and a six-month internship. The experts learn that the duration of the internship was gradually extended from an initial 45-day placement to three months and subsequently to six months in response to feedback from industry stakeholders, who considered the previous duration insufficient.

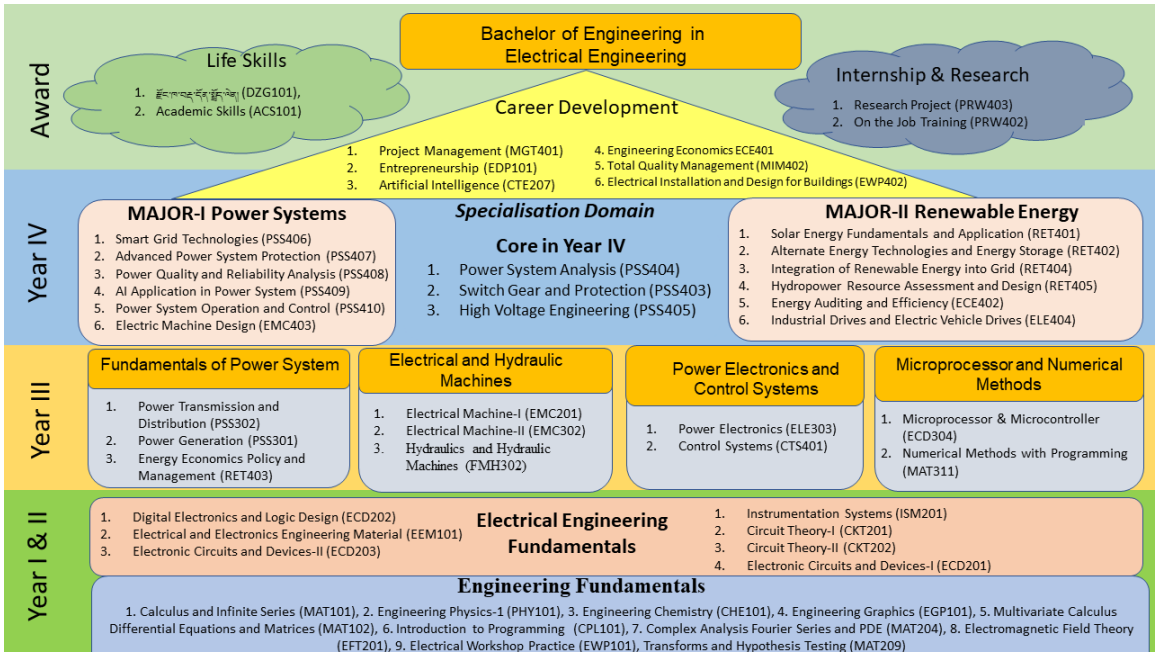
Students are also required to complete an industry-based research project (final thesis project) during the final year internship. The project is carried out in groups and is based on problem statements provided by partner industries. According to the documentation, industry supervisors and academic supervisors jointly support the students throughout the project. Prior to the internship semester, students are required to prepare a research proposal and develop an initial prototype in order to ensure adequate preparation for the industry-based project work.



Overview of the IT Programme Structure (Source: Self-Assessment Report)

The Bachelor of Engineering in Electrical Engineering programme is also structured progressively and is organised in four stages. The first year focuses mainly on mathematics and basic sciences, while the second year introduces fundamental engineering subjects. In the third and fourth years, the curriculum increasingly concentrates on discipline-specific and specialised content. In the final year, students may choose between the two major areas of Power System Engineering and Renewable Energy Engineering, complemented by minor modules. As with the IT programme, the EE programme ends with an industry-based research project.

The programme further includes a mandatory three-month internship, which takes place at the end of the first semester of the fourth year. The College coordinates the internship placements through the Office of the Dean of Research and Industrial Linkages, while students are supervised both by industry representatives and academic staff.



Overview of the Electrical Engineering Programme (Source: Self-Assessment Report)

Having reviewed the curricula, the experts conclude that both Bachelor's degree programmes provide solid fundamental training in their respective fields and are aligned with the expected qualification level. They confirm that the curricula are designed in such a way that students are able to achieve the intended learning outcomes. The experts also note positively that the programmes cover up-to-date subject content and that the intended qualification profiles are well aligned with the needs of the national labour market.

With regard to the profile of the Information Technology programme, the experts observe that the curriculum is very broad and covers a wide range of IT-related topics. They question why the programme does not offer a higher degree of specialisation. The programme coordinators explain that this broad orientation is intentional, as industry stakeholders reportedly seek graduates with a wide-ranging skill set. They also refer to tracer studies indicating that graduates have been successful in securing employment with this broad qualification profile. The experts understand these arguments and consider the curriculum structure to be reasonable in light of this approach.

At the same time, the experts believe that students would benefit from having the opportunity to specialize or personalize the programme a little more. This could be achieved by offering a greater number of elective modules. Currently, the IT programme has a largely fixed structure, with almost all modules being required and only two electives available. When asked about this, the programme coordinators referred to the expansion of the internship component to six months, as well as the inclusion of essential subject areas, which together have reduced the available space for electives. In addition, they noted that the

limited availability of specialised teaching staff restricts the possibility of offering a broader range of elective courses. While the experts understand these structural constraints, they still believe that the program would be enriched by a wider selection of electives. A broader elective offering would enable students to deepen their knowledge in specific areas of interest and to develop a more individualised qualification profile. Therefore, the experts recommend that the College explore possibilities to create additional space for electives. For example, topics such as Green IT, data protection, or applications of artificial intelligence could usefully complement the existing curriculum.

The recommendation to integrate more electives also applies to the Electrical Engineering programme. While students in this programme have comparatively greater opportunities for specialization – through the selection of a major in the fourth year consisting of three modules, as well as a minor comprising one interdisciplinary module – the experts are of the view that additional elective options could further enhance opportunities for deeper specialization in EE too.

In addition, the experts identify a structural issue within the IT curriculum concerning the placement of the “Operating Systems” module, which is currently scheduled in the first semester. While they appreciate the inclusion of this module, the experts suggest that placing it in a later semester would be pedagogically more suitable, as the content builds on foundational knowledgethat is typically acquired at a later stage of study. This is emphasised by the module descriptions. Although the descriptions state that there are no prerequisites, the content implies that it partly builds on knowledge that students would only gain from third-semester modules. The programme coordinators state that they are aware of the problem, but opted for this structure due to organisational issues. While the experts can comprehend this, they emphasise the non-linear succession of modules and therefore recommend changing the placement of this module to ensure academic coherence and facilitate students' progression.

Furthermore, the experts believe that the IT curriculum should include more AI-supported tools. They argue that contemporary IT education should encompass the development of competencies in the selection, effective use, quality control and ethical application of agentic coding systems. This can be considered an essential part of broader AI literacy. Employers are likely to increasingly expect graduates to not only use such systems productively, but also to critically assess their outputs and limitations in professional software development contexts. Therefore, they recommend incorporating the use of AI assistants into the IT programme to enable students to acquire these essential competencies.

Regarding the overall structure of the programmes, the experts conclude that both curricula are coherently organised. Modules are structured as self-contained units of teaching

and learning and are sequenced in a way that enables students to progressively develop and consolidate their knowledge and skills. The integration of internships in both programmes is particularly welcomed, as it allows students to apply theoretical knowledge in practical contexts and supports their preparation for professional careers. The design, timing, and supervision of the internships are considered appropriate to ensure that the intended learning outcomes are effectively achieved.

Student Mobility

According to the self-assessment report, the promotion of international student and staff mobility is defined as a strategic priority at both the College of Science and Technology (CST) and the Royal University of Bhutan (RUB). In this context, the institution has been engaged in international mobility activities for several years, particularly through participation in European Union-funded programmes since 2009. As a result, most established partnerships are with higher education institutions in Europe.

Organisational support for mobility is provided at both university and college level. RUB maintains a central international office, and responsibilities for coordination are also assigned within the college. Recognition of credits achieved abroad is ensured through a learning agreement signed by all parties involved before the mobility begins.

In the Information Technology programme, several students completed semester-long study stays at partner institutions between 2010 and 2017. More recently, cooperation with Uppsala University in Sweden has enabled additional exchange opportunities, allowing students to undertake study periods abroad in the field of computer science. International mobility has also included participation of academic staff.

Within the Electrical Engineering programme, students have participated in study visits and exchange periods at partner institutions, while the programme has also hosted incoming students from regional and international universities. These activities combine academic coursework with practical elements such as laboratory work and industry visits. In 2003, for example, students from Pokhara University in Nepal were hosted at CST.

The experts recognise the institution’s commitment to promoting international exchange wherever possible and commend the efforts of CST to foster internationalisation so far. However, they note that the overall number of outgoing students in both programmes remains relatively limited. They also point out that mobility is predominantly realised through short-term formats, often lasting less than one month or even only a few days. In the Electrical Engineering programme, for example, a total of 19 students have participated in mobility activities since 2019, of whom 11 spent less than one month abroad.

Representatives of CST explain that they would definitely welcome a higher level of mobility overall but identify limited funding as the main constraint. While available opportunities are utilised wherever possible, financial resources currently represent a key limiting factor for broader participation in mobility programmes. Furthermore, they indicate that credit transfer has at times posed challenges. They report that due to the highly structured nature of the curricula with the majority being mandatory modules, it can be difficult to identify equivalent modules at partner institutions abroad, which complicates the recognition of externally acquired credits.

Similar feedback is provided by the students in the audit. They state that they are generally aware of existing mobility opportunities and know the relevant contact points for further guidance and support. However, they report that, in addition to financial constraints, a major reason for the low participation in mobility is the concern that not all academic achievements obtained abroad will be recognised upon return.

The experts understand CST's intention to ensure that learning outcomes achieved abroad are broadly equivalent to those of the home programme. At the same time, they emphasise that international mobility requires a certain degree of flexibility. In this context, they refer, among other things, to the principles of the Lisbon Recognition Convention, which is used in European higher education institutions. According to this convention, credits obtained abroad should generally be recognised, unless substantial differences are evidenced by the higher education institution (HEI). As current recognition practices appear to limit participation in mobility programmes, the experts recommend introducing greater flexibility in the recognition of externally acquired credits, for example by following the Lisbon Convention's practices and policies.

In addition, the experts gain the impression that students are not always sufficiently informed about the framework conditions and opportunities associated with mobility. In particular, students appear unaware that they can actively search for and propose suitable study opportunities abroad themselves, since current practice involves teaching staff suggesting specific programmes and modules abroad that are suitable for recognition. Furthermore, students also do not seem fully familiar with the established recognition procedures, particularly the role of the learning agreement in ensuring the recognition of credits earned abroad prior to mobility. The experts therefore recommend that students be provided with more transparent information about mobility opportunities, procedures, and recognition policies. If CST were to adopt a more flexible approach to recognition, this would also need to be clearly communicated.

In addition, the experts reiterate their recommendation to increase the number of electives in both programmes, as described above. Since the CST staff described the highly fixed

structure of both curricula as another reason for the difficulties in terms of mobility and limited recognition possibilities, the experts point out that more electives in both programmes would also mean greater flexibility in terms of recognition and make it easier to find similar modules abroad.

Finally, with a view to increasing incoming mobility too, the experts suggest making comprehensive and accessible information for prospective international and visiting students available on the CST website. Clear and user-friendly online information could facilitate access for interested students abroad and contribute to increasing awareness of CST as a host institution.

Periodic Review of the Curriculum

The curricula of the programmes are subject to regular review procedures at both programme and institutional level to ensure their continued relevance and quality. Monitoring takes place on an annual basis as well as through more comprehensive periodic reviews.

Annual monitoring is carried out through the Annual Programme Monitoring Report (APMR), which serves as a central instrument for tracking the implementation and development of the programmes. This process incorporates feedback from students, external examiners, and teaching staff, as well as observations related to programme delivery. External examiners, appointed by the university, visit the institution on a regular basis to review programme implementation through discussions with staff and students. Their feedback, together with corresponding action plans, is included in the APMR. The report is reviewed and approved within the institutional committee structure.

In addition to annual monitoring, the programmes undergo a comprehensive review every four years. Conducted in line with university regulations, this review process includes a systematic assessment of the curriculum with regard to its structure, content, and alignment with current developments in the field. Particular attention is given to the relevance and suitability of modules in relation to labour market requirements. As with the annual review, this process is based on feedback from multiple sources, including graduates, students, employers, industry representatives, external examiners and academic staff. Based on this information, proposals for curriculum revisions are developed and submitted to the relevant academic committees for approval within the university's quality assurance framework.

The experts are pleased to hear that CST considers the feedback of various stakeholders when reviewing its programmes and maintains close links with industry. Overall, the experts conclude that there is a systematic process in place for the regular review and improvement of programmes.

Criterion 1.4 Admission Requirements

Evidence:

- Definitive Programme Document/Programme Handbooks
- Self-Assessment Report
- Admission Policy
- Discussions during the audit

Preliminary assessment and analysis of the experts:
Admission to the Bachelor of Engineering programmes at the College of Science and Technology (CST) is governed by the regulations of the Royal University of Bhutan, in particular the relevant provisions of the Wheel of Academic Law and the institutional Admission Policy. The admission procedure and requirements are formally defined in the Admisssions Policy and in the Definitive Programme Documents. The process is centrally coordinated, while selection decisions are supported by a college-level admission committee.

The selection of applicants is based on school performance (70%) and aptitude testing (30%). The main criterion is the result of the Bhutan Higher Secondary Education Certificate (BHSEC) or an equivalent qualification. Particular emphasis is placed on subject-specific competencies relevant to engineering studies, especially mathematics and physics, followed by chemistry. In addition, applicants are required to complete an aptitude test, which contributes to the overall ranking. Admission offers are made based on this combined score and the relative ranking of candidates. The effectiveness of the admission criteria and procedures is regularly reviewed by the responsible academic bodies at programme and college level.

Specific provisions apply to applicants who do not fully meet standard entry requirements. For example, Bhutanese applicants who have not passed the national language requirement must complete an additional proficiency assessment, while international applicants or those lacking proof of English language proficiency are required to provide recognised certification or pass an institutional test. For students who are admitted but demonstrate gaps in their preparation, the college offers targeted support measures, such as counselling and remedial classes.

The institution also provides defined pathways for the lateral entry of transfer students, for instance. Candidates holding relevant diploma qualifications may be admitted directly into the second year of the programme, provided that their qualifications are formally recognised. These students are required to complete the full set of programme requirements from the point of entry onwards, ensuring that learning outcomes remain equivalent to those of regularly admitted students.

Application data indicate a strong and increasing demand for both programmes in recent years. In Electrical Engineering, the number of applicants rose significantly from 422 in 2022 to 829 in 2025. A similar trend can be observed in the Information Technology programme, where applications increased from 721 to 1,040 over the same period. The annual intake remains relatively stable at approximately 50 students per programme. The experts find that the ratio between applications and available places reflects the high demand as well attractiveness of the programmes.

The experts review the admission requirements and procedures, finding them appropriate for supporting students in achieving the intended learning outcomes of their respective programmes. They also note that the admission requirements are transparent and binding for all stakeholders, and they acknowledge the clear and binding rules on the recognition of external qualifications. The admission ratios also confirm the demand for the two programmes.

Criterion 1.5 Workload and Credits

Evidence:

- Self-Assessment Report incl. Conversation Table from RUB CP to ECTS credits
- Study plans
- Module descriptions
- Bhutan Qualifications Framework
- Cohort Statistics
- Discussions during the audit

Preliminary assessment and analysis of the experts:
The Information Technology and Electrical Engineering programmes follow a four-year structure comprising eight semesters. The IT programme consists of 480 local credit points (CP), while the EE programme comprises 504 CP.

According to the self-assessment report, the definition and allocation of credits are based on the national Bhutan Qualifications Framework and the regulations of the Royal University of Bhutan. The institution applies a workload-based credit system that considers both contact hours and time for independent study. Student workload is defined in terms of notional hours, with one credit point corresponding to 10 hours of student effort. In line with this system, a full academic year consists of (at least) 120 CP, equivalent to 1,200 hours of workload, while a standard module carries 12 CP, corresponding to 120 hours. A typical semester includes approximately five modules and spans around 15 to 16 weeks.

CST indicates that the adequacy of the workload is regularly monitored. This is carried out through student questionnaires conducted twice per semester, as well as through input from external examiners.

In the self-assessment report, CST establishes a conversion between local credit points and ECTS, indicating that 1 ECTS credit corresponds to 2 local CP. However, based on the workload figures provided, the experts identify inconsistencies in this conversion. Given that one academic year corresponds to 1,200 hours, the equivalent workload would amount to approximately 40 to 48 ECTS credits per year (depending on whether 25 or 30 hours per ECTS credit are applied), rather than 60 ECTS credits. A similar discrepancy is observed at module level. For example, a module with 12 CP corresponds to 120 hours of workload and is therefore equivalent to approximately 4 (120h:30h) to 4.8 (120h:25h) ECTS credits, rather than the 6 ECTS credits as indicated by CST.

The figures provided also suggest that the overall student workload is approximately 32 hours per week (since the minimum workload at CST is 1,200 hours per year, whereas according to the ECTS it is 1,500 hours), which would not reflect the workload of a full-time student in comparison with ECTS standards. However, during the on-site discussions, both students and teaching staff affirmed the programmes as full-time and that students spend at least 40h per week for studies. The experts are convinced of this, as it is also supported by their observations of the structure and content of the curricula.

In follow-up discussions, it becomes evident that CST does not include examination preparation time in its workload calculations, focusing primarily on the teaching period of the semester. As a result, the actual total workload is likely higher than indicated in the formal documentation. The experts therefore conclude that CST needs to reassess and more comprehensively document the total student workload, ensuring that all components—including examination preparation—are systematically taken into account. On this basis, the calculation and presentation of the conversion to ECTS credits should be reviewed and (if necessary) adjusted accordingly. The experts assume that, once all relevant workload components are included, the alignment with ECTS is likely to improve.

Feedback from students indicates that the workload is generally perceived as manageable and relatively well balanced across the semesters. Students also confirm that they are regularly asked to evaluate the adequacy of the workload and credit allocation.

Furthermore, statistical data indicate that the programmes can be completed within the intended timeframe. On average, around 87% of students on both programmes graduate on time. The dropout rate is around 11% in the Electrical Engineering programme and 14% in the Information Technology programme. The experts do not consider these figures to be critical. Nevertheless, during the audit, they enquire about the mechanisms in place to

monitor student progression and prevent dropouts. Representatives of the Directorate explain that dropout rates are monitored and analysed within the internal quality management system. Measures have been introduced to support student retention, including central counselling services and targeted support for students with weaker academic performance. It was also explained that a significant proportion of students classified as dropouts leave the programme for personal reasons or due to a change in academic interests rather than academic failure. The experts endorse the existing structures, which further underscores the effective functioning of the QM system and support system, enabling students to graduate on time.

In conclusion, the experts confirm that CST applies a structured credit system based on student workload, that mechanisms for monitoring workload distribution are in place, and that all mandatory parts of the programmes are awarded credits. They also acknowledge that students are regularly consulted regarding the adequacy of the workload and that the programmes can be completed within the standard duration. At the same time, CST is required to ensure that workload calculations fully reflect the total student effort. In particular, examination preparation time must be systematically included, and the corresponding documentation, including the conversion to ECTS credits, must be revised accordingly.

Criterion 1.6 Didactic and Teaching Methodology

Evidence:

- Self-Assessment Report
- Study plans
- Module descriptions
- Discussions during the audit

Preliminary assessment and analysis of the experts:
According to the self-assessment report, the College of Science and Technology's programmes are oriented towards more student-centred learning approaches. This shift is intended to encourage independent learning, critical thinking and reflection among students.

A variety of teaching and learning methods are employed to support the achievement of the intended learning outcomes. These include lectures and seminars, as well as structured assignments, which are complemented by interactive activities such as case studies and group work. Students are expected to engage with learning materials in advance and participate actively in discussions and problem-solving activities during class sessions. Guided instruction is complemented by self-directed learning activities, including preparation,

assignments and examinations. The effectiveness of the applied teaching and learning methods is subject to regular review as part of the institution's quality assurance processes.

The teachers state that practical and applied learning is an integral part of their teaching methods. Students develop hands-on competencies through laboratory work, computer-based simulations, and project-based tasks. In addition, exposure to real-world applications is facilitated through activities such as industrial visits and guest lectures delivered by external experts.

The experts learn that digital tools are integrated into the teaching and learning process through the use of a Moodle-based learning management system. This platform is used to provide access to course materials, support communication, monitor student progress, and enable online interaction. Furthermore, selected modules incorporate external online learning resources, such as courses offered through platforms like Coursera, thereby extending the range of available learning opportunities.

Both programmes also foster independent academic work. This is reflected in components such as research projects, internships and project management modules. Furthermore, the College's Centre for Renewable and Sustainable Energy Development offers short-term courses on academic writing, intellectual property rights, research methodology and related subjects.

In the audit, students report that they are satisfied with the variety of teaching methods employed. They confirm that these methods are student-centred, with particular praise for interactive formats such as the flipped classroom method.

The expert group agrees with the students, considering the teaching methods and tools appropriate for supporting students in achieving their programmes' intended learning outcomes. The expert group also confirms that the programmes incorporate a variety of teaching and learning methods and values the opportunity for students to apply their knowledge in a practical setting, such as an internship, while also developing their scientific skills. Furthermore, they deem the ratio between contact hours and self-study time adequate. However, they point out that the teaching method known as the "flipped classroom" at CST is not actually a flipped classroom in the common sense of the term. CST members therefore report that they understand this to mean that students switch roles with teachers and present to their class. However, the term "flipped classroom" usually refers to students acquiring knowledge independently at home, with classroom time being used for in-depth practice and individual coaching. While this is only a minor issue of incorrect labelling, the expert group suggests using a different term to describe the teaching method.

Final assessment of the experts after the comment of the Higher Education Institution regarding criterion 1:

The experts have reviewed the Higher Education Institution's statement and the revised documentation submitted after the accreditation visit. While several improvements have been made and a number of issues have been addressed constructively, not all requirements and recommendations can yet be regarded as fully fulfilled.

Regarding the requirement to reformulate the intended learning outcomes of the Information Technology programme in a competence-oriented manner, the experts note that the institution's response primarily addresses the alignment with the EUR-ACE guidelines rather than the original requirement itself. Furthermore, a comparison of the programme learning outcomes contained in the revised programme documentation with those originally submitted as part of the self-assessment report does not reveal any substantial changes. The same observation applies to the learning outcomes at module level. The institution itself states that work on this issue is still ongoing. Consequently, the experts conclude that this requirement has not yet been fulfilled.

With regard to the EUR-ACE requirement to strengthen the engineering focus of the Information Technology programme, the experts acknowledge the revisions made to the programme documentation and the efforts currently underway. The submitted materials demonstrate clear progress and represent a positive development. However, as the process is still ongoing and the implementation has not yet been fully completed, the experts consider the requirement to be only partially fulfilled at this stage.

Concerning the issue of workload and credit calculation, the experts appreciate that the institution has substantially revised the workload calculations and has now included examination preparation and examination periods in the overall workload. The revised programme documentation consistently provides total workload figures for individual modules, semesters, study years, and the entire programmes. The experts find the additional workload allocated for examination preparation realistic and appropriate. They also note positively that the overall workload now indicated for both programmes is broadly in line with ECTS expectations for full-time study programmes.

Nevertheless, a significant inconsistency remains regarding the conversion of local credits into ECTS credits. While the institution continues to apply a conversion factor of 1 RUB credit = 2 ECTS credits, the revised workload figures would imply a total of approximately 324 ECTS credits for the Information Technology programme and 336 ECTS credits for the Electrical Engineering programme. This would correspond to a workload of only around 20 hours per ECTS credit, which is not compatible with ECTS guidelines requiring a workload of approximately 25 to 30 hours per ECTS credit. The experts therefore conclude that the

institution has now correctly determined and documented the overall student workload but must still revise and correct the conversion factor between local credits and ECTS credits in order to ensure consistency with internationally accepted ECTS standards.

Regarding the recommendations applicable to both programmes, the experts acknowledge the institution's intention to review the possibility of offering more elective courses during the next periodic programme review. However, as no concrete implementation has yet taken place, the recommendation to expand the range of electivescannot yet be considered fulfilled.

Similarly, concerning the recommendation to provide greater flexibility in the recognition of externally achieved qualifications and to improve transparency regarding mobility opportunities and recognition procedures, the institution indicates that it plans to establish a more user-friendly online information system. While this intention is welcomed, the proposed measures have not yet been implemented. The recommendation therefore remains unfulfilled.

For the Electrical Engineering programme, the experts note that the institution has decided not to rename the programme. At the same time, it acknowledges the experts' concerns and plans to broaden the programme's curricular content during the next periodic review, expected to be completed by June 2027. As these measures have not yet been implemented, the recommendation to better align the programme title and content remains unfulfilled.

Regarding the recommendations specific to the Information Technology programme, the experts confirm that the recommendation to move the module *Operating Systems* to a later semester has been implemented. This structural adjustment adequately addresses the issue identified during the review process, and the recommendation is therefore considered fulfilled.

The experts also confirm that the recommendation to integrate AI assistants into the teaching and learning process has been implemented. The institution has already initiated the use of AI-supported tools and has allocated dedicated Claude AI licences to the Information Technology programme. The experts regard this recommendation as fulfilled.

Criterion partly fulfilled.

2. Exams: System, Concept and Organisation

Criterion 2 Exams: System, Concept and Organisation

Evidence:

- Assessment and Exam Regulations
- Self-Assessment Report
- Study plans
- Module descriptions
- Samples Exams & Theses
- Discussions during the audit

Preliminary assessment and analysis of the experts:
The examination system at the CST is governed by the Royal University of Bhutan's central regulations, particularly the “Wheel of Academic Law” and the “Assessment and Examination Regulations”. The system combines continuous assessment and final examinations. Formative methods include elements such as assignments, laboratory work and project-based tasks, while summative assessments include mid-term tests and end-of-semester examinations. The specific assessment formats for each module are defined in the corresponding module descriptions.

Clear criteria are in place to determine whether a module is passed or failed. A student fails a module if they score below 40% in either the continuous assessment component or the semester-end examination. In addition, a module is also considered failed if the combined overall result is below 50%, even if both individual components meet the minimum threshold of 40%. Furthermore, a module may be failed if the required attendance level is not met. The standard minimum attendance requirement is 90%, which may be reduced to 80% only in justified cases, such as medical or officially approved reasons.

Regulations for progression and reassessment are also formally defined. If a student fails two-thirds or more of the modules in a semester, they are required to repeat the entire semester with the next cohort and are not permitted to progress. If fewer than two-thirds of the modules are failed, students may re-sit the failed module(s) at the beginning of the following semester and are allowed to progress to the next semester, even if the re-assessment is not passed. Failed modules can be retaken an unlimited number of times within a programme duration of up to six years. After this time, students must withdraw from the programme.

The system also includes provisions for handling exceptional circumstances. Students who miss an examination for justified reasons, such as illness, may be granted a first assessment attempt at a later stage. Regulations further provide for special arrangements for students with medical or other documented needs.

Examination procedures are organised centrally, including the publication of timetables approximately four weeks in advance. The examination period lasts for two weeks and usually starts one to two weeks after the end of the lecture period. There is a minimum interval of 24 hours between examinations, and a designated one-week preparation period is scheduled prior to the start of final examinations.

During the audit, the experts ask whether students have the opportunity to access detailed exam results and file an appeal. They learn that students can request to view their marked exams. However, if they want the exam to be rechecked, they have to pay an additional fee, as this involves extra work for the examiner. Students can also request an external examiner to recheck the exam, but this would incur a higher fee. The experts are surprised that students need to pay a fee to have their exams rechecked, as this should be a natural right of the student. Furthermore, the experts find out that the time windows during which students can actually view the detailed feedback and graded exams are very narrow and not always convenient for the students. For these reasons, the experts recommend optimising the overall exam review procedure and making it more student-friendly by waiving the fees and providing more flexible time slots for students to review their exams.

During the on-site visit, the experts assess various examination samples from both programmes. They conclude that overall CST has a comprehensive and transparent examination system in place, which is also confirmed by the students. The experts also positively note that the assessment forms are regularly reviewed and that the entire assessment system is monitored to ensure fairness and appropriateness.

Based on the exam samples and the module descriptions, the expert group verifies that the assessment methods used in the two programmes are generally competence-oriented and adequate for assessing the learning outcomes of the courses and programmes, corresponding to EQF level 6. They particularly welcome oral examinations such as the “Viva” assessment, which is an oral quiz competition between two students. However, they find that some modules in the IT programme could benefit from a more suitable assessment method. For example, they observe that exams including programming tasks are largely completed on paper. As this is an outdated practice, they recommend introducing more IT-based/electronic examinations for this purpose. The experts also suggest allowing more team-oriented and group-based projects in programming classes, moving away from producing source code to orally explaining it.

Final Project

Both programmes include a final project that extends over the final year of study. Students are required to address a research- or application-oriented problem, involving a literature review, problem formulation, and the development of a technical solution. The project concludes with a formal presentation and defence before a panel that includes external examiners. In both programmes, the final project is closely linked to the internship and is conducted as an industry-based group project, typically involving two to three students. Students work on real-world challenges, typically provided by partner organisations, and are jointly supervised by academic and industry mentors.

The experts consider the overall structure and procedure of the final project in both programmes to be convincing. However, they raise questions regarding the organisation of the project as group work and how individual contributions and independent work are ensured and assessed. The programme coordinators explain that while each group submits a joint project report, every student is required to write a dedicated chapter and is individually responsible for that part of the work. Furthermore, students receive individual grades instead of a collective group mark. Individual performance is also monitored throughout the project through regular supervision meetings, which are held on a weekly basis. During these meetings, supervisors assess each student's progress and contribution to the project. The experts find these arrangements transparent and appropriate for ensuring that every student demonstrates the ability to work independently on an engineering-related problem while also developing teamwork skills.

During the audit, the experts review several samples of the final project from both programmes. They conclude that the projects demonstrate the students' ability to work independently and apply scientific methods to engineering-related problems at EQF-level 6. However, the experts observe that the overall quality of the theses in Electrical Engineering is somewhat higher than that of the theses provided for Information Technology. While several IT theses are of a satisfactory standard, others fall rather below the level generally expected of a Bachelor's thesis. Nevertheless, given the applied and industry-based nature of the projects, the experts consider the overall quality of the submitted work to be acceptable.

At the same time, the reviewed theses reveal room for improvement in the IT programme, particularly with regard to scientific and technical writing skills. In several reports, claims about system performance and project outcomes were not sufficiently supported by a transparent methodology, clearly defined evaluation criteria, or reproducible evidence. Project objectives, methodological choices, implementation steps, and evaluation results were also not always consistently aligned, making it difficult to assess the evidentiary basis

of the conclusions. In addition, the reports showed weaknesses in formal presentation, including inconsistent chapter numbering and terminology, incomplete or weakly integrated references, insufficiently explained figures and tables, and claims that were not supported by transparent data or test procedures. These shortcomings weakened the professional and academic credibility of the thesis reports.

The experts acknowledge that the curriculum includes two modules intended to support the development of academic and research skills: “ACS101 Academic Skills” and “PRW301 Introduction to Research”, each carrying 3 ECTS credits. However, they note that “Academic Skills” appears to be a university-wide module of a general nature, while “Introduction to Research”, according to the module description, is primarily designed for students in the Bachelor’s programme in Civil Engineering. Consequently, neither module seems to be specifically tailored to the requirements and methodological characteristics of the Information Technology discipline. The experts consider this lack of subject-specific training in academic and technical writing to be a possible explanation for some of the shortcomings identified in the reviewed thesis samples. They therefore recommend strengthening the development of scientific and technical writing competencies within the Information Technology programme. Such training should be aligned with the specific requirements of the discipline and address IT-related research methods and discipline-specific approaches to academic work. They also recommend strengthening supervision and providing students with more detailed feedback throughout the project to improve the quality of the final thesis.

Final assessment of the experts after the comment of the Higher Education Institution regarding criterion 2:

The experts have reviewed the Higher Education Institution’s comments. While the institution has acknowledged the identified issues and outlined intended future actions, most measures remain at the planning stage and have not yet been implemented.

Regarding the recommendation applicable to both programmes to optimise the examination review procedure and make it more student-friendly by waiving the associated fees and providing adequate time slots for exam review, the institution explains that the removal of the fees would require an amendment of the university’s academic regulations. However, such an amendment has not yet been implemented. The recommendation is therefore considered not fulfilled.

For the Information Technology programme, the experts recommended the introduction of more electronic and IT-based forms of assessment. In its response, the institution states that the revision of assessment methods will be considered within the framework of the

upcoming periodic programme review for both the Information Technology and Electrical Engineering programmes. The experts welcome the intention to further develop assessment practices and consider the proposed direction appropriate for the discipline. However, as no concrete measures or implementations have yet been realised, the recommendation remains not fulfilled.

The experts also recommended strengthening the training of scientific and research-related skills and aligning it more closely with the methodological characteristics of the Information Technology discipline. The institution indicates that the module *PRW301 Introduction to Research* will be revised accordingly during the next periodic programme review. The experts regard this as a positive and appropriate response to the recommendation. Nevertheless, since the revision has not yet been completed and no revised module concept has been implemented, the recommendation cannot yet be considered fulfilled and therefore remains not fulfilled.

Criterion fulfilled.

3. Resources

Criterion 3.1 Staff and Development

Evidence:

- Self-Assessment Report
- Staff Handbook
- Study plans
- Module descriptions
- Discussions during the Audit

Preliminary assessment and analysis of the experts:
At CST, staffing and staff development are regulated by university-wide provisions. The Head of Department and the Programme Leader are responsible for staffing, academic quality and staff development, and also oversee resource planning.

Teaching staff are recruited through a competitive, multi-stage procedure. Vacancies are publicly advertised and candidates are assessed through written examinations, teaching demonstrations and interviews. According to the academic guidelines, academic staff must hold a qualification at least one level higher than the programme they teach. Selection is carried out by committees comprising both internal and external members.

The Information Technology programme is delivered by nine full-time academic staff members with qualifications in relevant computing disciplines. All nine hold a Master's degree, with one currently pursuing a PhD and another planning to start PhD studies this year i.e. 2026.

The Electrical Engineering programme is delivered by six full-time academic staff members, all of whom hold a Master's degree in a core area of the programme, such as power systems, control or renewable energy. Teaching in both programmes is partly supported by contributions from other departments.

All academic staff are expected to contribute to teaching, research and administrative duties. Institutional guidelines define the formal distribution of the workload across these areas, with most time allocated to teaching. In the audit, teachers explain that their workload is typically distributed as follows: 60% for teaching (with an average of 10–15 hours of contact time per week), 30% for research, and 10% for administration. However, they report that, in reality, the time invested in teaching is often even higher, leaving very little time for research.

Staff development is governed by institutional policies and supported through a combination of structured programmes and ongoing training opportunities. Newly recruited lecturers are required to complete a two-week induction programme focusing on teaching and learning in higher education. Within their first year, they must also complete the Postgraduate Certificate in Higher Education, which covers pedagogical principles, digital teaching methods, and feedback practices. As clarified during the audit, this qualification can be completed either full-time in around six months or part-time alongside teaching responsibilities in about one year. In addition, academic staff are expected to participate in periodic training workshops, for example when introducing new teaching methodologies or technological developments.

Staff performance and development needs are monitored through the Individual Work Performance System and internal quality assurance processes. Any identified development needs are incorporated into institutional human resource development plans. There are also opportunities for further academic qualifications, which are used by staff. For example, CST supports staff who are pursuing a PhD abroad, as it is currently not possible to complete a PhD in Bhutan.

In the audit, teachers report being involved in research and external engagement activities, including participation in international collaborations and conferences, consisting of both attending and hosting events. They also state that they participate in academic mobility and conference activities. However, this is limited to short-term mobility, as extended research stays or sabbaticals are not part of the current institutional framework. They add

that, while they try to follow up on research activities as much as possible, limited research funding and constrained research time are significant barriers to increased research. Thus, the experts learn that only about 2% of the overall budget at CST is allocated to research.

After reviewing the documentation and conducting the audit interviews, the experts conclude that the composition, qualifications, and professional profiles of the teaching staff are well suited to delivering the two EQF Level 6 programmes. The academic staff possess relevant qualifications and disciplinary expertise, and the experts gain the impression that they are committed to maintaining their subject knowledge and keeping pace with current technological developments.

At the same time, the experts note that the number of academic staff holding a PhD is relatively low. Given that the programmes under review are Bachelor's programmes, the experts do not consider this to be a critical issue at present. The current qualifications of the teaching staff are sufficient to ensure the academic quality and successful delivery of the programmes. Nevertheless, the experts are of the opinion that increasing the proportion of PhD-qualified staff would further strengthen the programmes in several ways. First, it could broaden the range of specialist topics offered, particularly in the form of elective modules. As outlined in Chapter 1.3, the current provision of electives is partly constrained by the availability of specialised teaching staff. Second, a larger number of PhD-qualified academics would further strengthen the scientific and research-oriented dimension of the programmes, as advanced expertise and research experience would increasingly impact teaching and curriculum development. Finally, an expansion of the academic staff base would help to reduce the teaching load currently carried by existing staff members.

As previously mentioned, the experts learn during the audit that teaching activities occupy a substantial portion of the academic workload, leaving only limited time for research activities. The experts consider this to be a challenge, particularly given the institution's ambitions to develop its academic profile further and potentially expand its programme portfolio in the future.

The experts also acknowledge that CST is aware of this issue and has already taken measures to address it. During the discussions, institutional representatives explain that they actively support staff wishing to pursue doctoral studies abroad and provide financial support for this purpose. However, they also highlight the broader challenge of recruiting and retaining PhD-qualified academics in Bhutan. In particular, many Bhutanese who pursue doctoral studies abroad subsequently choose to remain overseas, resulting in a significant loss of highly qualified personnel. The experts fully understand these constraints and recognise that this challenge extends beyond CST itself.

Nevertheless, the experts recommend that CST develop a long-term strategy aimed at increasing the proportion of PhD-qualified staff. In this context, the institution should continue to strengthen incentives that may attract and retain highly qualified academics. During the audit, the experts learn that factors such as employment stability, comparatively favourable working conditions, opportunities for international cooperation, and support for further academic development already constitute attractive elements of employment at CST. These and other incentives could be utilised more systematically in future recruitment and retention efforts.

Furthermore, experts consider the limited availability of research funding to be another major barrier to research activities at CST. They find that 2% of the college's overall funding going into research is very low. Additionally, as discussed in Chapter 3.3, while parts of the research infrastructure and laboratory equipment are adequate for Bachelor's programmes, they offer limited opportunities for more advanced research activities. The experts therefore recommend increasing financial support for research and further strengthening research infrastructure in order to provide staff with better conditions for conducting research and participating in international academic activities. They also encourage CST to continue advocating for stronger national research support structures and funding opportunities.

With regard to pedagogical qualifications and staff development, the experts have a very positive impression. They value the comprehensive framework for teaching qualification as well as the systematic monitoring of teaching quality. In the experts' view, this demonstrates the importance that CST attaches to high-quality teaching and learning.

This positive assessment is also reflected in the feedback received from students. During the audit, students express a high level of satisfaction with the quality of teaching and highlight the accessibility, commitment, and support provided by academic staff.

Overall, the experts conclude that the existing teaching staff are fully capable of delivering the two programmes at the required academic level. They particularly commend the commitment of the academic staff, who provide high-quality teaching and extensive support to students while simultaneously pursuing research activities. At the same time, the experts find that the high teaching workload and limited research resources restrict the scope for further research development. They therefore encourage CST to continue its efforts to increase the number of PhD-qualified staff and to strengthen institutional support for research and research infrastructure.

Criterion 3.2 Student Support and Student Services

Evidence:

- Self-Assessment Report
- Discussions during the Audit

Preliminary assessment and analysis of the experts:

The College of Science and Technology has established a structured framework of student support services aimed at fostering academic success, personal well-being, and employability. These services are embedded across the entire student lifecycle and are designed to address students' evolving needs as they progress through their studies. In particular, academic support provided by teaching staff, structured supervision in the later stages of study, as well as institutional efforts related to internships and graduate placement, are perceived as central elements contributing to positive student outcomes.

Support mechanisms are already initiated during the admission phase, where prospective students receive guidance on their study choices and potential career paths through direct communication with members of the admissions committee. Upon entry, first-year students participate in an introductory programme that familiarises them with academic requirements, institutional regulations, and the range of support services available on campus.

As students advance through their studies, the support system increasingly focuses on academic development. This includes ongoing academic advising, targeted training in research methodologies, and various co-curricular learning opportunities such as expert talks, career-related events, and innovation-oriented activities.

In the final stage of the study programme, support becomes more closely aligned with students' transition into employment or further academic pursuits. Emphasis is placed on research supervision, practical experience through internships, and structured career preparation activities, including employer engagement.

In addition to academic and career-related support, the college provides a range of services that contribute to students' overall well-being and campus experience. These include access to accommodation, learning resources, healthcare provision, recreational facilities, and counselling services. Psychological support is further reinforced through the involvement of qualified professionals. Moreover, student-led organisations and clubs play an important role in shaping campus life by offering opportunities for social interaction, extracurricular engagement, and the development of leadership and organisational skills.

The experts consider that there are sufficient resources to provide individual guidance, counselling and support to all students at CST. The support system helps students adapt to university life, achieve the intended learning outcomes, complete their studies successfully and transition to working life. Students report being well informed about and satisfied with the services available to them.

Criterion 3.3 Funds and equipment

Evidence:

- Self-Assessment Report
- Discussions during the audit
- Website of CST (https://cst.edu.bt/admission/)

Preliminary assessment and analysis of the experts:
CST draws its financial resources from three main sources. The primary source of funding is public financial support provided by the Government of Bhutan. The college receives an annual budget covering both operational and capital expenditures, including staff salaries, teaching and learning facilities, student support services, and research activities. The second source of income is student tuition fees. During the audit, the experts learn that tuition fees are formally charged in all programmes. However, a significant proportion of students receive government scholarships that cover these costs. Accordingly, around 70% of CST students receive funding through scholarships, while the remaining 30% finance their studies independently. Those who finance their studies independently need to pay tuition fees of Nu. 48,628.00 Nu., i.e. around 440 euros per semester. In addition, CST generates supplementary income through consultancy services, externally funded research projects, international cooperation activities, and the provision of training programmes. These additional sources of revenue contribute to the further development of the institution and support activities beyond those financed through the regular government budget.

According to the self-assessment report, the allocation and use of resources are managed at college and departmental levels. The Head of Department, in cooperation with Programme Leaders and the college management, regularly reviews infrastructure and equipment needs and prioritises upgrades within the available budget. In addition, the Head of Department also seeks to secure additional funding through external partnerships and international projects which are then used for teaching and research facilities.

The technical infrastructure of the Information Technology programme consists of ten computer laboratories, most of which are equipped with approximately 24 workstations each. The programme also has access to a high-performance computing facility that supports applications such as artificial intelligence and machine learning.

The Electrical Engineering programme provides access to ten specialised laboratories covering areas such as electrical machines, power electronics and protection systems. Further infrastructure is also under development to support applied teaching and research activities, including a solar photovoltaic system and a weather station.

Furthermore, all students at CST have access to the institutional library, which contains technical books, research papers and articles in both print and electronic formats. Students are also supported in publishing their research papers in national and international journals.

The experts learn that the EE programme maintains close links with external stakeholders from the energy sector, including organisations involved in power generation, transmission, and distribution, as well as governmental bodies. These collaborations contribute to the development of laboratory facilities and provide additional resources for practical training and research.

During the audit, students express satisfaction with the facilities and equipment at CST. They report that all the necessary resources, including software licences, are available. Teachers also state that they are generally satisfied, although they indicate that there is room for improvement, particularly in terms of the equipment used for research. They mention, for example, the desire for a real-time digital simulator.

During the audit visit, the experts tour the campus facilities and laboratories. They conclude that the infrastructure and technical equipment in the laboratories are adequate for delivering the programmes and achieving the intended learning outcomes. However, they notice that some of the equipment in the power electronics and electric machines labs is very old, with some devices not working at all. Therefore, the experts recommend renewing the equipment in the EE programme, particularly in the aforementioned labs.

In terms of financial resources, the experts consider the overall funding of the institution to be stable and the financial planning arrangements to be reliable. They are confident that sufficient resources are available to ensure the continued delivery of the two programmes over the next six years. At the same time, as discussed in Chapter 3.1, the experts note that only limited resources are currently available for research activities. They therefore recommend increasing financial support for research and strengthening the overall research environment, including further investment in laboratory infrastructure. Such measures would not only enhance the research activities and academic development of the teaching staff, but would also contribute to the further improvement of the programmes themselves. Through the integration of research outcomes into teaching and increased opportunities for students to participate in research projects, stronger research capacities would ultimately also have a positive impact on the quality of education provided.

The experts also suggest that CST should submit a request to the ministry to establish a national research agency that provides researchers with funds and projects, as there is currently none. They learn that with respect to electrical power engineering, professors of CST can get grants from Bhutanese industry to conduct research projects. However, in other areas of electrical engineering, e.g. electronics and information technology, there are little to no such opportunities. In order to also develop electrical engineering outside the power sector, governmental research funding is essential until the private sector can take over. The experts therefore encourage CST and RUB to push for the creation of a Bhutanese agency that funds academic research.

Final assessment of the experts after the comment of the Higher Education Institution regarding criterion 3:

The experts acknowledge several positive developments since the site visit. In particular, two academics holding doctoral degrees have been recruited, which strengthens the academic profile of the programmes. The experts also appreciate that the university is currently reviewing its human resource policies and considering measures such as sabbatical leave to further support academic staff development and research activities.

However, the experts do not identify comparable progress regarding the recommendation to increase financial support for research activities, academic development, and laboratory infrastructure. The institution's statement does not provide evidence of additional funding, implemented measures, or concrete improvements in these areas. The experts therefore maintain their recommendation and encourage continued efforts to strengthen research funding and the broader research environment.

Concerning the recommendation to renew the equipment in the Electrical Machines and Power Electronics laboratories, the experts note that the institution has committed to modernising the laboratories during the 2026/2027 fiscal year. While this demonstrates awareness of the issue and a willingness to address it, the planned measures have not yet been implemented. As the laboratory equipment has not yet been renewed, the recommendation remains not fulfilled.

Criterion fulfilled

4. Transparency and Documentation

Criterion 4.1 Module Descriptions

Evidence:

- Self-Assessment Report
- Module descriptions
- Websites of all study programmes
- Audit Discussions

Preliminary assessment and analysis of the experts:
The experts confirm that the module descriptions for the two programmes contain the necessary information, including the module name and code, the person responsible, the intended learning outcomes, module content, recommended literature, workload and credit points awarded, teaching methods, admission requirements, examination methods, an explanation of how the module grade is calculated, and the date of the last amendment. However, the experts note that not all modules list prerequisites, and that some only indicate the module code instead of the required knowledge. This could make it difficult for external people, such as interested persons and exchange students, to understand. Furthermore, the experts point out that various modules list outdated sources for suggested reading. The experts therefore require the module descriptions to be revised to ensure they list adequate and comprehensive prerequisites, as well as updated literature references. They also note that the description for the module "Dzongkha" (the official language of Bhutan) is not available in English. While they understand that the module refers to the native language, they request that, for reasons of transparency, particularly for interested students, at least the main information should also be presented in English.

Students confirm during discussions that information about modules is always available online, and that details concerning examinations and course content are provided at the beginning of each semester by teaching staff.

Criterion 4.2 Diploma and Diploma Supplement

Evidence:

- Exemplary diploma certificate per study programme
- Exemplary transcript of records per study programme

Preliminary assessment and analysis of the experts:
According to the self-assessment report, upon graduation, CST students receive a degree certificate and an academic transcript. The latter lists the modules completed by each student and their marks for each one. However, the experts learn that CST does not issue a Diploma Supplement. Therefore, the experts require CST to provide each graduate of the two programmes with a Diploma Supplement including the following information:

- The student's qualification profile, including the learning outcomes achieved
- The final mark, along with an explanation of the grading system/final mark
- Statistical data, as set out in the ECTS Users' Guide, to contextualise the final mark of the respective graduate within the cohort's performance
- The classification of the degree programme with regard to the Bhutanese education system

In addition, the documents (the Diploma Supplement or the transcript, which can also form part of the Diploma Supplement) must refer to the total number of ECTS credits awarded for the entire programme.

Criterion 4.3 Relevant Rules

Evidence:

- Self-Assessment Report
- All relevant regulations as published on the university's webpage
- Audit Discussions

Preliminary assessment and analysis of the experts:
The experts confirm that the rights and obligations of both CST and the students are clearly defined and binding. All rules and regulations are published on the college's website and students receive course materials at the beginning of each semester. In addition, all relevant information about the programmes is available on the programme homepages.

Final assessment of the experts after the comment of the Higher Education Institution regarding criterion 4:

The experts have reviewed the revised programme documentation and conclude that the requirements previously identified under this criterion have been satisfactorily addressed.

Regarding the module descriptions, the experts confirm that the revised documentation now contains updated literature references and more appropriate information on module prerequisites. Furthermore, all module descriptions are now available in English, including

the previously outstanding translation of the Dzongkha module. The experts find the revised documentation comprehensive and transparent and therefore consider this requirement to be fulfilled.

The experts also confirm that the institution has developed Diploma Supplements for both programmes in accordance with the ASIIN requirements and with reference to the European Qualifications Framework, the Bhutan Qualifications Framework, and the relevant academic regulations of the Royal University of Bhutan. The submitted Diploma Supplements provide the required information in a transparent and internationally understandable format. The experts therefore consider this requirement to be fulfilled.

Criterion fulfilled.

5. Quality management: quality assessment and development

Criterion 5 Quality management: quality assessment and development

Evidence:

- Wheel of Academic Law (RUB)
- Internal Quality Assurance Handbook
- Self-Assessment Report
- Discussions during the audit

Preliminary assessment and analysis of the experts:
The experts discuss the quality management system at the College of Science and Technology with all stakeholders. They learn that quality management is an integral aspect of academic and institutional development at CST aimed at ensuring the continuous enhancement of all academic programmes. The system is built around structured feedback mechanisms, stakeholder engagement, internal evaluations, and regular monitoring processes.

Quality assurance activities take place at different levels and intervals. Programme performance is monitored annually through established reporting and review mechanisms, while more comprehensive programme reviews are conducted every four years. These processes draw on feedback from a range of stakeholders, including students, academic staff, graduates, employers, external examiners, and relevant committees. The findings are used to identify areas for improvement and to inform decisions on programme development.

According to CST, student feedback is an important part of the quality assurance system. Anonymous surveys on modules and teaching staff are conducted twice per semester in each module. In addition, Student Consultative Meetings are held once per semester to discuss academic matters, facilities, workload and student services. Student representatives from each cohort participate in these meetings, as well as Programme Committee meetings. Furthermore, student representatives are members of the College Academic Committee, the college's highest academic decision-making body.

External examiners are appointed by the university and typically include both academic and industry representatives. They conduct regular visits, review programme implementation, and provide written reports containing observations and recommendations. The findings of these reviews are incorporated into action plans and follow-up measures documented in the Annual Programme Monitoring Report.

The Annual Programme Monitoring Report serves as a central instrument for recording programme performance and improvement activities. It consolidates information from student evaluations, external examiner reports, assessment outcomes, and other quality assurance activities. Responsibility for compiling and submitting the report lies with the Programme Leader, who oversees programme implementation.

In the audit, students report being satisfied with the quality assurance at CST, which includes a welcoming and friendly atmosphere where feedback is encouraged and taken seriously. Students confirm that surveys are carried out twice every semester and that feedback can be provided in person at any time, too. However, they state that the results of the surveys and any subsequent changes are typically not communicated to students. They emphasise, though, that they observe changes based on their feedback being implemented in subsequent semesters. While the experts appreciate that feedback is welcomed and changes are implemented, they deem a closed-feedback loop necessary to ensure transparent communication with students about the survey results and what is done with the feedback afterwards. The college can decide how to communicate the summarised and anonymous results to students, for example by email or in person in class, but students must be informed about the survey results and any remedial action intended.

Overall, however, the experts find that CST has a comprehensive quality management system in place, ensuring regular reviews of all programmes and consideration of feedback from all relevant stakeholders. This is evident in the quality of teaching and the high level of satisfaction among all participants interviewed during the audit. The experts conclude that the existing quality management system effectively ensures that programme quality is upheld and continuously improved. However, CST needs to ensure that this process and

its outcomes are also transparently communicated to students, and that the feedback loop is therefore systematically closed.

Final assessment of the experts after the comment of the Higher Education Institution regarding criterion 5:

The institution acknowledges the experts' observation and states its intention to ensure that feedback processes are systematically closed and that the results of evaluations and feedback mechanisms are communicated to students in the future. The experts welcome this commitment and consider the planned approach appropriate. However, the response indicates that these measures are currently still at the planning stage. The institution has not yet provided evidence that a systematic process for closing feedback loops has been implemented or that the results of feedback are regularly communicated to students in practice. Consequently, the experts conclude that the issue has not yet been fully addressed.

Criterion not fulfilled.

E Additional Documents

No additional documents needed.

F Comment of the Higher Education Institution (07.08.2026)

The following quotes the comment of the institution:

"**D 1. Statement of CST on Experts Accreditation Report**

The college would like to acknowledge the accreditation report submised by ASIIN office and experts for the onsite visit. The college notes the observations and recommendations made by experts with regard to Bachelor of Engineering in Electrical Engineering and Bachelor of Engineering in Information Technology.

The college acknowledge the expert panel's valuable observations regarding programme documentation and international alignment. Their feedback highlighted the need to improve the consistency of module descriptions, particularly in relation to prerequisites and literature references, introduce an ASIIN-compliant Diploma Supplement in the final degree documents, and revise the conversion and presentation of ECTS credits to enhance transparency, consistency, and international comparability. These recommendations provide a constructive basis for strengthening the quality and global recognition of our programmes.

The programme team has revised all the module descriptions where readling lists have been updated and pre-requisites mentioned whereever applicable. The diploma supplement has been developed and approved in 153rd College Academic Committee Meeting held on August 6,2026.

D 1.1. Objectives and Learning Outcomes of Degree Programme

The college appreciate the expert panel's recognition of the regular programme review process, active stakeholder engagement, strong industry collaboration, and employer's confidence in the quality and competence of our graduates.

The college acknowldge the observations made with regard to the fulfillment of ASIIN Criteria TC02 of BE in Electrical Engineering along with EUR ACE criteria. As for BE in IT the college acknowledge the observations made on fullfillment of the TC-04 ASIIN criteria and also on recommendation to provide evidenced based write up for fullfillment of EUR ACE criteria.

The programme team of BE in IT has prepared a new supporting document on Fulfillment of EUR-ACE framework standards to make engineering-specific competencies more explicit. However, further action will be taken to ensure a full alignment of the EUR-ACE standards by reviewing the learning outcomes of the programme in the next periodic review of the programme scheduled for academic year 2027-2028.

D1.2. Name of the Degree Programme

The college acknowledge the experts recogntion on BE in IT programmes on appropriately reflects objectives, intended learning outcomes and currilcular contents of the programme.

The BE in Electrical Engineering programme as pointed out by experts is more focused towards power engineering and to enhance transparency the experts suggest to reconsider the title of award to suitable one. For example BE in Electrical Power Engineering. Experts also point out that broadening the curricular in the programme to justify the title.

In this regard the programme team has carried out a mixed method survey, with purposive sampling method to check the stakeholder acceptance of the programme title revision. A total of 24 respondents were there from stakeholders and 29 students from 2025 and 2026 graduates of BE in Electrical Engineering. The survey respondents included Druk Green Power Corporation (Power Generating Company), Bhutan Power Corporation Ltd (Utility Company), Industries (Ferro Silicon Companies, Food and Beverages, Consultants, Royal Civil Service Commission and other relevant agencies). The survey data analysis reveals that the Programme Name should not be revised.

The programme team and college anknowledges the comments from experts and programme team will be broadening the curricular contents of the programme during the periodic review of the programme which will be completed by June 2027.

D1.3. Curriculum

The experts point out that both the Bachelor of Engineering in Electrical Engineering and Bachelor of Engineering in Information Technology; provides fundamental trainin in respective fields and are aligned with expected qualification level. Both the programmes have up to date subject contents and aligned with the needs to national labor market. The college would like to acknowledge the observation.

The college acknowledge experts recommendation to expand elective offerings, enabling students to pursue greater specialization and personalized learning in emerging fields in both the programmes.

The programmes will relook into offering specialized electives in upcoming periodic review of the programmes.

The college acknowledge the expert panel’s recommendation to improve the academic sequencing of the IT curriculum by relocating the Operating Systems module to a later semester where it aligns better with foundational knowledge and supports coherent student progression. It is also recommended to integrate AI-supported tools and AI literacy into the

curriculum, enabling students to develop competencies in the effective, ethical, and critical use of AI-assisted software development technologies.

The structural issue in BE in IT programme has been addressed with Operating Systems module being shifted to higher semester. The college and programme team has also started to integrate AI supported tools in teaching and learning and college will be subscribing to Claude AI with 10 licenses allocated to BE in IT programme.

The programme team will explore some more suitable AI-supported tools to automate the assessment of most of the programming tasks of the students. Currently, CST uses tools like DOMjudge for conducting intra or Inter-College programming contests among Students of the colleges of RUB and evaluating the program codes insteading of manual approach. The IT programme also has Claude AI Subscription mainly used for programming tasks.

With regard to student mobility college value the expert panel's constructive recommendation to enhance communication on international mobility opportunities, credit recognition procedures, and the role of learning agreements. Clearer guidance and a more adaptable recognition framework would better inform students and encourage greater participation in international exchange programmes.

The college would be working towards providing clear and user friendly online information system to facilitate access to international students and create CST as one of the host institutes.

D1.4. Workload and Credits

The college acknowledge the expert panel's valuable recommendation regarding the alignment of CST's workload calculations with ECTS standard and to comprehensively reviewing and documenting the total student workload, including examination preparation time, and revising the ECTS credit conversion process to ensure accuracy, transparency, and international comparability.

The programme teams have worked out the workload considering examination time which includes both preparation and examimation time for both theory and practicals. The converstion of RUB Credit points to ECTS is given in Table 1.

Table 1. RUB Credit Point to ECTS

BE ELECTRICAL ENGINEERING- ECTS CREDIT CONVERSION				
Sl.No	**Semester**	**Total Credit Hours**	**With Assessment Examination**	**ECTS (Notional Hours)**

		(Without Examination)		
1	Year 1, Semester I	720	984	750
2	Year 1, Semester II	720	909	750
3	Year 2, Semester I	600	843	750
4	Year 2, Semester II	600	789	750
5	Year 3, Semester I	600	816	750
6	Year 3, Semester II	600	816	750
7	Year 4, Semester I	600	813	750
8	Year 4, Semester II	600	760	750
Total hours		5040	6730	6000
Total Credit (RUB)		504	**673**	**600**
Conversion		**ECTS**		
60 ECTS/ 120 RUB CREDIT POINT		0.5		
12 RUB Credit		6		
RUB Credit		**252**	**336.5**	

Total Notional Hours as per RUB Credit Point with exam= 6730 Hours (8 Semesters)

Total Notional Hours as per ECTS :6000 Hours (8 Semesters)

RUB Credit Point to ECTS Conversion: 1 RUB Credit Point ≈ 0.5 ECTS or 1 ECTS = 2 RUB Credit points.

D1.5. Didactic and Teaching Methodology

The college acknowledges expert panel's recognition of CST's efforts in adopting digital tools, diverse teaching methods, and student-centred learning practices. The positive feedback on the use of Moodle, online learning resources, research activities, and internships to enhance students' learning experiences and practical skills. The feedback encourages us to continue strengthening interactive teaching approaches, independent learning, and opportunities for students to apply their knowledge in real-world contexts.

D2. Exams: System, Concept and Organisation

The examination system at CST is comprehensive and transparent; the examination systems are reviewed regularly and monitored to ensure fairness and appropriatness as reflected by experts. However, it is pointed out that currently students have to pay fees for rechecking and revaluation of their papers. Experts recommend to optimize the exam review procedure by waiving recheck fees and providing more flexible time slots for students to review their graded exams.

The college acknowledge the concerens and the issue was discussed in 153rd College Academic Committee Meeting (CAC) and the meeting forward the agenda to be discussed in Programme Quality Committee Meeting as this change would mean change in Academic regulation of the university.

The expert panel's recognise that CST's assessment practices are generally competence-oriented and aligned with the intended learning outcomes. CST would like to accept positive feedback on innovative approaches such as Viva assessments and also take note of their recommendation to further modernize assessment methods in the IT programme through increased use of electronic examinations and more collaborative, project-based programming assessments.

The recommendation on revision of assessment modes will be taken up in the upcoming periodic review of the programme for both BE in EE and BE in IT programs.

The expert panel's recognise that the final-year project framework in both programmes is well-structured, industry-oriented, and effective in helping students achieve the expected competencies at EQF Level 6. The involvement of industry partners, academic and industry supervision, individual assessment, and regular progress monitoring, which together support students in applying their knowledge to real-world engineering challenges while developing independent working and teamwork skills is being acknowledged by experts.

The college also acknowledge the areas identified for further improvement, particularly in the Information Technology programme, where some project reports require stronger scientific and technical writing, clearer research methodology, improved documentation, and better alignment between objectives, implementation, evaluation, and conclusions which also includes improved supersvion of students.

The programme team would be revising the PRW301 Introduction to Research module to better suit BE in IT program in the upcoming periodic review.

D3 Resources

D3.1 Staff and Development

The expert panel's recognition of the commitment, qualifications, and professional expertise of CST's academic staff in delivering the two **EQF Level 6** programmes is well received. The experts noted that the current teaching capacity is adequate to ensure programme quality; however, the recommendation to gradually increase the proportion of PhD-qualified faculty members to further strengthen research capacity, academic excellence, and the long-term development of the programmes is being acknowledged.

The BE in Electrical Engineering programme after the onsite visit has been able recruit to two academicians with PhD. Dr. Tshewang Lhendup (PhD in Renewable Energy) has joined CST from July 2026 and Dr. Sastry (PhD in Power System Engineering) would be joining by mid august 2026. CST will continue to strive for academic excellence with research driven programmes.

The experts recommend that CST develop a long-term strategy aimed at increasing the proportion of PhD-qualified staff and the institution should continue to strengthen incentives that may attract and retain highly qualified academics. The University is currently reviewing its human resource policy and provisions like sabbatical leave are being proposed.

D3.2 Student Support and Student Services

Experts confirm that CST possesses sufficient resources and support mechanisms to deliver comprehensive guidance, counseling, and support to all students throughout their academic journey, assisting with university adaptation, achievement of learning outcomes, successful graduation, and transition into the workforce.

D3.3 Student Support and Student Services

Both the programmes have adequate infrastructure which includes laboratories across BE in EE and BE in IT programmes. In BE in IT high-performance computing facilities are available while in EE experts have observed industry partnerships particularly in energy-sector. However, audit findings and faculty feedback emphasize a need to upgrade research capabilities and renew outdated or non-functioning equipment in the power electronics and electric machines labs.

The programme team has put up the proposal for upgradation of laboratory equipments in Electrical Machines and Power Electronics Laboratories in the 199th College Management Committee Meeting. The proposal was approved for procurement in financial year 2026-2027.

The experts also suggest that CST should submit a request to the ministry to establish a national research agency that provides researchers with funds and projects, as there is currently none.

The college would take this recommendation in the upcoming years with relevant agencies.

D4. Transparency and Documentation

D4.1 Module Descriptions

Experts confirm that module descriptions across both programs are structurally sound and cover all the essentials, including course codes, learning outcomes, workloads, grading criteria, and teaching methods. However, auditors identified a few key areas that need attention to improve clarity and transparency for everyone. The prequisites should explicitly explain the required background knowledge rather than just listing internal course codes, which can be confusing for prospective or exchange students and reading lists that need to updated with latest editions. Experts reccomment to have English summary of the "Dzongkha" to ensure the curriculum remains accessible and transparent to all interested applicants.

The programme team acknowleges this observation. The module descriptions have been updated with latest edition of reading lists, pre requisites are explained wherever applicable and English translation of Dzongkha Module is also being developed. The revised Definitve Programme Document and English translation of Dzongkha is available.

D4. Diploma and Diploma Supplement

The experts learn that CST does not issue a Diploma Supplement. Therefore, the experts require CST to provide each graduate of the two programmes with a Diploma Supplement.

The college has developed Diploma supplement as per ASIIN criteria, European Qualifications Framework (EQF), The Wheel of Academic Law of Royal University of Bhuayn and Bhutan Qualifcations Framework (BQF).

D5. Quality management: quality assessment and develop-ment

The experts points that CST has comprehensive quality management system that ensures continuous program improvement through structured annual reviews, four-year programme reviews, external examiner inputs, and deep student involvement programme quality assurance committes. Although overall satisfaction is high and feedback leads to real changes, experts recommend CST to implement a closed feedback loop to transparently communicate survey results and planned actions back to the student body.

The college acknowledge this observation, would like to ensure that feedback loop is closed and results communicated to students. “

G Summary: Expert recommendations (31.08.2026)

Taking into account the additional information and the comments given by CST the peers summarize their analysis and **final assessment** for the award of the seals as follows:

Degree Programme	ASIIN Seal	Maximum duration of accreditation	Subject-specific label	Maximum duration of accreditation
Ba Electrical Engineering	With requirements for one year	30.09.2032	EUR-ACE®	30.09.2032
Ba Information Technology	With requirements for one year	30.09.2032	EUR-ACE®	Suspended until A 4 is fulfilled

Requirements

For all degree programmes

A 6. (ASIIN 1.5) Ensure that national credits are accurately converted to ECTS credits, and that subsequently, all documents display the correct number of ECTS credits.

A 7. (ASIIN 5) Ensure that students are informed about the survey results.

For the Ba Information Technology programme

A 8. (ASIIN 1.1) Reformulate the intended learning outcomes so that they are competence oriented.

A 9. (ASIIN 1.3) Strengthen the engineering focus of the curriculum, particularly by enhancing the documentation and assessment of design methodology, experimental validation, quality assurance, professional standards and technically justified decision-making in student projects.

Recommendations

For all degree programmes

E 1. (ASIIN 1.3) It is recommended to establish more electives.

E 2. (ASIIN 1.5) It is recommended that more flexibility is offered in terms of recognition of externally achieved qualifications, and that students are informed more transparently about mobility options and the credit recognition policy.

E 3. (ASIIN 2) It is recommended that the exam review procedure is optimised and made more student-friendly by waiving the fees and providing adequate time slots for it.

E 4. (ASIIN 3.3) It is recommended that financial support for research, academic activities, and laboratories is increased.

For the Ba Information Technology programme

E 5. (ASIIN 2) It is recommended that more electronic/IT-based exams are introduced.

E 6. (ASIIN 2) It is recommended that training in scientific skills is enhanced and tailored more closely to the methodological characteristics of the IT discipline.

For the Ba Electrical Engineering programme

E 7. (ASIIN 1.2) It is recommended renaming the programme to reflect its focus on power and energy, or widening its scope.

E 8. (ASIIN 3.3) It is recommended that the equipment in the Power Electronics and Electric Machines labs is renewed.

H Comment of the Technical Committees (04.09.2026)

Technical Committee 02 – Electrical Engineering/Information Technology (04.09.2026)

Assessment and analysis for the award of the ASIIN seal:

The Technical Committee discusses the procedure and largely concurs with the assessment of the experts. However, it questions recommendation E 1, as comparable cases in which the name of a degree programme does not fully correspond to its content are usually treated as a requirement rather than a recommendation. The Technical Committee also considers the implications such a decision may have for the higher education institution, given that renaming a degree programme involves considerable administrative effort, and discusses whether fulfilment within one year is realistic. Weighing these aspects, the TC concludes that the equal treatment of institutions facing comparable issues should prevail and decides to change the recommendation to a requirement. It adopts the standard formulation for such cases, which leaves it to the HEI to decide whether to adjust the name or the content of the degree programme. In this context, the TC notes that the institution has already indicated its intention to take corresponding measures.

Assessment and analysis for the award of the EUR-ACE® Label:

The Technical Committee deems that the intended learning outcomes of the degree programmes do comply with the engineering specific parts of Subject-Specific Criteria of the Technical Committee 02 – Electrical Engineering/Information Technology

The Technical Committee 02 – Electrical Engineering/Information Technology recommends the award of the seals as follows:

Degree Programme	ASIIN Seal	Accredited by German Engineers	Maximum duration of accreditation	Subject-specific label	Maximum duration of accreditation
Ba Electrical Engineering	With requirements for one year	With requirements for one year	30.09.2032	EUR-ACE®	30.09.2032

Degree Programme	ASIIN Seal	Accredited by German Engineers	Maximum duration of accreditation	Subject-specific label	Maximum duration of accreditation
Ba Information Technology	With requirements for one year	With requirements for one year	30.09.2032	EUR-ACE®	Suspended until A 4 is fulfilled

Technical Committee 04 – Informatics/Computer Science (10.09.2026)

Assessment and analysis for the award of the ASIIN seal:

The TC discusses the procedure, and in principle agrees with the experts' assessment. However, the TC finds that a recommendation is missing in the final assessment, although the issue is addressed within the report. In the report, the experts discuss the portion of faculty members with a PhD and eventually recommend to increase this number. However, this recommendation is missing in the final assessment, which is why the TC wants to add a new recommendation E 4 in order to address this matter.

The Technical Committee 04 – Informatics/Computer Science recommends the award of the seals as follows:

Degree Programme	ASIIN Seal	Accredited by German Engineers	Maximum duration of accreditation	Subject-specific label	Maximum duration of accreditation
Ba Information Technology	With requirements for one year	With requirements for one year	30.09.2032	EUR-ACE®	Suspended until A 4 is fulfilled

I Decision of the Accreditation Commission (25.09.2026)

Assessment and analysis for the award of the ASIIN seal:

The commission discusses the procedure, following the experts' vote and the changes suggested by TC 02 and TC 04.

Assessment and analysis for the award of the EUR-ACE® Label:

The Accreditation Commission deems that the intended learning outcomes of the degree programmes do comply with the engineering specific parts of Subject-Specific Criteria of the Technical Committee 02 – Electrical Engineering/Information Technology.

The Accreditation Commission decides to award the following seals:

Degree Programme	ASIIN Seal	Accredited by German Engineers	Maximum duration of accreditation	Subject-specific label	Maximum duration of accreditation
Ba Electrical Engineering	With requirements for one year	With requirements for one year	30.09.2032	EUR-ACE®	Subject to the approval of the ENAEE Administrative Council
Ba Information Technology	With requirements for one year	With requirements for one year	30.09.2032	EUR-ACE®	Suspended until A 4 is fulfilled

Requirements

For all degree programmes

A 1. (ASIIN 1.5) Ensure that national credits are accurately converted to ECTS credits, and that subsequently, all documents display the correct number of ECTS credits.

A 2. (ASIIN 5) Ensure that students are informed about the survey results.

For the Ba Information Technology programme

A 3. (ASIIN 1.1) Reformulate the intended learning outcomes so that they are competence oriented.

A 4. (ASIIN 1.3) Strengthen the engineering focus of the curriculum, particularly by enhancing the documentation and assessment of design methodology, experimental validation, quality assurance, professional standards and technically justified decision-making in student projects.

For the Electrical Engineering programme

A 5. (ASIIN 1.2) Ensure that the name of the degree programme, its intended learning outcomes and its content correspond with each other.

Recommendations

For all degree programmes

E 1. (ASIIN 1.3) It is recommended to establish more electives.

E 2. (ASIIN 1.5) It is recommended that more flexibility is offered in terms of recognition of externally achieved qualifications, and that students are informed more transparently about mobility options and the credit recognition policy.

E 3. (ASIIN 2) It is recommended that the exam review procedure is optimised and made more student-friendly by waiving the fees and providing adequate time slots for it.

E 4. (ASIIN 3.1) It is recommended to increase the proportion of PhD-qualified faculty members.

E 5. (ASIIN 3.3) It is recommended that financial support for research, academic activities, and laboratories is increased.

For the Ba Information Technology programme

E 6. (ASIIN 2) It is recommended that more electronic/IT-based exams are introduced.

E 7. (ASIIN 2) It is recommended that training in scientific skills is enhanced and tailored more closely to the methodological characteristics of the IT discipline.

For the Ba Electrical Engineering programme

E 8. (ASIIN 3.3) It is recommended that the equipment in the Power Electronics and Electric Machines labs is renewed.

Appendix: Programme Learning Outcomes and Curricula

According to The Definitive Programme Document the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by the Bachelor degree programme Electrical Engineering:

"**Aims of the Programme**

The aim of the programme is to equip graduates with the basic knowledge needed for successful careers in electrical engineering, including electrical machines, power generation, power transmission and distribution, power system protection, power control drives, renewable energy generation and integration, electrical network management and design, as well as fostering professional ethics and leadership qualities.

Learning Outcomes of the Programme

Upon successful completion of the Bachelor of Engineering in Electrical Engineering, the graduates are expected to have the ability to:

1. Apply scientific, mathematical and electrical engineering principles to solve problems in the field of electrical engineering
2. Design electrical networks for power systems and industrial applications that meet technical, safety, environment and economic requirements
3. Mitigate electrical engineering problems using simulation, experiments and field data
4. Design and manage transmission and distribution networks, operate power generating station including conventional and non-conventional sources
5. Appraise innovative solutions to address real-life problems in power sectors
6. Evaluate the professional, ethical and social issues related to electricity
7. Demonstrate interpersonal skills such as cooperation, negotiation, teamwork and leadership
8. Build an educational foundation to pursue career / higher studies in engineering, emerging technologies and entrepreneurship."

The following **curriculum** is presented:

Year/ Sem		MODULES					
1	I	MAT101	PHY101	EWP101	CPL101	ACS101	EGP101
		Calculus and Infinite Series	Engineering Physics-I	Electrical Workshop Practice	Introduction to Programming	Academic Skills	Engineering Graphics
	II	MAT102	EEM101	TSM101	DZG101	MGT401	CHE101
		Multivariate Calculus, Differential Equations and Matrices	Electrical and Electronics Engineering Material	Engineering Mechanics	རྫོང་གསལ་དཔྱད་སྦྱོང་ལེན།	Project Management	Engineering Chemistry
2	I	MAT204	ISM201	CKT201	ECD201	ECD202	
		Complex Analysis, Fourier Series and PDE	Instrumentation Systems	Circuit Theory-I	Electronic Circuits and Devices-I	Digital Electronics and Logic Design	
	II	MAT209	EFT201	CKT202	ECD203	SNP201	
		Transforms and Hypothesis Testing	Electromagnetic Field Theory	Circuit Theory-II	Electronic Circuits and Devices-II	Signals and Systems	
3	I	PSS301	FMH302	EMC301	ELE303	MAT311	
		Power Generation	Hydraulics and Hydraulic Machines	Electrical Machine-I	Power Electronics	Numerical Methods with Programming	
	II	ECD304	EMC302	CTS401	RET403	PSS302	
		Microprocessor & Microcontroller	Electrical Machines - II	Control Systems	Energy Economics Policy and Management	Power transmission and Distribution	
4	I	PSS403	PSS404	PRW403	Major	Minor	
		Switch Gear and Protection	Power System Analysis	Research Project			
	II	PSS405	PRW402	PRW403	Major	Major	
		High Voltage Engineering	On the Job Training	Research Project			

MAJOR I: Power System Engineering

Year	Code	Module
4	PSS406	Smart Grid Technologies
4	EMC403	Electrical Machine Design
4	PSS407	Advanced Power System Protection
4	PSS408	Power Quality and Reliability Analysis
4	PSS409	AI Application in Power Systems
4	PSS410	Power System Operation and Control

Table 3: List of Major II Modules

MAJOR II: Renewable Energy Engineering		
Year	**Code**	**Module**
4	RET401	Solar Energy Fundamentals and Application
4	RET402	Alternate Energy Technologies and Energy Storage
4	RET404	Integration of Renewable Energy into Grid
4	RET405	Hydropower Resource Assessment and Design
4	ECE402	Energy Auditing and Efficiency
4	ELE404	Industrial Drive and Electric Vehicle Drives

Table 4: Minor Modules

Year	Code	Module
4	EDP101	Entrepreneurship
4	MIM301	Industrial Engineering & Production Management
4	MIM402	Total Quality Management
4	EWP402	Electrical Installation and Design for Buildings
4	CTE207	Artificial Intelligence

According to The Definitive Programme Document the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by the Bachelor degree programme Information Technology:

"**Aims of the programme**

The programme aims to produce competent engineering graduates in Information Technology by fostering knowledge, skills, and dispositions through deliberate practice in relevant content demonstrating IT proficiency.

The programme also aims to offer diverse professional and lifelong learning opportunities, producing professionals prepared to perform duties ethically and solve real-world problems with innovation. Students will receive a solid foundation in IT and engineering fundamentals, supporting **five key pillars**: Programming; Networking and System Administration; Cryptography and Security; Databases, AI and Machine Learning; HCI, Mobile and Web Systems; all underpinned by a focus on Entrepreneurship and Professionalism geared towards career preparation.

The programme dynamically remains responsive, continuously adapting to stay abreast of evolving global standards and advancements in cutting-edge technologies.

Learning Outcomes of the Programme

On completion of the programme, graduates will be able to:

1. Apply computing, science, and mathematics principles to solve complex IT engineering problems.
2. Analyse the problem, identify and define the computing requirements appropriate to the solution and apply computational approaches to the problem-solving process.
3. Design, implement, and evaluate computing-based systems in the IT discipline to meet specified requirements.
4. Use appropriate and emerging technologies to improve the performance of systems and discover the cause of performance problems in a system.
5. Perform system integration and API-based architecture development.
6. Demonstrate an understanding of security issues in the design and administration of computer networks and develop proficiency in the defence of network and system integrity.
7. Develop and conduct appropriate experimentation, analyse and interpret data, and use engineering judgment to draw conclusions.
8. Appraise innovative solutions to address real-life problems by developing predictive systems using machine learning and data analytic tools.
9. Recognise ethical and professional responsibilities in IT solutions within global, economic, environmental, and societal contexts.
10. Apply entrepreneurial knowledge and skills to explore tech-based business opportunities and develop a business proposal for creating employment opportunities.

11. Collaborate in multi-disciplinary groups to address technology-related challenges and achieve common goals.
12. Communicate technical information effectively to diverse audiences with clarity and purpose.
13. Evaluate the project requirements and associated risks to develop an effective project plan and implement the project within the organisational constraints."

The following **curriculum** is presented:

Year 3 Semester I				Contact Hours			Marks Theory		Marks Pract
Sl#	Code	Module	Credit	L	T	P	CA	EX	CA
1	ITM301	Professionalism and Ethics in IT	12	3	0	0	60	40	0
2	CTE308	Mobile Application Development	12	3	0	3	35	0	65
3	CTE309	Machine Learning	12	3	0	3	35	30	35
4	PRW301	Introduction to Research	12	2	0	0	100	0	0
5	ITM302	System Administration	12	3	0	3	35	30	35

Year 3 Semester II				Contact Hours			Marks Theory		Marks Pract
Sl#	Code	Module	Credit	L	T	P	CA	EX	CA
1	DIS302	Data Analytics	12	3	0	3	35	30	35
2	DIS303	Cryptology	12	3	0	3	35	30	35
3		Elective I	12	3	0	3	35	30	35
4	ITM304	IT Project Management	12	3	0	0	60	40	0
5	EDP101	Entrepreneurship	12	2	0	0	100	0	0

Year 4 Semester I				Contact Hours			Marks Theory		Marks Pract
Sl#	Code	Module	Credit	L	T	P	CA	EX	CA
1	DIS404	Advanced Database Systems	12	3	0	0	60	40	0
3	DIS405	Information Security	12	3	0	0	60	40	0
4	CTE412	Integrated Systems Technology	12	3	0	3	35	30	35
5		Elective II	12	3	0	3	35	30	35
6	IRP401	Industry Research Project Proposal	12	3	0	0	100	0	0

Year 4 Semester II				Contact Hours			Marks Theory		Marks Pract
Sl#	Code	Module	Credit	L	T	P	CA	EX	CA

1	IRP402	Industry Research Project	48	5	0	0	100	0	0
2	ONL401	Online Courses	12	0	0	0	100	0	0

Elective I	
NWC303	Advanced Routing
CTE310	Natural Language Processing
CTE311	Digital Image Processing
Elective II	
NWC404	Network Security
ITM403	Advanced System Administration
DIS406	Blockchain Technology