



PROGRAMME REVIEW REPORT

Cluster of study programmes
Bachelor of Science in Biological Sciences
Bachelor of Science Honours in Botany
Bachelor of Science Honours in Chemistry
Bachelor of Science Honours in Zoology
Faculty of Science
University of Ruhuna

Site Visit Dates: 30th November & 1st December 2023



Review Panel: Prof. (Ms) N. Deshapriya (Chair)
Prof. S. Arasaretnam
Prof. A. Henagamage
Dr. M J M Jafeen

The Quality Assurance Council
University Grants Commission, Sri Lanka

University: University of Ruhuna

Faculty: Faculty of Science

Programmes: Bachelor of Science (Biological Sciences), Bachelor of Science Honours in Botany, Chemistry, Zoology

Review Panel: Prof. (Ms) N Deshappriya (Chairperson)

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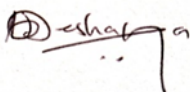
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Section 1: Brief Introduction to the Programme

The University of Ruhuna (UoR) was established on the 1st of September 1978 and has 10 faculties at present, namely, Agriculture, Engineering, Fisheries and Marine Sciences and Technology, Humanities and Social Sciences, Management and Finance, Medicine, Science, Technology, Allied and Health Sciences, and Graduate Studies. The Faculty of Science (FoS) is one of the four faculties established at the inception of the university in 1978 and has five departments i.e. Botany, Chemistry, Mathematics, Physics and Zoology. In addition, there is a Computer Unit, which caters to the needs of the Faculty, and the University in general. Student intake to the FoS has increased gradually during the period 2015-2019 and by 2019 the total intake has been 489. Table 1.1 shows the number of students enrolled in each degree programme offered by the FoS from 2015 to 2019.

Table 1.1: Student intake (2015-2019)

	2015	2016	2017	2018	2019
BSc General	276	317	313	322	362
BSc Special	47	52	41	44	69
BCS General	37	47	49	48	49
BCS Special	8	5	7	5	9
Total	368	421	410	419	489

Degree programmes offered by the Faculty of Science

Currently, the Faculty of Science offers Bachelor of Science (BSc) (3 year) and BSc Honours (4 year Special as designated by UoR) degrees in Biological and Physical Science streams, and Bachelor of Computer Science (BCS) (3 year) and BCS Honours (4 year Special) degree programmes in the Computer Science stream. The BSc degree programmes span six semesters while the duration of BSc Honours (Special) Degree programmes is eight semesters.

Departments contributing to degree programmes under review

The undergraduate programmes offered by the Faculty comprise of course units offered by individual departments. The Departments of Botany and Zoology offer course units mainly for students in the Biological Science stream. In addition, both departments offer optional courses for students in the Physical Science stream. The Departments of Chemistry and Physics cater to students in both Physical and Biological Science streams.

- Department of Botany

The Department of Botany conducts courses in all major fields of Botany for Biological Science undergraduates registered for BSc and BSc Honours degree programmes. The department comprises 14 well-qualified academic staff members and sufficient infrastructure facilities to cater to up to 150 undergraduate students. The Botanical Society of the department provides opportunities for students to conduct extra-curricular activities relevant to the subject.

- Department of Chemistry

The Department of Chemistry conducts courses in all major fields of Chemistry for undergraduate students registered for BSc and BSc Honours degree programmes. The department comprises 17 well qualified academic staff members and sufficient infrastructure facilities to cater to up to 300 undergraduate students. The Chemical Society of the department provides opportunities for students to conduct extra-curricular activities relevant to the subject.

- Department of Zoology

The Department of Zoology conducts courses in all major fields of Zoology for undergraduate students of the Biological Science stream registered for BSc and BSc Honours degree programmes. The department comprises 13 well qualified academic staff members and sufficient infrastructure facilities to cater to up to 150 undergraduate students. The Zoological Society and the Birders' Club of the department provide opportunities for students to conduct nature friendly activities relevant to the subject.

The curriculum of every department comprises of both core and optional course units fulfilling the minimum requirement according to the SLQF guidelines. During the first two academic years, students in BSc in Biological Sciences programme must select/follow core course units offered by three of the four Departments of Chemistry, Zoology, Botany or Physics. Biological Science students are given the opportunity to choose optional course units offered by the Department of Physics in the second academic year of their degree programme. All course

units offered by the Departments of Botany and Zoology in the third academic year are optional for the students registered for the BSc degree. The Department of Chemistry offers optional course units to both Biological and Physical Sciences streams during semester II of the third academic year. Four-year Honours degree programmes are offered by all departments and the students are selected for these programmes by the respective department of study upon their request and based on their academic performance during the first two academic years of the BSc degree, an interview as well as their general aptitude.

Teaching/ learning resources

The university has an official Management Information System (RUMIS) which manages the students' data, integrating all the faculties. After obtaining enrolment information from RUMIS, the Management Information System of the Faculty of Science (FOSMIS) is used to manage the information relevant to the students registered for programmes offered by FoS, i.e. information on registration for degree programmes, course units and examinations. FOSMIS is also a platform for Heads of Departments, Dean and the Assistant Registrar to publish notices relevant to almost all activities relevant to students. In addition to FOSMIS, the Faculty possesses a web-based Learning Management System (LMS) which provides an interactive digital platform for teaching and learning process of the academic programmes. The Faculty of Science gets services from the main library of the university in addition to the library available at the Faculty. The library is operated with an MIS, "ISURU".

The Department of English Language Teaching (DELT) of the Faculty of Humanities and Social Sciences, provides services to all faculties of the university including the Faculty of Science, to conduct English Language programmes during the orientation period and also compulsory course units in English for the undergraduates of the Faculty. The Faculty has an English coordinator appointed by the Faculty Board to liaise with the permanent academic staff member appointed by DELT to conduct the English programmes for the students of the Faculty of Science with the assistance of visiting instructors.

Section 2: Review Team's Observations on the Self-Evaluation Report (SER)

The process of preparing of Self-Evaluation Report (SER) of the Faculty of Science has been discussed initially at the Internal Quality Assurance Cell (IQAC) of the Faculty as instructed by the Internal Quality Assurance Unit (IQAU) of the University. The SER consisted of all sections as prescribed by Chapter 4 of the Programme Review Manual of the UGC.

Section 1 comprises a brief introduction to the Faculty, the programmes under review and their activities as well as information on common facilities available to students and staff members of the FoS.

The content of the Introduction to the study programmes included in the SER was mostly extracted from the Student Handbook and included the required information. However, only a superficial Graduate Profile has been formulated and a more detailed insight into the expected graduate attributes is needed. Learning outcomes for BSc and BSc (Honours) programmes (PLOs) have not been included in the SER. Although the numbers of academic and support staff of all departments of the Faculty are specified (table extracted from the Student Handbook) their profiles are not included.

The SER refers to a Cultural Center, Resource Center for Modern Languages and a Counselling Services Center. However, their physical presence or the services rendered by these centers could not be observed during the site visit.

Some of the pertinent information could have been included at least as Annexures such as academic staff profiles, adjunct and visiting staff profiles, lists of laboratories, services rendered by the relevant centers, etc.

A SWOT analysis has been included in the SER which indicates the awareness of the strengths that need nurturing and weaknesses that need to be addressed.

Section 2 summarizes the process of preparing the SER and provides information about the appointment of committees/ writing teams and the allocation of responsibilities. In addition to the faculty IQAC members, academic staff members (01 from the Department of Botany, 02 each from the Departments of Chemistry and Zoology) have been appointed by the Faculty Board and approved by the Senate of the University to formulate the SER and collect relevant documentary evidence. Furthermore, eight sub-committees have been appointed to be responsible for compiling evidence for the eight criteria specified in the Programme Review

Manual of the UGC. Selected members have participated in the workshop conducted by the QAAC of the UGC.

Section 3 of the SER has given details on compliance of the study programmes with the criteria and standards, by providing documents as a means of supporting each claim. For each standard under each criterion, evidence was presented using a coherent coding system to mark and differentiate each claim. However, some documents provided as evidence for some of the criteria/ standards were not appropriate and the review team had to request required/ relevant evidence during the site visit. Some of the documents, although mentioned as evidence in the SER, were not provided. Some folders were empty. In a few instances, evidence was irrelevant due to a lack of understanding of the pertinent documents to show compliance. Some evidence provided was long documents with numerous aspects and did not indicate compliance with the specific standard clearly: e.g. the entire Student Handbook has been listed as evidence repeatedly without indicating the relevant component needed to show compliance for the specific standard. Some of the documents provided as evidence were undated, unsigned typewritten sheets and did not show their association with a formal meeting/ report/ approving body/ approval process, etc.

Some of the scores were increased by the review team after the site visit which is an indication of the shortcomings of evidence provided in the SER to show compliance of the programmes to several standards.

SER also consists of a comprehensive summary which includes an analysis of compliance of the degree programmes to standards/ best practices prescribed in the UGC manual.

Section 3: A Brief Description of the Review Process

Review Team

The review team comprising the following members was appointed for the review of the Bachelor of Science (BSc) and BSc Honours in Botany, Chemistry and Zoology programmes of the University of Ruhuna (UoR), Sri Lanka.

- Prof. (Ms) N. Deshappriya (Chairperson), Senior Professor, Department of Botany, Faculty of Applied Sciences, University of Sri Jayewardenepura.
- Prof. A. Arasaretnam, Professor in Chemistry, Department of Chemistry, Faculty of Science, Eastern University of Sri Lanka.
- Prof. A. P. Henagamage, Associate Professor /Head, Department of Science and Technology Faculty of Applied Sciences, Uva Wellassa University.
- Dr. M. J. M. Jafeen, Senior Lecturer /Head, Department of Physical Sciences, Faculty of Applied Sciences, South Eastern University of Sri Lanka

Review Process

A rigorous review process was conducted in several steps.

A soft copy of the Self Evaluation Report (SER) prepared by the three departments on the BSc (Biological Sciences) and BSc Honours (Botany, Chemistry, Zoology) of the Faculty of Science (FoS), University of Ruhuna (UoR) was uploaded to the QAAC MIS. Members of the team conducted a desk evaluation independently based merely on the information provided in the SER and the results were uploaded to the same digital platform. This was followed by a Zoom meeting of the review team to discuss strengths and weaknesses evidenced in the SER and further clarifications/evidence required was also discussed. Once the documentary evidence uploaded and also shared *via* Google Drive (<https://192.248.48.12/dmsscience/seeddms-6.0.25/>) was available, all standards were evaluated, after which several online discussions were held between the members of the review panel. The perusal/ evaluation of documentary evidence was completed by mid-February 2023. However, the Dean of the FoS informed the review chair that they could not accommodate a site visit and thus it was postponed indefinitely. By the end of November, the review team was informed that the FoS was ready for the site visit and hence, a 02-day site visit schedule for 30th November and 1st December 2023 was prepared with the concurrence of all personnel involved.

The review visit comprised the following aspects:

- Meetings with all stakeholders
- Additional scrutinization/ clarifications needed in documentary evidence
- Observation of facilities
- Debriefing

The evaluation of the programme was therefore based on the information included in the SER, uploaded documentary evidence, information gathered during stakeholder meetings and observations and perusal of additional documentary evidence during the site visit.

Meetings/ discussions with stakeholders: senior management, staff and students

The review team was welcomed by the Faculty Coordinator of IQAC at the commencement of the site visit. Subsequently, meetings were held with the Vice Chancellor, Deputy Vice Chancellor, Director of IQAU and individuals/ groups of stakeholders as indicated below:

- Dean/ FoS
- Heads of Departments
- Academic staff of the Faculty that contribute to the relevant programmes
- Librarian, Coordinator ITRCC, Chairman CGC, Director & Career counselor of CGU, Director STIC, Director UBL & Faculty Coordinator TTO, Chair/RISTCON, Representatives of Academic Session, English Coordinators and Teaching staff, Academic Coordinators, Chairperson RUSREC, FSC Coordinators, Chair/Ethical Review Committee Meeting with DSSC (Deputy Senior Student Counselor), Deputy Proctor, Student Grievance and Student Request Committees, committee for Student Welfare and Student Counsellors, Chair/Free Lunch programme, Chair/Scholarship programme, Chair/Talent Show, Sport Coordinators, Chair/Faculty Day
- Non-academic staff members
- Postgraduate and undergraduate students
- Director/ SDC
- Director/ CGU
- Alumni

It should be mentioned that a very high number of personnel holding a highly diverse array of responsibilities participated in some of the meetings and it was extremely difficult for the

review team to hold all-inclusive discussions within the stipulated time periods. This was further aggravated by the fact that some of these meetings with a high number of stakeholders were common to both review teams (biological and physical sciences) visiting at the same time (altogether 07 review team members in both) giving inadequate opportunities to discuss and comprehend the roles/ responsibilities of the participants in especially the management of the relevant degree programmes.

Facilities observed

The review panel visited the relevant facilities for physical verification of their standards, availability and suitability. All members of the review panel participated in the physical verification process. Meetings/ discussions with the director/ person in charge of some facilities were held *in situ* at the facility/ center for the convenience of both parties. The facilities inspected and the relevant personnel met were as follows:

- Student canteen
- Laboratories and Lecture halls
- SDC / Director
- CGU/ Director
- Examination Division/ SAR Examinations
- Medical Center /Medical Officer and staff
- Residential Facilities / Warden
- Gymnasium/ sports facilities

Scrutinizing additional documentary evidence

The aim was to peruse the relevant, additional documents that have not been provided that the Review Team (RT) felt would further clarify/justify the level of compliance of the programmes. The review team carefully scrutinized some of the hard copies of documentation provided by the institution as evidence, as well as additional documents that the team felt were conclusive evidence. In addition to the documentary evidence mentioned in the SER and uploaded for perusal, additional clarifications made during the site visit as well as information conveyed during stakeholder meetings and observation of facilities were considered when making judgments on each standard of the PR manual. Good practices implemented (even those that were not mentioned in the SER) were considered when scores were assigned irrespective of the time of their initiation/ establishment.

Debriefing

At the conclusion of the second day of the site visit, an interactive wrap-up meeting was held with the Dean, HoDs, and members of the academic staff. The chairperson of the review team with the support of the team members, highlighted the key findings and facilitated an interactive discussion. The schedule of the site visit, selected photographs and attendance sheets of meetings are included in Appendices I, II and III.

Reports

The RT has to submit a preliminary report on the key findings within 2 weeks of the visit (already submitted) and subsequently, the Review Chair along with the members prepared a draft review report for submission to the QAC which will be sent to the university for perusal and comments. Once the comments are received, the final report will be prepared by the review team and sent once again to the QAC which will then be published.

All academic and administrative staff members of the university ensured that the review visit was conducted in a very conducive and hospitable environment. The Heads and senior and junior staff members associated with the programmes under review were proactive and extremely helpful during the entire duration of the site visit and the support and hospitality extended by all staff members and the commitment of the Faculty Coordinator of IQAC during the review process is acknowledged with gratitude.

Section 4: Overview of the Faculty's Approach to Quality and Standards

The review team observed that the programmes have many initiatives implemented for the maintenance of quality and standards at the Faculty/ University. The University of Ruhuna and FoS systematically operate its quality management practices through an Internal Quality Assurance Unit (IQAU) and a faculty-level Internal Quality Assurance Cell (IQAC), in compliance with the internal quality assurance manual of UGC and the IQA circular of 2015.

The management of the quality assurance activities at the Faculty of Science is done through its IQAC which directly functions in liaison with IQAU. The IQAC committee is composed of the deputy senior student counsellor of the Faculty, a nominee from each department, a nominee from the Faculty, an external member of the Faculty Board, Assistant Registrar/FoS (Secretary of the Committee) and a subject clerk and periodically holds meetings related to faculty quality assurance matters and the progress of faculty quality management process is discussed at the subsequent Faculty Board.

The office of the Faculty IQAC is located in the Department of Physics. It was noted that there were several documents relating to various quality assurance practices and standards that were not specified in the SER. The review team noticed that even though student feedback was considered as one of the prime instruments for the measurement of quality of a programme and delivery therein, the findings from the feedback were not properly addressed indicating the lack of a strictly coordinated mechanism for the improvement of quality based on stakeholder responses.

Furthermore, the review team learned that the students become familiar with the Faculty/University during the orientation programme, which provides information about the academic programmes, evaluation criteria and examination guidelines, by-laws, available facilities, etc. However, the team noted that the University/ Faculty does not have a specific Student Charter, where the Faculty guides the incoming students to comply with the Code of Conduct, discharge their rights and responsibilities, etc.

The curricula of the programmes under review are designed to include teacher and student-centered teaching and learning strategies to some extent and adhere to the SLQF guidelines. The Faculty claims that the SDC regularly conducts mandatory training for such purposes and holds induction training programmes for newly recruited lecturers annually. However, training/ updating of all academic staff on all aspects of course design, delivery and evaluation, as well as OBE SCL, on a regular basis was not evidenced. The review team observed that the curricula of

the programmes were developed several years back and have not been periodically revised in regular 5-year cycles although minor revisions were done frequently, and it was revealed to the team that a major revision in curricula is planned in 2024. It was observed that there was a positive attitude among the academic, administrative, non-academic, and students regarding the quality assurance practices. However, it was noted that the non-academic staff and students were not sufficiently engaged during the process of the preparation of the self-evaluation report and the collection of evidence.

It is worthwhile to mention that the Faculty has established good ICT facilities for its students including Wi-Fi access in hostel premises, up-to-date LMS, several administrative activities such as online workload analysis, online hostel management system, etc.

Section 5: Judgement on the Eight Criteria of Programme Review

Table 5.1: Criterion-wise raw and actual scores for each programme

Assessment criteria	Raw criterion -wise score				Actual score			
	BSc	BSc (Hons)			BSc	BSc (Hons)		
		Botany	Chemistry	Zoology		Botany	Chemistry	Zoology
1.Programme Management	65	65	65	65	120.3	120.3	120.3	120.3
2.Human and Physical Resources	31	31	31	31	86.1	86.1	86.1	86.1
3.Programme Design and Development	53	54	54	54	110.4	112.5	112.5	112.5
4.Course/Module Design and Development	46	47	47	47	121.0	123.6	123.6	123.6
5.Teaching and Learning	42	47	47	47	110.5	123.6	123.6	123.6
6.Learning Environment, Student Support and Progression	45	49	49	47	62.5	68.0	68.0	65.2
7.Student Assessment and Awards	44	44	44	44	129.4	129.4	129.4	129.4
8.Innovative and Healthy Practices	31	32	32	31	36.9	38.0	38.0	36.9

Comments of the RT on each standard of each criterion are provided henceforth and some repetition is due to overlaps of evidentiary support requirements (although in different contexts) between some standards. This system was used to elucidate the level of compliance shown by the programmes to each standard.

Criterion 1: Programme Management

The Faculty's organizational structure is adequate for effective management and execution of its core functions with respect to programme management. The Faculty's organogram, strategic plan, by-laws and vision and mission statements are updated and appropriate. The Faculty has subcommittees / *ad hoc* committees with TORs to coordinate the implementation of key functions of programme management.

The Faculty Action Plan is aligned with the University's/HEI's Strategic Plan. Although evidence for a committee for monitoring the implementation of the Action Plan is not provided in the SER, the evidence for the existence of such a committee was available on request during the site visit.

The FoS adopts management procedures that are in compliance with national and institutional management procedures. Evidence for documented Standard Operational Procedures (SOPs) has not been provided. However, the SOPs were accessible during the site visit upon request by the review team.

Student participation in governance and management is facilitated by accommodating student representatives in the Faculty Board and through some meetings held with members of the student council. The documentary evidence for participation in other committees is inconclusive. e.g. one document provided as evidence is a notice of invitation for students to participate in the library committee in 2022 and the other, is the list of members of the canteen committee appointed in 2016. Most of the students were also not aware of the possibility of participation in such bodies other than the Faculty Board. There was no evidence of follow-up actions subsequent to any of the meetings with student participation. More involvement of students in the decision making processes, through regular consultative interaction with students, and resultant actions based on the outcomes of such interactions would enhance the quality of the programmes.

There is evidence for the preparation of an annual academic calendar and timetables. However, the completion of the degree programme(s) / student graduation within the stipulated time could not be elucidated from the evidence provided.

A handbook, (that also serves by way of the prospectus) with required information pertaining to the BSc and BSc Honours programmes including curricula, student support services, CGU and some available facilities, is made available to students. However, a Student Charter or a Code of

Conduct adapted to suit the programmes is not evidenced other than a common guideline/ charter compiled by the UGC.

The university website is up-to-date with current information and provides links to all publications such as the student handbook, special notices, announcements, etc.

The Faculty conducts a fairly comprehensive orientation programme for new entrants to acquaint them with the 'university culture/ life in the university'. However, sufficient insights into gender-based topics do not seem to be included in the programme and also a few sessions on the benefits of acquiring a holistic university education/ experience, conducted maybe by prestigious alumni, would have endorsed confidence in the state university system by new entrants.

Student data are collected and maintained securely in the Faculty and other relevant divisions of the university.

The Faculty level ICT platform i.e. Faculty of Science Management Information System (FOSMIS) is utilized for the management of all key functions of the degree programmes and furthermore, this is linked with the University Management Information System (RUMIS).

There is no evidence for a Code of Conduct or Student Charter prescribed specifically by the university other than the documents compiled by the UGC. However, disciplinary by-laws are in place and enacted appropriately.

Duty lists are specified to non-academic/ academic support staff and workload allocations are specified to the academic staff. However, there was no documentary evidence to show that the Faculty has formulated specific Codes of Conduct for all categories of staff. Specific Codes of Conduct for all categories of staff should be formulated for the efficient functioning of programmes.

Some evidence is provided for acknowledgement of the achievements of the staff members. However, no formalized/approved guidelines and formats other than increment forms are available for performance appraisal. Formalized/approved and consistent guidelines should be available for the performance appraisal of academic staff members.

An Internal Quality Assurance Cell (IQAC) has been established and a director appointed. Evidence provided for the activities of the IQAC is far from adequate to indicate a dynamic role assumed to enhance the quality and standards of programmes; only a one-page undated

standalone document depicting the roles, responsibilities, composition, etc. of the IQAC has been provided rather than a comprehensive operational procedures manual. No documentary evidence is provided to indicate the enactment of a significant role by the IQAC in implementing effective internal quality enhancement processes. It is not clear whether the relevant information/ decisions on all aspects of QA percolate through to all members of the Faculty. (The folder titled implementation of recommendations was empty). Both the IQAC and the IQAU should play a more active role in implementing a comprehensive internal quality enhancement system as well as educating all stakeholders about the importance of such a system.

The Faculty has established a Curriculum Development Committee (CDC) for updating/ approval of curricula. However, acceptable documents on the composition (an undated, typed A4 page provided as evidence) were not provided nor was there a TOR for the CDC. Also, there is no evidence for stakeholder feedback or remedial measures.

The curricula indicate that the programmes use the SLQF guidelines as reference points. No mapping with SBSs is evidenced. Other than a proposal/ programme outline of a workshop, training for inclusion of OBE SCL is not evidenced. The relevance of minutes of the IQAC provided as evidence is unclear.

A policy on programme approval has not been provided as evidence. However, a senate-approved (senate approval granted in 2023) document that indicated the procedure for updating/ approval of curricula was made available to the review team during the site visit on request (November 30th 2023). There is no clear evidence for the implementation of the entire process/ procedure of curriculum revision other than the involvement of the CDC and the Faculty Board indicated by the minutes of both committees.

Most of the evidence provided is not sufficiently indicative of monitoring measures on the implementation of the curriculum. Peer evaluation forms are available for some departments. There was no evidence to indicate that student and/or employer feedback is used for continuous improvement of the curriculum and associated processes. There is no formal mechanism for analysis of student feedback and staff appraisals.

Other than the mention of one NSF grant awarded to the Science Faculty in a financial report, no evidence has been provided regarding nationally funded research grants. The outcomes of the few MOUs for funding of two PG studies were not clearly indicated.

The Faculty has an academic mentoring system in place, as well as adequate welfare mechanisms. However, the evidence provided for training in mentoring and student counselling is inadequate. (an undated CCPDHE schedule with a 2-hour session on Mentoring and Student Counselling and a tentative schedule for a CCPDHE programme provided as evidence).

Students have access to centralized healthcare, sports and recreational facilities (healthcare facilities were observed during the site visit although not mentioned in the SER). Students seemed dissatisfied about the unavailability of some medications in the health center and the medical staff indicated the requirement of an ambulance. Arrangements have not been made to get the service of a medical doctor after working hours. Students were satisfied with most of the sports facilities. However, the lack of support for swimming was mentioned by some students. The Faculty/ University should ensure that all sportsmen/women of the Faculty are provided with the required support.

Evidence to indicate measures for ensuring safety and security of students is unsatisfactory and it was further confirmed during the site visit. Adequate evidence is not provided to demonstrate the implementation of stringent safety measures in laboratories and safety manuals / procedures have not been prepared. The evidence did not indicate that comprehensive laboratory safety training is conducted even before the Honours students start their research projects. There is no mechanism to dispose of used chemicals. There were no formalized regular mechanisms in place to ensure the general safety of students, especially after working hours.

Approved examinations by-laws are adopted and implemented by the Faculty. By-laws pertaining to general student discipline are also available.

There is evidence for the availability of strategies and activities aimed at supporting students with special needs and differently abled learners. A committee has been appointed in 2021 specially for this purpose. However, a policy for managing the requirements of differently abled students and learners with special needs in a structured manner is not available.

Although there is a GEE policy and website, there is no center to address the related problems or internalized and approved mechanisms/ strategies to ensure GEE and deter SGBV amongst students and staff.

Ragging is considered an offence according to the disciplinary by-laws of the University. In addition, some evidence of actions pertaining to incidents of ragging has been provided.

However, there is no institutionalized policy to address ragging/ harassment of students, and such a policy should be adopted.

Criterion 2: Human and Physical Resources

The three departments have a satisfactory number of competent academic staff and physical resources to ensure that the programmes are effectively delivered. Academic staff composition includes early and mid-career as well as highly experienced lecturers involved in research and outreach activities. Sufficient technical and academic support staff are available in each department.

Although sufficient documentary evidence has not been provided, it was noted that most of the staff members obtained their postgraduate qualifications from recognized foreign universities and that their expertise is on par with national/ international norms. A document prepared by the National Education Commission in 2009/10 which has a limited focus on HRD, has been provided as evidence for HRD policy. A comprehensive HRD policy adapted to suit the needs of the HEI should be prepared.

The newly recruited staff undergo a comprehensive induction programme conducted by the University Staff Development Centre (SDC) and its successful completion is mandatory for confirmation in their positions as prescribed by the UGC.

Documentary evidence to show the participation of some academic staff members in a few CPD programmes (other than the mandatory programme for newly recruited academic staff members) has been provided. However, documents provided as evidence for monitoring the impact of CPD programmes are irrelevant. There is no indication of remedial action based on the shortcomings of the programmes/ participants. The impact of CPD programmes should be monitored and remedial action based on shortcomings of the programmes/ participants should be initiated

Opportunities for training relevant to laboratory staff are inadequate.

Lecture theatres and laboratories and other infrastructure facilities are available for administration, teaching and learning. However, problems related to shortage of chemicals, delays in repairing instruments and lack of a mechanism for disposal of used chemicals should be addressed as much as possible.

Laboratory facilities are available for students to carry out a research project as a partial requirement of all three honours degree programmes. Comprehensive manuals/ guidelines on the use of specialized facilities are not available.

Other than a few workshops held in 2020 under the AHEAD project, no evidence is available to indicate training on OBE-LCT has been provided for the academic staff. Also, there is no evidence to indicate that the facilities have been upgraded/updated to implement OBE-LCT activities effectively.

The Faculty of Science gets services from the well-resourced main library of the university in addition to the library available at the Faculty. The library is operated with MIS /"ISURU". Students have access to e-journals available at the library. However, evidence for the availability of interlibrary loan facilities for students or for a mechanism for acquiring stakeholder views is not available.

The Faculty possesses a Learning Management System (LMS) which provides an interactive platform for the teaching and learning process. Internet/Wi-Fi facilities are available. However, ICT facilities and technical assistance or any other support provided to BSc students to acquire ICT skills was not evidenced nor was feedback on the facilities sought from stakeholders.

Substantial evidence has not been provided to indicate the guidance provided to students in learning and use of ESL in academic activities. However, it was observed during the site visit that English Language course units are offered at different levels of the academic programme. The Faculty has a Coordinator appointed by the Faculty Board to coordinate the English language teaching activities.

Other than a few co and extracurricular activities, no proper arrangements are in place to organize special tailor-made programmes to enhance the soft skills of students, by the Career Guidance Unit (CGU). The synopsis/ outline of a programme of the university to provide training on soft/life skills to students does not indicate whether it has been approved and/ or conducted. Also, evidence for the participation of BSc and BSc Honours students in training programmes and a coordinating mechanism between the CGU and the Faculty has not been provided. There is no attempt to match the soft skills development with a comprehensive graduate profile specific to each programme under review.

Students of the Faculty participate in the multicultural programmes organized by the university to promote harmony and cohesion among students.

Criterion 3: Programme Design and Development

A faculty-level Course Coordinators' Committee (CCC) consisting of relevant academic staff members has been appointed for programme development. An approved curriculum development policy was not available for the specified review period (2015- 2020). However, a document/ guideline for the development and approval of curricula has been prepared and approved by the Senate in 2023.

Limited input has been sought from external resource persons on certain aspects of programme design and brief reports on some programmes were evidenced. Participation of alumni and external/industry experts at all key stages of programme planning, design, development and improvement is insufficient.

Other than two feedback forms on the same person by the same company for two consecutive years, and tracer studies on employment of graduates which are irrelevant as evidence for the standard, no employer satisfaction /feedback from employers have been sought during programme design and development.

The evidence does not rationalize how the programme conforms to the goals and objectives of the institution. No needs survey instruments have been utilized to seek feedback on the national needs during programme design/ development. Programme design complies with SLQF guidelines. Although awareness of SBS is evidenced, adoption of SBS during programme development is not clear.

Course units are presented according to a course specification template that includes ILOs, qualification level criteria, and qualification type descriptors in the 2020 Student Handbook. As a common set of PLOs based on SLQF guidelines have not been adopted/ developed by the Faculty for either BSc or BSc (Hons) programmes, alignment with common programme mission and goals is not evidenced. Several folders provided as evidence for the standard were empty.

Constructive alignment of BSc and BSc (Hons) programmes PLOs/ILOs with respective graduate profiles is not evidenced.

ILOs have been included in the synopses of course units according to the format prescribed by the UGC. Student/ external stakeholder feedback on the appropriateness and achievement of ILOs was not available. Other documents provided as evidence are irrelevant to the programmes under review.

Lack of regular training for staff on OBE-SCL was evidenced. Two workshops held in 2020 that are specified as training in the practice of OBE-SCL were mostly on course unit mapping and participation was evidenced in only one of the workshops. The staff should be provided with regular and appropriate training in outcome-based education & student-centered learning approaches. No proper arrangements or mechanisms to promote OBE-SCL were available in the lecture halls.

The Departments of Botany and Zoology have included mapping and allocation of a percentage of marks for continuous assessments. However, alignment of course module outcomes with uniform, approved PLOs of BSc or BSc (Hons) programmes was not evidenced. Also, the inclusion of strategies/components to promote OBE-SCL in the curriculum, particularly in theory-based course units, is insufficient. It was evidenced that the continuous assessments indicated in the course synopsis as OBE-LCT practices for most course units of the BSc programme were mid semester written papers, which is not an effective or acceptable OBE-SCL practice. More strategies/components to promote OBE-LCT should be included in the curriculum, particularly in theory-based course units to develop the associated skills in students.

Other than the entire 2018 Student Handbook without any indication of which part(s) are relevant for standard 3.10, no other information has been provided as evidence for the accommodation of supplementary courses in the curriculum. However, the review team observed that some optional interdisciplinary course units are offered by the Faculty in both semesters of the academic year. An industrial training component has been included in the BSc (Hons) Botany and Chemistry curricula and a research project is included in the BSc programme and in all three honours degree programmes being reviewed.

Evidence provided to indicate inclusion of diverse course units to address gender issues, cultural and social diversity, equity, social justice, ethical values and sustainability into the curriculum, was irrelevant. Mechanisms to seek feedback from stakeholders on such integration were not available.

Other than the entire Handbook (without any indication of the relevance to the standard), and the mention of one course unit offered by the Faculty, most of the documents listed as evidence for standard 3.12 were not available and the few existent folders were empty. However, the review team perceived that both BSc and BSc (Hons) degree programmes comprise a coherent set of course modules inclusive of both core and optional course units. Student feedback on the choice of course units is not provided.

The documents provided as evidence (the entire Student Handbook) do not clearly highlight how the curriculum is layered to promote progressive/ increasing demands on student's intellectual capacity, although the curriculum displays this to some extent. Student feedback to indicate their satisfaction in the aspect is not available.

Graduation rates and employment rates have been calculated through tracer studies during some years as measurable process indicators. However, participation/ admission rates to advanced degree programmes/ fellowships, etc. have not been monitored.

Minimum credit values (combination of both compulsory and optional) required to award the degree and qualifications of the BSc and BSc (Hons) degree programmes are appropriate to the level and are aligned with SLQF levels 5 and 6 respectively.

The documents provided as evidence to show compliance to standard 3.16 are irrelevant and do not show consideration of design principles, academic standards or the available learning opportunities before a programme/ course unit is approved by the relevant committees. The folder titled Faculty programme approval process was empty.

Adoption of principles of programme design/ policy for programme design is not clearly indicated. However, there is some evidence to indicate that decisions pertinent to programme development etc. are disseminated to academic staff members at the Faculty Board meetings. Holistic training for academic staff on instructional design and development should be expanded to encompass all attributes of the process.

Industrial training is a component of a course unit in the Botany honours degree programme, and in Chemistry honours, it is not considered in GPA calculations. ILOs are not available for the industrial training component. No evidence has been provided for MOUs/ agreements with industries for providing training opportunities on a regular basis.

No evidence has been provided to indicate integration of any of the attributes specified in standard 3.19 into the curriculum or to justify the claims in the SER, for the programmes under review. However, the review team assumed that some of the attributes are developed through teaching-learning practices and more so in BSc (Hons) graduates through the research project and in BSc graduates through industrial training (currently) and/ or group projects.

No evidence has been provided (some folders empty) to indicate an active role played by the IQAC in monitoring, evaluating and improving programme design and development. Most of the IQAC minutes of meetings provided were focused on preparation for the programme review of BSc and BSc (Hons) and associated activities. It was observed during the site visit that a university-level quality assurance unit is in place and faculty level coordinators have been appointed.

Proposals of new degree programmes to be introduced and (assumably based on responses given) one component of the Botany (Hons) have been reviewed by external persons. The use of stakeholder feedback (feedback from alumni and feedback from industry experts) for course improvement, curriculum revision, curriculum development and ongoing programme improvements is insufficient (Evidence for employer satisfaction survey is feedback on the same person by the same company during 3 consecutive years).

Forms titled surveys on employability of graduands are available. However, evidence for student input in such surveys, analyses of inputs or incorporating the outputs of the surveys for ongoing curriculum design and development is insufficient.

The CGU collects and records information about students' employability through tracer studies conducted annually after graduation.

Some strategies/ actions to support differently abled learners are practiced. However, there is no policy or evidence for enhancement or monitoring of the available resources.

Criterion 4: Course Module Design and Development

An approved curriculum development policy was not available during the specified period (2015- 2020). There was no policy for course design and approval and a flow diagram is provided as evidence. During the site visit it was observed that approval for the particular document was granted in 2023. The involvement of external experts in course design and development is insufficient.

The course units reflect the knowledge and current developments in the respective subjects contributing towards the degree programmes. However, the alignment of the ILOs of course units with comprehensive, common programme objectives/ learning outcomes for BSc and BSc (honours) degree programmes was not evidenced.

The SLQF credit definition and SBS references are adhered to in the course design processes. An organisational arrangement is available for course design and approval, but no approved policy is available.

UGC prescribed course design templates with clear specifications are used by all three departments.

Contents, learning activities and assessments are aligned with course ILOs. However, constructive alignment with specific PLOs for each degree programme was not evidenced.

Course specifications indicate activities aimed at the use of SCL and the Department of Zoology has provided evidence for such activities. However, there is no feedback on the effectiveness of such strategies through course evaluations.

Clear course unit specifications are provided as evidence and course design conforms to SLQF guidelines with specified credit values and indications of the workload. However, all details are not included in the Handbook provided as evidence. None of the required details are available for the industrial training component.

Course design specification includes details on most of the attributes on credit value, modes of delivery and learning as per SLQF guidelines.

The document provided as the course design policy of the Faculty does not indicate the procedure of integrating appropriate learning strategies to improve transferable skills in students, into course units. The requirement is fulfilled in BSc (Hons) students through the research project and industrial training when offered, and to some extent in BSc students through the group project

Although some consideration is extended to the needs of differently abled students during examinations, the course design and development process has not considered their needs by including special teaching and assessment strategies or any other mechanisms. No student satisfaction survey data on this aspect is available.

Course specifications indicate that they are adequately balanced, and it is presumed that the programmes are offered in a manner that allows completion within the stipulated time.

The documents provided as evidence do not show that the course content is developed with adequate depth and balance. Some indications of conducting the programme within the planned duration and the use of SLQF as a guide are available.

Evidence for limited use of the LMS during the delivery of some course units is available. The LMS would have been utilised heavily in teaching-learning activities during the COVID-19 pandemic period. Course specifications do not infer the use of ICT during delivery of a majority of course units. However, the use of the LMS was evidenced during the site visit.

Holistic training for academic staff on instructional design and development is inadequate and should be expanded to encompass all attributes. No feedback on the limited training sessions is available.

The evidence provided shows monetary allocations for programme implementation and not for course design, approval, monitoring and review procedures.

The evidence provided indicates the general practices of course unit design and approval and shows compliance to some extent with standard 4.16 and 4.17. Based on observation of curricula, it is assumed that all necessary aspects are considered during the process, and the information/ instructions are conveyed to all levels of academic staff through various mechanisms.

The role played by the IQAC to adopt internal monitoring strategies/ processes to improve course design, development and approval during the review period seems inadequate. A QA policy has been developed and approved in 2022. Other than a few instances, all other activities/ discussions of the IQAC seem to have focussed on the forthcoming programme reviews.

Feedback on the delivery and content of course modules is sought from students using standard forms. Some departments seek feedback from peers and external examiners/ moderators. However, the strategy of using such feedback for improvement of the course units is not evidenced.

Criterion 5: Teaching and Learning

Teaching and learning strategies are aligned with the Faculty's mission and curriculum requirements.

Students are provided with course specifications and timetables at the beginning of each semester.

Course specifications indicate the constructive alignment of teaching-learning strategies and assessments.

Although some allowances have been made for differently abled students during examinations, appropriate teaching and learning methodologies have not been introduced for their support. Student satisfaction surveys have not been carried out.

Evidence to show how diverse delivery methods are used to maximize student engagement has not been provided (almost all folders relevant to the programmes under review were empty). However, the LMS has been used especially during the COVID-19 pandemic period.

Evidence provided to show integration of the teachers' own or publicly available knowledge/activities into teaching, is insufficient. However, the review team is mindful of some course units that may expose students to currently available knowledge.

The folders uploaded to show compliance with standard 5.7 were empty (only documents relevant to the BCS degree programme were presented) and hence no evidence is available. However, the review team is mindful of some course units of the programme offered to students where engagement in self-directed and collaborative learning is promoted. Student feedback and course evaluation reports are not mentioned in the documents list stated as evidence.

Students are encouraged to participate in research and creative activities and in the discovery of knowledge. However, the student feedback provided is not relevant to the standard.

Course specifications provided by the Departments of Chemistry and Zoology have outlined modes of collaborative learning as the method of teaching and learning. Evidence for group activities has also been provided.

Research is a part of the BSc (Honours) programme and the students are encouraged to publish their research. Information on some activities conducted by BSc students is also available. However, the student feedback provided is not relevant to the context of the standard.

Although there is a policy webpage on gender equity, sufficient evidence on the implementation of the policy is not provided. Student and/or staff feedback pertaining to non-discriminative teaching learning strategies is not sought or provided.

Insufficient evidence has been provided for applicable instruments and mechanisms for routine monitoring of teaching learning activities. Records or student satisfaction survey reports to indicate the results of such reviews are not available.

Evidence to show the use of innovative practices and technology in the teaching-learning processes is inadequate.

Evidence for the practice of student-centered teaching-learning is provided only through photographs of field visit/s etc. However, the review team is mindful of the conduct of additional activities that promote student-centered teaching learning in addition to the teacher-directed mode.

Resources and facilities are available for students to engage in active learning. However, student satisfaction survey mechanisms or survey reports are not available.

Student feedback and peer observation forms are available as means of measuring the quality of the teaching and learning process. However, evidence for regular internal monitoring by the IQAC or the use of results of feedback for improvement of the teaching-learning process of the programmes under review is not available.

Systematic coordinated mechanisms/ strategies adopted for the use of information gained from course evaluation reports, teacher appraisal reports, and external examiner's reports to improve teaching-learning is not evidenced.

There is an Academic Accountability Website and Workload Model which ensures allocation of work to staff in a fair and equitable manner.

A specific appraisal system to evaluate and reward excellence in teaching and the adoption of good practices in teaching is not evidenced and it would be beneficial to acknowledge such attributes.

Criterion 6: Learning Environment, Student Support and Progression

The Faculty has a website, and a digital information platform and has implemented a few activities to provide a conducive environment. A physical help desk established, maybe in the Dean's Office, would vastly improve the support system for numerous students. Most importantly, student feedback on the effectiveness/efficiency of systems has not been sought and hence student satisfaction surveys are not available. The lapse was further highlighted by some students expressing their discontent with some of the systems in place, although they were reluctant to specify the issues. This could have been resolved by introducing more efficient strategies had student feedback been sought by the Faculty.

Although learning support seems to be provided to some extent, sufficient documentary evidence has not been provided to show compliance with standard 6.2. Notably, needs analysis data surveys or student satisfaction survey reports essential for strengthening the learner support services are not available (folder empty).

The Faculty offers a comprehensive induction programme for incoming students, which includes briefings on the university, faculty, and examination procedures. Some CGU activities are also conducted.

Other than the instructions provided in the Student Handbook, a formal Student Charter/ Code of Conduct with clear indications of student rights, and responsibilities is not provided. No student satisfaction survey reports on the particular aspect are available.

The CGU has conducted some activities to promote independent learning in students. However, there is no evidence for regularized counselling or strategies for motivating students to develop independent learning skills.

Other than a few forms that included negative feedback on mentoring, there is no evidence for monitoring mechanisms/ evaluation of student support services. Consequentially monitoring outcomes are not used for improvement of the system.

Many of the documentary evidence required to show compliance with standard 6.7 i.e. library training plans, evidence for attendance, training evaluation reports, and most importantly, student satisfaction surveys have not been provided.

Adequate training relevant to specialized learning resources is not provided. Evaluation of training, staff performance appraisal during and after training and/or student satisfaction survey reports are not available.

Other than a few infrastructure developments and some allowances made during examinations, a policy or internalised mechanisms for academic support, services and guidance to meet the requirements of students with special needs is not available.

The library uses and provides ICT-based online services (ISURU) to students which are utilized to some extent (a typewritten standalone sheet provided as evidence accepted). There is no ICT policy relevant to the standard and no stakeholder feedback is available.

Library information resources are used during the learning process and students use the library when necessary.

An up-to-date database maintained by the Faculty includes student information/ records on examination results. However, evidence of follow up on the progression or feedback on student performance by the Faculty is not evidenced.

The FoS promotes academic/social interaction between the Faculty and students through the student societies. Although the link with information on Faculty Day could not be opened, the review team accepted it as an annual event. However, student feedback results /satisfaction surveys on these activities are not available.

There is evidence for appointing office bearers inclusive of academic staff members and students to the subject and a few other societies. However, there is no evidence to show regularly scheduled meetings to facilitate academic interaction between academic staff and/ or mentors/ counsellors and students. Student feedback on such interactions is also unavailable. Regularly scheduled meetings between staff and students to facilitate academic interaction feedback is needed.

There is documentary and photographic evidence to show that the Faculty with the help of students organizes sports, aesthetic and other relevant activities.

A Career Guidance Unit (CGU) has been established and the action plans of the CGU for the years 2020 and 2021 are available. Some activities conducted by the CGU are evidenced. However, student feedback to indicate the success/ relevance of such activities has not been sought (folder empty).

It was indicated to the review team that the departments of Botany and Chemistry have included industrial training as a component of a course unit in the BSc (Hons) degree programme and a defined course specification or ILOs for the component are not available. There is no uniformity in the evaluation of the course unit across the BSc (Hons) degree programmes. Recently, industrial training has been included as a faculty-optional course unit in the BSc curriculum. MOUs signed with industrial trainers, feedback from providers of training or student feedback is not evidenced.

No evidence highlighting the strategies drawn and implemented or reports on the progress of promoting GEE and deterring SGBV is provided, though a webpage with a GEE policy and guidelines is available. Action plans, progress in promoting GEE and deterring SGBV or the physical existence of a centre for strategic implementation of the policy was not evidenced even during the site visit.

Student feedback focusing mainly on the teacher /teaching methodology of course units is collected by individual lecturers. No evidence is provided to indicate seeking student feedback on support services. The unsigned, undated, one page document is inadequate to be considered as evidence for using the information for improvements.

There is no evidence for proactive academic counselling/ learner support or feedback from students on the facilitation of progression from one level of the programme to another. Adequate staff training on counselling is not evidenced (participation of one staff member associated with the programmes under review in one workshop on counselling held in 2021 is evidenced). A Student Counselling Unit or the activity plan of the Unit to facilitate effective counselling on the aspects specified in standard 6.20 is not evidenced. Records highlighting the systematic operation and function of student counselling are not available.

The documentary evidence is irrelevant and does not indicate the Faculty policy on fallback options or justify the implementation of a policy. However, the review team assumes that the BSc (Hons) students have the fallback option to exit with a BSc degree.

The results of one tracer study conducted in 2017 for all faculties of the university on employment status are inadequate to indicate compliance with standard 6.22. Results of regularised surveys on retention, progression, graduation rates etc. are not available.

By-laws relevant to hostel accommodation are available as evidence. A disciplinary committee and a student request committee consider the relevant problems which are resolved accordingly.

The University Alumni Association has implemented a scholarship programme to provide assistance to needy students. However, their active participation in faculty activities to assist students to prepare for their professional future seems far from adequate.

Criterion 7: Student Assessment and Awards

A clear relationship between assessment tasks and programme outcomes is not evidenced as no alignment with PLOs has been specified. The relevance of evidence provided to indicate faculty policy on OBE is unclear. However, examination by-laws, rules and regulations are available.

Evidence to show that assessment strategies are aligned to qualification level descriptors of SLQF requirements for BSc (Bio) and BSc (Hons) programmes is inadequate. Documents, as evidence to show that assessments are linked to the ILOs, are inconclusive. Sample assignments, and course content documents to show that weightage relating to different components of assessments specified in the programme have not been provided.

The Faculty has approved procedures for designing, setting, moderating, marking, grading, monitoring and reviewing the assessment methods and standards of awards. However, a formal policy on reviewing and amending assessment strategies and by-laws is not available.

The weightage allocated to different modes of assessment used within a course unit is specified in the course specification/ synopsis.

The Faculty adopts the procedure for appointing internal and external examiners for each course unit. However, a policy document on such appointments or the provision of TORs for external examiners is not evidenced.

There are mechanisms and procedures to obtain external examiners' views on exam papers/ marking of answer scripts. However, there are no records to show consideration of such reports before the results are finalized.

Published criteria, regulations and procedures are adhered to when assessing students.

The relevant procedures, and underlying by-laws, rules and regulations are available although documents provided as evidence do not indicate how the examination/ assessment procedures and underlying by-laws, rules and regulations are conveyed to academic staff members. The

review team assumed that the relevant documents were made available to academic staff members involved in assessments.

Although the Faculty has not developed a formal policy, requests of students with disabilities are considered and appropriate arrangements/ facilities are made available to them.

The evidence provided has no relevance to justify compliance with standard 7.11. In addition, the students mentioned that formative assessments are not held at the prescribed time and as a consequence, they are not informed about the level of achievement and shortcomings on time to promote effective learning and academic development.

Marking schemes, procedures for recording and verifying marks, etc to show compliance with standard 7.12 are not provided. However, the review team observed that necessary strategies to ensure consistency and fairness in the assessment procedure are in place.

A complete transcript indicating the courses followed, stages of progression, grades obtained, and the aggregate GPA and class is awarded to the students by the examination branch.

There is no direct evidence for the timely release of results as stipulated by the UGC circular. Assessment decisions are recorded accurately; such records are maintained for a designated period by the university Examinations branch.

The Faculty ensures that the degree awarded, and the name of the degree complies with SLQF guidelines, credit requirements and competency levels.

Assessment regulations are strictly enforced, and disciplinary procedures are in place for handling breaches of examination regulations by students.

Criterion 8: Innovative and Healthy Practices

The Faculty of Science has established and operates an ICT-based platform (LMS) to facilitate multi-mode teaching delivery and learning and some departments seem to utilize the facility more than others based on uploads. Student feedback on the LMS is available.

There is evidence for limited use of OER by a few academic staff members. However, there is no approved OER policy or guidelines to ensure the effectiveness of using such amenities.

Evidence is available on R &D activities and recognition received by several of members of the Faculty.

There is a faculty research committee for the coordination of R & D and a Research Circle to promote community engagement. Although activity/ activities to promote research are included in the Action Plan, their outcomes are not evidenced. A manual or specification of the procedures or guidelines for conducting R & D and outreach activities is not evidenced.

Excellence in research of academics is being recognized and rewarded in numerous ways. However, the rewards schemes or modes of implementation of schemes are not clearly specified.

A research component is included in the curricula of BSc (Hons) programmes (core) and the BSc programme (faculty optional) and the findings are published as reports/ dissertations and some as conference papers.

The Departments of Botany and Chemistry have included Industrial training as a component of a course unit in the BSc (Hons) degree programme. Recently industrial training has been included as a faculty optional course unit in the BSc curriculum. However, guidelines/ by-laws to be followed during the industrial attachment (IA) are not available. A list of places with formal links to optimize the training experience is not evidenced.

A few links established by the staff of the respective departments (mostly Botany) are evidenced.

Other than the analyses of a few samples, no evidence is provided for conducting any income generating activities by the three departments. This was confirmed to be so during the site visit.

The document for introducing a new course module with a provision for a credit transfer facility provided as evidence for standard 8.10 is inconclusive. There is no evidence for university approved policy or guidelines/ by-laws for credit transfer other than evidence of allowing students to transfer credits to one programme of one specific university.

Student and staff participation in numerous co-curricular activities is promoted by the FoS.

The Faculty has no approved policy and guidelines for granting permission for students to participate in regional/ national level competitions. Although outstanding achievements of

students are acknowledged, there is no reward mechanism for outstanding performers other than the award of colours to sportsmen/women.

The evidence provided for standard 8.13 does not clearly indicate regular revision or monitoring of the programmes to maintain academic standards. However, the review team is cognizant of the curricula development and approval procedure through the perusal of documents provided as evidence for other standards. Notably, it was evidenced that the 5-year cycle for programme revision as prescribed by the UGC has not been adhered to with regard to the current time frame. Furthermore, evidence for mechanisms of appointing external examiners, and lists of external examiners are also not available.

The students who have registered for an honours degree have the option to exit with a BSc degree. However, the option to exit at a diploma or certificate level is not available.

Section 6: Grading of Overall Performance of the Programmes

Table 6.1 Assessment criteria and score –Bachelor of Science (Biological Sciences) programme

No.	Criteria	Weighted minimum score	Actual criterion-wise score
1	Programme Management	75	120
2	Human and Physical Resources	50	86
3	Programme Design and Development	75	110
4	Course/ Module Design and Development	75	121
5	Teaching and Learning	75	111
6	Learning Environment, Student Support and Progression	50	63
7	Student Assessment and Awards	75	129
8	Innovative and Healthy Practices	25	37
Total score (out of 1000)		777	
Percentage %		77.7→78%	
Grade		B	
Performance descriptor		Good	
Interpretation of descriptor		Satisfactory level of accomplishment of quality expected of a programme of study; requires improvement in a few aspects	

Overall Performance – Grade B (Good)

Table 6.2 Assessment criteria and score - BSc (Honours) in Botany

No.	Criteria	Weighted minimum score	Actual criterion-wise score
1	Programme Management	75	120
2	Human and Physical Resources	50	86
3	Programme Design and Development	75	113
4	Course/ Module Design and Development	75	124
5	Teaching and Learning	75	124
6	Learning Environment, Student Support and Progression	50	68
7	Student Assessment and Awards	75	129
8	Innovative and Healthy Practices	25	38
Total score (out of 1000)		802	
Percentage %		80.2→80%	
Grade		A	
Performance descriptor		Very Good	
Interpretation of descriptor		High level of accomplishment of quality expected of a programme of study; should move towards excellence	

Overall Performance – Grade A (Very Good)

Table 6.3: Assessment criteria and score - BSc (Honours) in Chemistry

No.	Criteria	Weighted minimum score	Actual criterion-wise score
1	Programme Management	75	120
2	Human and Physical Resources	50	86
3	Programme Design and Development	75	113
4	Course/ Module Design and Development	75	124
5	Teaching and Learning	75	124
6	Learning Environment, Student Support and Progression	50	68
7	Student Assessment and Awards	75	129
8	Innovative and Healthy Practices	25	38
Total score (out of 1000)		802	
Percentage %		80.2→80%	
Grade		A	
Performance descriptor		Very Good	
Interpretation of descriptor		High level of accomplishment of quality expected of a programme of study; should move towards excellence	

Overall Performance - Grade A (Very Good)

Table 6.4 Assessment criteria and score - BSc (Honours) in Zoology

No.	Criteria	Weighted minimum score	Actual criterion-wise score
1	Programme Management	75	120
2	Human and Physical Resources	50	86
3	Programme Design and Development	75	113
4	Course/ Module Design and Development	75	124
5	Teaching and Learning	75	124
6	Learning Environment, Student Support and Progression	50	65
7	Student Assessment and Awards	75	129
8	Innovative and Healthy Practices	25	37
Total score (out of 1000)		79.8	
Percentage %		79.8 → 80%	
Grade		A	
Performance descriptor		Very Good	
Interpretation of descriptor		High level of accomplishment of quality expected of a programme of study; should move towards excellence	

Overall Performance - Grade A (Very Good)

Section 7: Commendations and Recommendations

Commendations

- The Faculty's organogram, strategic plan, by-laws and vision and mission statements are updated and appropriate
- A handbook (that also serves by way of the prospectus) with essential information pertaining to the BSc and BSc Honours programmes is made available to all incoming students
- The university website is up-to -date with current information and provides links to all publications such as the student handbook, special notices, announcements
- The FoS conducts a fairly comprehensive orientation/ induction programme for new entrants.
- The Faculty of Science Management Information System (FOSMIS) is utilized for the management of all key functions of the degree programmes
- An academic mentoring system as well as adequate welfare mechanisms are in place
- Students have access to centralized health care, sports and recreational facilities
- A satisfactory number of competent academic staff and physical resources are available to ensure that the programmes are effectively delivered.
- The newly recruited staff undergo a comprehensive induction programme conducted by the University Staff Development Centre (SDC)
- Lecture theatres, laboratories and other infrastructure facilities are available for effective administration, teaching and learning
- A well-resourced main library of the university in addition to the faculty library is available to students and staff. The library is operated with MIS /"ISURU".
- English Language course units are offered at different levels of the academic programme
- ICT- based platform (LMS) is utilized to facilitate multi- mode teaching delivery and learning
- Students have opportunities to publish the findings of their research
- Academic Accountability Website and Workload Model ensures that the allocation of work to staff is fair and equitable.

Recommendations

- The qualification awarded for the SLQF level 6-degree programmes should be renamed as **BSc Honours** degrees followed by the appropriate qualifier as prescribed by SLQF guidelines.
- The current **graduate profile** needs to be strengthened with both generic and subject-specific attributes to match the dynamic national and international demands/requirements
- A comprehensive **Student Charter and/or a Code of Conduct** adapted to suit the BSc programme should be compiled and provided for specific guidance of new entrants on their rights, responsibilities and services available to them
- Streamlined and consistent **training** should be provided to academic staff members involved in **Mentoring and/or Student Counselling** activities
- It is recommended that the Faculty develops a regularized mechanism for ensuring the general **safety of students** and that the three departments should prepare safety manuals and provide adequate training to students on laboratory safety measures.
- A policy for handling the requirements of **differently abled students and learners with special needs** should be developed.
- It is recommended to establish a centre with a dynamic person in charge in order to develop strategies to **ensure GEE and deter SGBV** in the faculty/ university
- **Stakeholder feedback** on aspects such as:
library resources, the degree programmes and the available facilities, support for differently abled students, administrative, academic and technical support systems, continuous improvement of the curriculum and associated processes, non-discriminative teaching learning strategies, effectiveness/efficiency of support systems, academic/social interaction between the Faculty and students etc. should be sought and analysed for appropriate implementation of remedial actions. Needs analysis data surveys and student satisfaction surveys on learning support services should be conducted and used for the improvement of the systems.
- Participation of **alumni and external/industry experts** feedback from employers at all key stages of programme planning, design, development and improvement is recommended. As the science alumni expressed willingness to support graduates in numerous ways during a meeting held with RT, their participation should be encouraged
- **More job-oriented Honours degree programmes** based on the needs of the country should be introduced

- **Comprehensive PLOs** based on SLQF guidelines should be formulated for the entirety of BSc and BSc (Honours) programmes
- **A university calendar** with all pertinent information on policies, rules, regulations etc should be compiled.
- It is important that undergraduates, especially those registered for the BSc programme, experience the 'world of work' as a teaching// learning exercise. A properly designed **industrial training course unit** inclusive of ILOs and course outline and assessment criteria should be developed and it is critical that feedback from all stakeholders including students is sought during the planning and design. The course unit should have a suitable credit value that counts towards the GPA of the student and therefore should be properly streamlined and carefully monitored. Stringent guidelines for both trainers and trainees should be developed and provided at the onset of the training.
- **A Student Counselling Unit** should be established with trained, proactive counsellors, a regularized action plan that includes guiding student progression throughout the degree programme
- **Adherence to** a strictly regularized preconceived cycle/schedule for **formative assessments/mid-semester exams** is strongly recommended.
- Formalized guidelines/ procedures should be developed for R and D and the central body i.e. **a Research Council** for the coordination of research activities and to administer the operational aspects of research grants uniformly and systematically across all faculties as well as acknowledge high quality outputs of research would be encouraging especially to young academics to undertake research with high standards
- **Income generating activities** eg: PG programmes, short courses, diplomas, and training programmes should be initiated and conducted
- Strict adherence to a **5-year cycle for programme revision** as prescribed by the SLQF is recommended

Section 8: Summary

Cluster I of the Faculty of Science (FoS), University of Ruhuna (UoR) consisted of BSc (Biological Sciences) and BSc (Hons) in Botany, Chemistry and Zoology degree programmes. The review process comprised a desk evaluation, online evaluation of documentary evidence and a two-day site visit, of which meetings with stakeholders, observation of facilities and further clarification regarding documentary evidence were the main activities. The scores allocated for standards of the 8 criteria were not based solely on documentary evidence provided in the SER, but also on information gathered through meetings as well as observations of physical resources and perusal of additional documentary evidence. Recently introduced good practices were also considered for the scoring.

The UoR has established many initiatives to ensure the quality of degree programmes offered by all faculties. The BSc and BSc (Hons) programmes also have introduced many good initiative to enhance the quality and standards of the graduands.

After consideration of the level of initiation, implementation, establishment and monitoring of all standards, the BSc programme was awarded a **B Grade with an overall total score of 78%** indicating that it is at a satisfactory level of accomplishment of quality expected of a programme of study. However, the review team noted that there were a few shortcomings that should be addressed to raise the standards of the BSc programme to the 'Very Good' level as prescribed by the UGC manual for review that was used for the PR.

All three BSc (Hons) programmes were awarded **A grades, with scores of 80% or above** indicating that they are at a high level of accomplishment of quality expected of a programme of study. They should address the very few existent shortcomings in order to move towards excellence.

The key attributes to be nurtured and those that should be improved are indicated comprehensively and in detail in Sections 5 and 7 of this report.

Whilst congratulating the teams for reaching the present high standard of quality, the review team wishes to thank the Vice Chancellor and Deputy Vice Chancellor of the University of Ruhuna, the Director / IQAU, the Dean of the Faculty of Science, the administrative staff of UoR, the Heads, and members of staff of Departments of Botany, Chemistry and Zoology, the Faculty

Coordinator of IQAC for the unconditional support rendered in making the review process a success.

We sincerely hope that our comments will be useful in improving the quality of the degree programmes reviewed even further and our good wishes are extended for success in all future endeavours.

Annexure: Site Visit Schedule

Date	Time	Event	Venue	Remarks
30.11.2023	8.30 -8.40 a.m.	Courtesy visit - Meeting with VC	VC office	Coordinating responsibility: AR/Science
	8.45 -8.50 a.m.	Courtesy visit – Meeting with Dean/Science	Dean's office	Coordinating responsibility: Chair/IQAC
	9.00 -9.40 a.m.	Meeting with the Dean, Heads of Departments (Botany, Chemistry, Computer Science, Mathematics, Physics, and Zoology) (LMS and FOSMIS presentations)	Conference Room/FoS	Chaired by the Review team Coordinating responsibility: AR/Science & Chair/IQAC
	9.40-10.20 a.m.	Meeting with Librarian, Coordinator ITRCC, Chairman CGC, Director & Career counselor of CGU, Director STIC, Director UBL & Faculty Coordinator TTO, Chair/RISTCON, Representatives of Academic Session, English Coordinators and Teaching staff, Academic Coordinators, Chairperson RUSREC, FSC Coordinators, Chair/Ethical Review Committee	Conference Room/FoS	Coordinating responsibility: Chair/IQAC & Prof. Shirani
		REFRESHMENT		Coordinating responsibility: AR/Science

	10.20 -11.00 a.m.	Meeting with DSSC (Deputy Senior Student Counselor), Deputy Proctor, Student Grievance and student request Committees, committee for Student Welfare and Student Counsellors, Chair/Free Lunch Programme, Chair/Scholarship Programme, Chair/Talent Show, Sport Coordinators, Chair/Faculty Day	Conference Room/FoS	Coordinating responsibility: Chair/IQAC & Prof. Nadeesha
	11.00 - 11.45 a.m.	Visit to Department of Zoology	Department of Zoology	Chaired by HOD/ Zoology Coordinating responsibility: Dr. Sudharshani
	11.45 - 12.30 p.m.	Visit the Department of Botany	Department of Botany	Chaired by HOD/Botany Coordinating responsibility: Prof. Masakorala
	12.30 – 1.30 p.m.	LUNCH	University Guest House	Coordinating responsibility: Prof. Nadeesha
	1.30 - 2.15 p.m.	Visit to Department of Chemistry (Common visit for both Physical and Biological review teams)	Department of Chemistry	Chaired by HOD/ Chemistry Coordinating responsibility: Dr. Harshi
	2.15 – 2.30 p.m.	Visit to Department of Physics (Common visit for both Physical and Biological review teams)	Department of Physics	Chaired by HOD/ Physics Coordinating responsibility: Prof. Mahanama
	3.00 – 3.30 p.m.	REFRESHMENT	Department of Physics	Coordinating responsibility: Dr. Nadeeka
	3.30 – 4.15 p.m.	Meeting with Level I, II & III General Degree Undergraduates	Conference Room/FoS	Coordinating responsibility: Dr. Jeewantha

	4.15 -5.00 p.m.	Meeting with Special Degree Undergraduates	Conference Room/FoS	Coordinating responsibility: Dr. Jeewantha
	5.00 -7.00 p.m.	Document Verification	E - Learning Room/DCS	Coordinating responsibility: Dr. Harshi Dr. Prasangika
	7.00 – 7.30 p.m.	Meeting with Post Graduate Students	ONLINE E -	Coordinating responsibility: Prof. Sunanda
	7.30 – 8.00 p.m.	Meeting with Industries	Learning Room/DCS	Coordinating responsibility: Dr. Nadun
	8.00 – 8.30 p.m.	Meeting with Alumni	(Common for both Physical and Biological review teams) Technical support: Dr. Pubudu Mr. Lakshan	Coordinating responsibility: Dr. Lalith Dr. Mahesh
01.12.2023	8.30–9.00 a.m.	Meeting with temporary staff members (Temporary Lecturers and Demonstrators)	Conference Room/FoS	Coordinating responsibility: Prof. Shirani
	9.00–10.00 a.m	Meeting with permanent academic staff members and permanent instructors	Conference Room/FoS	Coordinating responsibility: Prof. Nadeesha
		REFRESHMENT		Coordinating responsibility: AR/Science
	10.00–11.00 a.m.	Meeting with all Non-academic staff members	Conference Room/FoS	Coordinating responsibility: AR/Science
	11.00 -12.30 p.m.	Document Verification	E - Learning Room/DCS	Coordinating responsibility: Dr. Harshi Dr. Prasangika

	12.30 - 1.30 p.m.	LUNCH	University Guest House	Coordinating responsibility: Prof. Nadeesha
	1.30 – 3.30 p.m.	Visits: Canteen, Library, Examination Dept., Student welfare unit, IQAC room, Career Guidance Room, Gymnasium, Medical Centre, Hostels (Boys/Girls) (Common visit for both Physical and Biological review teams)		Coordinating responsibility: Dr. Pubudu Mr. Sisila
	3.30 -4.30 p.m.	Review Team Internal Meeting + Refreshment	Conference Room/FoS	
	4.30 - 5.30 p.m.	Wrap up meeting with VC, Director CQA, Dean, Heads of the Departments, Senior Academic Staff members	Conference Room/FoS	Coordinating responsibility: Dr. Bodhika
	END OF THE REVIEW and RETURN			