PROGRAM REVIEW REPORT

B.Sc.(Hons) Green Technology Degree Program

Faculty of Agriculture

University of Ruhuna

16-19 December 2019

Review Panel: Prof. RanjithWijayawardana

Prof. AriyaSumanasinghe

Dr. WasanthaGunathilaka

The Quality Assurance Council
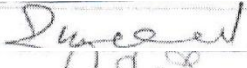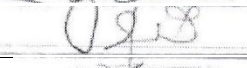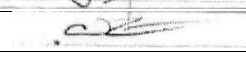
University Grants Commission, Sri Lanka

Authentication

University: University of Ruhuna

Faculty: Faculty of Agriculture

Program: B.Sc. Honours in Green Technology

Review panel.

Name	Signature
Prof. RanjithWijayawardana (Chair)	
Prof. AriyaSumanasinghe	
Dr. WasanthaGunathilake	

Date: 19th . Dec. 2019

Contents

Abbreviations

ABM	- Agric. Business Management
AR	- Assistant Registrar
ARMT	- Agricultural Resource and Technology Management
CPD	- Continuous Professional Development
ELTU	- English Language Teaching Unit
FA,UR	- Faculty of Agriculture, University of Ruhuna
FB	- Faculty Board
GT	- Green Technology
HEI	- Higher Education Institute
HOD	- Head of the Department
ICT	- Information and Communication Technology
ILOs	- intended Learning Outcomes
IQAC	- Internal Quality Assurance Cell
IQAU	- Internal Quality Assurance Unit
LMS	- Learning Management System
MOU	- Memorandum Of Understanding
OBE	- Outcome Based Education
PLOs	- Program Learning Objectives
PR	- Program Review
QAC	- Quality Assurance Council
SAB	- Senior Assistant Bursar
SAR	- Senior Assistant Registrar
SDC	- Staff Development Center
SER	- Self Evaluation Report
UGC	- University Grants Commission

Section 1. Introduction

The University of Ruhuna was established by a special Presidential Decree on 1[st]September 1978 as Ruhuna University College. With 41 years of history, the University of Ruhuna has expanded its activities to possess 10 Faculties situated at 4 different locations in the Southern Province, with 57 Departments imparting knowledge and skills to more than 8500 students.The main campus is in Wellamadama, Matara, while the Faculties of Medicine and Allied Health Sciences areinKarapitiya, theFaculty of Engineering isiHapugala,and the Agriculture and Technology Facultiesare inMapalana,Kamburupitiya.

The Faculty of Agriculture (FAUR), one of the pioneering faculties of the University, is located at Mapalana, just 2 km from Kamburupitiya and 16 km from Matara where the main campus is situated. The Faculty has 50 hectares of land, where many required academic facilities - lecture theaters, laboratories, a computer unit, the library, and administration buildings such as student residences, student recreational facilities, health center etc. are situated. The biogas unit, compost unit, Science and technology park, the university farm, and an acquired meteorological station operating from way back in1939 are several noteworthy units of the FAUR.The FAUR offers three undergraduate degree programs of 4-year duration namely, BSc GreenTechnology (GT), BSc Agricultural Resource Management and Technology (ARMT) andBSc Agribusiness Management (ABM).

About 250 students are admitted to the Faculty annually for the 3 undergraduate degree programs and there was a total student population of 659,as of the dawning of the year 2018. The GT program, which was initiated in the year 2013, has attracted a total of 229 students with an average of 36 students a year.The GTprogram plans its activities for 50 students per batch but as indicated above, the number is mostly less than the expectation due to the delay in second round filling of the students by the UGC.

Table 1.1 Student enrolments in GT Degree program (2013-2018)

Academic Year	Number of Students
2012-2013	51
2013-2014	39
2014-2015	25
2015-2016	29
2016-2017	19

2017-2018	46

Table 1.2 Credit allocation and course structure for different years and semesters:

year	semester	Compulsory course units	Optional course units	Credit load
1	I	18		18
	II	16		16
2	I	16	2	18
	II	16	2	18
3	I	16	2	18
	Ii	16	2	18
4	I	Industrial training (6) Course modules (6)		12
	II	Research project(6)		06
Total credits		116	08	124

There are 72 permanent academic staff including 18 Professors and 39 PhDholders specialized in a wide range of subject disciplines. The majority have been trained at reputed universities overseas. They are supported by 25 non-academic cadres. Services are also obtained by a strong team of eminent visiting lecturers comprising agricultural scientists, administrators, policy makers and industrialists.

Table1.3 Staff strength of the FAUR

Category	Number
Professor	18
Associate Professor	02
Senior Lecturer	31
Lecturer	21
Temporary Lecturers/ demonstrators	24
Academic Support Staff	02
Non Academic Staff	25

It appears that the major share of the contribution to the GT program, probably more than 75%, comes from the Department of Agricultural Engineering. With the staff availability and their specialties, postgraduate programs are also conducted. According to the information available,more than 100 postgraduate students are enrolled for five M.Sc. (2 years; coursework + research), MPhil (Research) and Ph. D degree programs.

1.1 Strengths, weakness and constraints

Strengths

- Qualified staff members in the faculty as per the program requirement
- Seven departments to share the resources
- Small student number and fostering student centered learning
- Links with local and foreign institutes / universities for industrial training
- MOUs for academic collaborations with foreign universities
- Unique learning environment in the campus
- Motivated students for higher achievements

Weaknesses

- Lack of laboratory facilities for practical applications of the Green Technology
- Insufficient number of staff trained for the discipline.
- Lack of physical resources for training and development of staff
- Low number of students and underutilization of resources

Constraints

- Locational disadvantage for industrial linkages
- Locational disadvantage for staffing
- Insufficient fund allocation for library and other related development

Section 2. Review Team's Observation on the Self Evaluation Report (SER)

At the outset, the Dean has assigned Internal Quality Assurance Cell (IQAC) to prepare the action plan. The IQAC has developed the plan, identified the time line and appointed sub committees: viz. SER advisory, criteria-wise arranging, evidence collection and technical assistant committees.Then the SER writing team, comprising 11 academic staff members from all the departments of study, was appointed by the Faculty Board (FB). Working group leaders had been appointed for each criterion so that eight working groups had been created with leaders for writing the SER and they have written the different chapters.

The SER writing committee has gathered facts, listed out evidence, organized, analyzed and coded them as per the guidelines. A draft SER was finalized including corresponding codes for each criterion and circulated among all faculty members.After receiving their comments, the draft report was fine-tuned before sending it to Internal Review Panel of the university. As per the comments of Internal Reviewers, the SER had been finalized and submitted to the Quality Assurance Council of theUGC in March, 2019.

The review team observed that both academic staff and the non-academics had been made fully aware of the program evaluation and Program Review (PR)manual and realized that SER report writing team has been given adequate support from all categories of staff of the department. All the academic, non-academic members, alumni and students have been highly cooperative with the review team during the review process.

The SER had been compiled as per the instructions given in the PR manual and a comprehensive SWOT analysis incorporated in the SER. A brief summary of the cadre provisions and of the capacity and area of laboratory, lecture halls and other supporting facilities of FAUR were annexed. Many of the items of evidence listed in the SER were relevant to the PR manual instructions. All the evidence collected by the Faculty staff to support claims made in the SER, were checked by the team during the review as documentation perusal, monitoring observations and as site visits.

Section 3. Description of review process

Higher education is a 'public good' and plays a crucial role in the economic and social development in Sri Lanka. As public institutions engaged in the delivery of this public good, the state universities in Sri Lanka have a responsibility to maintain and improve high standards and the quality of higher education.

The program review process introduced initially by the Committee of Vice Chancellors and Directors (CVCD) and the University Grants Commission (UGC) of Sri Lanka, has now been directed by the Quality Assurance and Accreditation Council (QAAC) headed by the Director. In order to fulfill this requirement, it has been decided to evaluate the quality of education within a specific program of study, for undergraduate programs in a university.

The experiences gained during the first cycle (2004-2013) of Institutional and subject reviews by the QAAC of the UGC have contributed to guide the process in a more relevant manner within the present context of higher education in Sri Lanka. The evaluation procedure, specifically, focuses on the quality of the students' learning experience and achievement. The First Cycle of Program Review (2017) was completed only with the evaluation of most of the Faculties of Humanities and Social Sciences within the UGC [Universities]. The Second Cycle of Program Review (2018) is being continued with the evaluation of all Management Faculties and some of the Faculties of Humanities and Social Sciences who did not submit their self-evaluation reports (SER) last year (2017). This report presents the findings of a review of the quality of education provided by the BSc. Honours in Green Technology (GT),Faculty of Agriculture (FA) of the University ofRuhuna (UR).

The review panel appointed by the UGC consisted of:

- Prof. RanjithWijayawardana (Chairperson, Rajarata University of Sri Lanka)
- Prof. V.AriyaSumanasinghe (University of Peradeniya)
- Dr. H.A.W.S. Gunathilaka (Wayamba University of Sri Lanka)

3.1 Pre-site Visit Evaluation

The SER prepared by FA, UR, was handed over by QAC of the UGC to the individual members of the team well before the site visit. Members of the panel went through the report and the individual assessment was reported to the QAC. The team met at the Pre-Site Visit meeting/workshop held on 4th July 2019 and discussed the individual scores.It was found that the individual reviewers have awarded similar assessments.

The review process was based on the SER submitted by the FA for their study programme of GT and supported by the information gathered from the four-day site visit made by the review team to the above Faculty, UR.

In the process of the Programme Review, attention was focused on the following eight aspects as given in the Manual for Review of Undergraduate Study Programmes of Sri Lankan Universities and Higher Education Institutions:

1. Programme Management
2. Human and Physical Resources
3. Programme Design and Development
4. Course Module Design and Development
5. Teaching and Learning
6. Learning Environment, Student Support and Progression
7. Student Assessment and Awards
8. Innovative and Healthy Practices

The evaluation of eight aspects was supplemented by the information gathered at different discussions (see Annex 1 - Schedule of the Site Visit Meetings 16th– 19th December, 2019 FA, UR).

3.2 Site visit

The team visited the FA, UR, from Monday 16th of December to 19th December 2019.

3.3 Meeting with the Vice-Chancellor

The first meeting was held at 9.00amwith the Vice Chancellor (VC) at the Senate Room located in the main University premises in order to explain the purpose of the visit and to gain his views about the process. The VC warmly welcomed the review team to the University. He explained the basic facts about the University, and highly emphasized the importance of the international research collaboration in producing of value-added graduates. Further he explained the facilities available (foreign language learning facility and extracurricular aesthetic studies) and the activities conducted by the cultural center of the university. The VC highlighted how he has been involved in maintaining a zero ragging environment within the University.

3.4 Meeting with Director/ Internal Quality Assurance Unit UR

The Director/IQAU warmly welcomed the team and shared documentary evidence of the policies that have been formulated recently by the IQAU in line with the UGC circular of October2019, leading to a "**Center for Quality Assurance**" chaired by the VC. The Management Committee Meetings of IQAU have been conducted regularly and reported to the Senate. Finally review team was of the view that the Director, with other staff members offers satisfactory service to the University in this connection. The Director, IQAU described the support provided by the IQAU to IQAC of the FA. IQAU has provided necessary training and guidance in preparing SER and monitoring process.

3.5 Faculty of Agriculture at Mapalana

The Dean and the Senior Members of the Faculty warmly welcomed the review team to the Faculty. Then the review team was directed to the auditorium where the documentary

evidenceswere arranged. The room was well arranged with supporting files stacked in a user friendly manner. Members of the review team met and discussed about the daily plan and the duties of each member from 9.00am to 10.00am.

3.6 Meeting with the Dean

An attractive presentation was done by the Dean, FA. This presentation convinced the review team about the programme study, infrastructure available and major constraints they face during the delivery of academic program. During his presentation, he highlighted that they were able to achieve the Research Excellence in 2018. Further he pointed out that all Departments of the Faculty contributetowards conduct of the BSc. Green Technology degree program, but the main contribution isfrom the Dept. of Agric. Engineering, which bears about 70% of the work load. During his presentation, he mentioned that an additional entry qualification for GT program required as a "Credit Pass (C) for English in G.C.E. (OL)". The presentation was a comprehensive one including the Graduate profile, Job profile, ILOs, Electives of 08 credits, Student exchange programs with Japan, China, Indonesia and Thailand, avenues for research publications. Further he explained the resources available in the Faculty including the Agriculture Meteorological Station etc. He expressed their views about the procedure of writing the SER and discussed various issues related to Programme Review of GT.The meeting was concluded with an opportunity to raise our queries.

3.7 Meeting with the students

The students were selected by the Dean representing all academic years. At the beginning, the review team explainedto the students the purpose of the site visit and the importance of QA system in Sri Lankan HEI. Then the review team raised several questions related to different criteria of the PR manual. The students appreciated the academic members' rapport with the students. The students were happy with the way of conducting the program by providing a hard/soft copy of the course outline in the induction program, appointment of student counselors, and the available facilities including hostels, health facilities, sports, timely issuing of Mahapola and Bursary.   The students have established one association called "Green Pulse Association". The students were happy about fair evaluation procedure and timely releasingof results.

The students made requests regarding extension oftheir in-plant training period from 3 to 6 months; increasing field visits; increase in chances for optional subjects and putting them into the core course; providing access to banking facilities at the Faculty premises; to avoid bringing in visiting lecturers during the latter part of the semester. The students highlighted that they have realized the importance of sociology subjects in their curriculum, which enables them to step into the world of work more conveniently. It was also suggested to introduce a course relating to building constructions as well.

The review team is of the view the students of Green Technology have been properly exposed to a research culture, but it also appeared clear that the staff of the ELTU is not sufficient to cater to the needs of the whole faculty.

3.8 Meeting with Student Counsellors and Mentors

A discussion was held with student counsellors. The students are supported in their studies by having student and academic counselling system and mentoring programs. One academic counsellor has been provided for each Dept., reporting to the HOD. In addition, ten student counsellorsreportto the VC. Regular training programs have been granted to counsellors and mentors. Their tenure is one year.

3.9 Meeting with academic staff

This was the first meeting with Senior and Junior academic members. The review team discussed the QA aspects and the Teaching-Learning process with the staff. The curriculum revision process has been initiated after an interim report of the lapses. The need to change some of the current optional subjects tocore courses was also discussed. In the revision, reservation of notional hours and matching with credit was also an area of interest in the discussion. More attention has been paid to extending the industrial training period from three months to six months. During the discussion, the review team recognized the IT lab and the library should have more facilities to cater to the whole faculty. It was also pointed out that there are no Management Assistants at Dept. level, and only a few have been attached tothe Dean's office.

3.10 Meeting with the Faculty Administrative staff

A discussion was held with administrative staff including SAR, SAB, and AR. The review team realized all the administrative staff in the Faculty maintain good rapport with the students. The SAR/Exams explained about the student cooperation for their duties. However, there is an urgent need for prompt recruitment of staff to already approved cadres in the office.

3.11 Meeting with the Heads of Departments

A discussion was held with HODs of the faculty. During the discussion, they pointed out the necessity of recruitment of cadres for the new area of studies. They were not happy with equal distribution of academic cadres among Dept.'s, without considering the work load of the respective Dept.

3.12 Meeting with external stake holders, alumni and other stake holders

There were about forty alumni at this meeting. They were very enthusiastic in responding to our queries. They mentioned how they help the undergraduates in finding theirindustrial training and job opportunities. While appreciating the quality of graduates of this new degree program, it was proposed to improve soft and hard skills of graduates (i.e. including a subject on Application of Auto-CAD in building designing). The review team encouraged the stakeholders to form a formal Alumni Association to do more interactive programs with the Department and students.

3.13 Meeting with temporary academic staff

The temporary Lecturers and Demonstrators participated in the discussion. The review team discussed their role in the Faculty. The number of staff and the assistance given to the academic program for practical's and research was quite sufficient.

3.14 Meeting with Proctor and Deputy Proctor

During the discussion with the Proctor and Deputy Proctor, their aim of developing a zero-ragging environment within the whole university was explained in depth. According to this policy, students have been expelled from the universityfor ragging and unruly behavior. There was sufficient evidence of disciplinary action against students for some incidents.

3.15 Meeting with Technical officers and lab attendants and work aides

The discussion was held with technical officers, lab attendants and work aides. It was found that training workshops have been arranged for lab attendants and work aides by technical officers. They highlighted the training received from India and other places have helped in facilitating student practical. They were happy with the implementation of promotion procedure regularly, availability of the welfare society and a Montessori school which is open even for outsiders. A request was made to avoid delays in the procurement process. The technical officers' role in covering clerical duties in departments with unfilled vacancies were commendable.

3.16 Staff Development Centre

The Director, Staff Development Center (SDC) coordinates all staff development programs. There were evidences of meetings and attendance sheets for workshops. However, there were no tailor-made courses for the benefit of the university staff. The SDC has provided evidence for conduct of the induction course for academic members and other courses for other categories of staff members. However, the review team is of the view that ifthe SDC has more physical resources, it will be able to work in better capacity.

3.17 The Library

The team visited the Faculty library. The staff provide a friendly service and the place is well arranged. The environment of the main library is conducive to teachers and learners. The electronic books, journals and other materials were in place. However, the number of titles and the copies of books pertaining to Green Technology is very limited. This deficiency needs to be addressed during annual budgeting.

3.18 Faculty Computer Unit

The center is equipped with two computer labs with 71 computers for the students of FA, UR. Computer lab 1 is mainly allocated for the students practical. Computer lab 2 is allocated as a common practical lab. These labs are opened from 8.00 a.m. to 8.00 p.m. for students for their academic purposes. Free source software facilities (Windows 7 and LINUX) have been installed into all computers. Seven servers are functioning in the computer unit.

Free Wi-Fi facility is available for staff and students in the computer unit and in all Departments.

The review team felt that the Information and Communication Technology (ICT) Centre provides a satisfactory service to the students as a team. Nevertheless, the number of computers of the center with internet connection should be increased further in order to cater to a large number of students in the Faculty.

3.19 Canteen Facilities

Of the two canteens in the Faculty, one is well-spaced and facilitated. The other canteen is for the use of staff. The review team noted thatfood services for the students are monitored by the welfare committee of the campus.

3.20 Physical Education Unit

The Faculty has provided sufficient out door sport facilities including a main playground, Volleyball and Basketballcourt. The indoor gymnasium is maintained with a minimum resource base and needs improvements in terms of capacity. The review team observed that Instructors assigned to the unit are keen to develop facilities and talents.

3.21 Medical center

A medical officer is available in the Faculty during the official hours of all week days. The other required basic facilities and staff were found to be sufficient.Free medical treatment is provided for students and staff. The services provided the Faculty medical center is good. However, arrangements should be made to attend to the needs during weekends.

Section 4. Faculty's approach to quality and standards

Quality assurance (QA) is the means (i.e. policies, attitude, actions, procedures etc.) by which an institution can guarantee with confidence and certainty, that the standard and quality of its educational provision are being maintained and enhanced. Quality assurance needs to be a continuous process. Everyone who works in an institution must take responsibility for developing it in their day-to-day routine activities. This can be brought about only through internal quality assurance (IQA). Hence IQA is considered as the corner stone of QA in higher education. Internal quality assurance units were established in all public universities in 2005 and a broad framework has been prepared (Internal Quality Assurance Manual for Sri Lankan Universities, 2013).

4.1 Internal Quality Assurance System and the Process

The internal quality assurance unit (IQAU) of the University has been established in 2012 in order to maintain quality in the University. The IQAU was reestablished in the UR under the direction of the Quality Assurance Council (QAC) of the University Grants Commission (UGC) in October 2016. Prof. MahindaAtapattu is the current Director of the IQAU of UR. The Deputy Director is also serving in the IQAU team. The Director of IQAU has organized the IQAU regular Management Committee Meetings (monthly) at the UR. The Management Committee is chaired by the Vice-Chancellor of the University, and is organized as per the guidelines issued by the UGC in this regard. The Assistant Registrar serves as the Secretary to the Committee.

4.2 Recent Activities in Quality Assurance

The IQAU has adopted a new policy document from October 2019 to meet different academic requirements, revised the IQAU Policy Manual for the UR, and Operating Guidance for FQAC of Faculties of Study. In order to improve the quality of programs offered by different Faculties, all the Faculty Quality Assurance Cells (FQACs) are expected to take responsibility to implement the above policies. The Director has been preparing and tabling monthly activity reports to the Vice Chancellor. Finally, the review team was of the view that the Director and with the other staff members offer a satisfactory service to improve the quality of learning-teaching environment in the University. The Director, IQAU described the support provided by the IQAU to IQAC of the FA, UR. IQAU has provided necessary training and guidance in preparing self-evaluation report (SER) and monitoring process.

4.3 Faculty Quality Assurance Cell (FQAC)

The review team discussed the quality assurance aspects and the teaching-learning process with staff. FA, UR has appointed a Coordinator to deal with IQAU. The IQAU facilitated the FA, UR of GT by providing necessary policy documents and directives for implementation of the internal culture in the Faculty. QA activities have been identified as a compulsory item in

the agenda of the Faculty Board Meeting and QA cell is functional. The overall attention is good, but adoption of a Benchmark statement is yet to be done.

4.4 Response to Quality Approaches

The students are given study guides or course outlines of the course units offered during the semester at the beginning of the semester. There is a procedure to inform students about the proposed course outlines/curricula. The academic members of the Faculty have been trained on how to write course descriptions, modules or units using constructive alignment.

The Students' Handbookwhich is given to students at the beginning of the program, includes common university information, available scholarships, rules and regulations, student charter, by-laws for their exams and introduction to all academic members and the departments etc. In getting student feedback on teaching,adigital format is being used and is an innovation. It is currently being used by all most all the academic members of the Department. Evaluation status is directed to the Dean through the Head of the Department with a copy to the concerned lecturer. The peer review process also has been introduced in the department.

The Department has compiled their syllabi, incorporating details such as notional hours, new assessment methods, aligned learning outcomes, prerequisites and the attributes of graduates.However,attention needs to be given to improving the mapping of PLOs and ILOs together with developing the course profiles. It is advisable to conduct more workshops utilizing allocated QA funds for the FAUR, for all junior/senior academic staff members on how to write course descriptions, modules or units using constructive alignment (according to SLQF) in the UR. As discussed previously, the review team confirms that the GT Degree program of FAUR, UR is in accordance with the Internal Quality Assurance Manual for Sri Lankan Universities, 2013 and the IQA circular of 2015.

Section 5. Judgment on each of the eight criteria

Criterion 1: Programme Management

Strengths:

- Faculty has aligned the academic program and action plan with the university strategic plan
- Management procedures and standard operational procedures(SOP) relevant to good governance are in place.
- Work norm for the academics are defined, monitored and reported through a Management Information System. Duties and responsibilities of the officers are clear and communicated.
- Participatory decision making process was evidenced, student and other stakeholder consultation for special issues were also in practice
- The faculty has several committees comprising of senior academics. The Curriculum development committee, research committee, academic committee, QA committee, welfare committee and ragging prevention committee were functional and effective toward academic progression.
- Student handbook is comprehensive and provides necessary information to the students. Student guidance by mentoring and counselling programs are volunteer efforts by the senior staff to ensure a good learning environment. Website is maintained satisfactorily and MIS is also applied for general administration.
- Use of LMS in delivering all courses is noteworthy.Orientation program was found to be perfect. Code of conduct is monitored and disciplinary measures are well communicated to students. Complaints and suggestion boxes are also supplemented.
- Alertness to quality assurance was also evidenced and university IQA Centre and faculty FIQAC are functional.
- After five years of operations, curriculum revision has been given due consideration and is in progress.
- Staff involvement in developing collaborative partnerships with national and international organizations and universities is commendable.
- Notwithstanding the pre-planned arrangements for differently abled students, staff has taken very serious initiatives to support such students in the past when the need hasarisen.

Weaknesses:

- Even though, action plan monitoring committee is appointed, progress documentation and changes reporting is weak.
- No graduate tracer studieshave been done.
- The Green Technology is a practically oriented program but Outcome Based Educational approaches are not properly implemented.

- Subject bench mark statements are available only for very few subjects and it is the responsibility of experts from the QAC of the UGC to develop for rest of the subjects.

Criterion 2: Human and Physical Resources

Strengths:

- Majority of the staff involved in the program are qualified with PhDs in the relevant area.
- Availability of laboratory facilities for common subjects offered in the program with other departments.
- Supportive administrative staff both in the academic and non-academic category.
- Hostel facilities, canteen facilities and common room facilities were found to be adequate as per the student number
- Outdoor sport facilities are adequate
- Services of temporary demonstrators are adequately addressed.

Weaknesses:

- Continuing Professional Development (CPD) has not been sufficiently addressed and no remedial actions were found.
- Limited physical resources in laboratories and workshops for Green Technology applications (i.e., models of modern equipment and tools used in the industries)
- Limited OBE programs and related feedback has not been collected.
- Limited number of titles and copies of books in the Library in new subjects (Green Technology is a new discipline requiring more supplementary reading materials).
- Insufficient staff for English language teaching unit (ELTU).
- Insufficient soft skill improvement programmes by Career Guidance unit (CGU). Lack of physical and human resources for career guidance
- Indoor Gymnasium facilities are not adequate.
- Delay in filling the non-academic service cadres
- Only 75 computers to cater to >250 students

Criterion 3: Program Design and Development

Strengths:

- In 2018, a curriculum revision has been initiated and it is progressing with necessary approval and stakeholder consultation.
- Interim report has been produced identifying the necessary changes. Graduate profile, Program Learning Objectives (PLO), Course ILOs are in place, but improvement in mapping is required.

- Program is structured with relevant compulsory and elective courses aggregating to 124 credits. Progressing of learning skills over the 4 years is also visible.
- Industrial placement of the students is facilitated and monitored with MoUs.
- Graduate employability surveys are conducted and documented.

Weaknesses:

- Lack of documentation of the curriculum development process of the existing degree program which was designed in 2013.
- Lack of concern to use the expertise of the national bodies in fine-tuning the curriculum to meet the standards of the key thematic area of the curriculum.
- PLO and ILO mapping need to be revisited to create a holistic view of the program.
- Course specification templates to be improved with lesson plans and lesson outcomes.
- Assessments are poorly aligned with the Course ILOs.
- No fall-back options are envisaged in the on-going curriculum revision.
- Outcome based performance indicators need to be introduced in monitoring the program advancement.
- Use of stakeholder feedback for course improvement and ongoing program improvements is not sufficient.

Criterion 4: Course module design andDevelopment.

Strengths:

- In developing the course modules for existing curriculum, senior staffhaveplayed the key role
- Adherence to the approval procedure of the course design applicable to the initial curriculum and new curriculum which is being processed seemed appropriate.
- Course content and the credit weightages are adequately addressed as per QAC guidelines and the graduation rate is good.
- ICT application and teaching methodologies in designing and delivering the program is satisfactory.
- IQAC staff and their involvement creates a supportive environment in designing the new course modules for the new program.
- Course units in the program are sufficient to cover four thematic components of the curriculum.

Weaknesses:

- No evidence of progressive course evaluation over the last three years after introducing the 1st curriculum.

- Consultation of professional bodies and standards used in course development are not given due consideration.
- Course profile of all the subjects need to include detailed lesson plans, lesson ILOs and appropriate assessment strategies.
- Mapping of PLOs and ILOs is incomplete

Criterion 5: Teaching and Learning

Strengths:

- Committed and well qualified team of senior staff
- Timetable is provided before commencement of the lectures of the course unit.
- Blended learning techniques (LMS using MOODLE etc.) are practiced.
- Teaching evaluation by students and peers are carried out.
- Reports of continuous assessment are well maintained with possibility for re-checking
- Release of midterm/ continuous assessments and end of term resultson time
- Students are encouraged to do research and publish their research in journals.
- Engagement in co-curricular and extracurricular activities are satisfactory
- Appointing academic coordinator to oversee the teaching and learning in the year wise programs

Weaknesses:

- Course specification files (Master files) elaborating the mode of delivery schedule, evaluation procedure etc. of theory and practical component have not developed.
- Assessmentsare poorly linked with the ILOs and a common weightage is adopted for all course units regardless of the nature of the subject

Criterion 6: Learning environment, Student support and Progression

Strengths:

- Well organized one-month induction program before the academic sessions
- Conducive academic and social interaction prevails among all tiers of the faculty.
- Student hand books are distributed and students are made aware of by-laws, student charter and code of conductearly on, at the orientation
- Supporting complementary courses are offered in the very 1st semester
- E-learning and LMS is widely used
- Extra-curricular activities are encouraged
- Organized industrial placement in reputed institutes
- Student grievances are properly and urgently addressed

- Provision of suggestion and complaint boxes in each department, and key functional areas
- Staff training is given a priority and the Staff Development Centre is functional to train the staff for student mentoring and counselling
- Appointing Mentors for students throughout the university life

Weaknesses:

- Evidence on continuation of activities, for example: monitoring of student support services, is sparse.
- Training sessions for the faculty staff are limited and physical facilities and human resourcesat the SDC are not sufficient
- Physical facilities and human resources forCareer Guidance activities are not sufficient
- Fall back options are not accommodated in the program.

Criterion 7: Student Assessment and Awards

Strengths:

- External examiner evaluations are appropriately considered in assessments
- Transparency and fairness are maintained by 2nd marking
- Confidentiality in examination matters and timely release of results highly assured
- Re-scrutinization and verification of assessments are meticulously addressed
- Students are given the opportunity for foreign training for industrial/project research and they are selected on a competitive basis
- Differently-abled students and their shortcomings are well looked after upon informing.

Weaknesses:

- Course ILOs are not always aligned with lesson sequencing
- Weightage in assessments should be more carefully thought of in respect of the course
- Records of the progression of students are not maintained for monitoring and student guidance

Criterion 8: Innovative and Healthy Practices

Strengths:

- Use of external examiners' evaluation for In-plant training assessment.
- Establishment of a Research and Ethics committee.
- Active continuation of MOUs with national and international university collaborations.
- Implementing digital communication procedures for meetings
- Work norms and performances are digitally channeled through HOD, to the Dean with the digitally processed Accountability Model
- Availability suggestion and complaint boxes for students
- Appointing an academic coordinator for each year of the program for smooth operations
- Committees to address student's health and welfare
- Multi-cultural programmes are conducted to promote social harmony.
- Staff-student research appraisal systemis well established.
- Well established International linkages for student-staff research collaboration.
- Active student exchange programs with foreign universities

Weaknesses:

- Limited sources of income to complement the grants received through government by engaging in income-generating activities.
- Unavailability of credit-transfer policy in conformity with institutional policies that allows students to transfer credits to another Faculty/Institute.
- Requirement of Credit pass for the English language to enroll on the program, which affects the number in the annual intake.

Section 6. Grading of overall performance

Criterion No.	Assessment Criteria	Converted Actual Score	Weighted Minimum Score	Above WMS (Y/N)
1	Programme Management	135	75	Yes
2	Human and Physical Resources	86	50	Yes
3	Programme Design and Development	121	75	Yes
4	Course/ Module Design and Development	116	75	Yes
5	Teaching and Learning	134	75	Yes
6	Learning Environment, Student Support and Progression	79	50	Yes
7	Student Assessment and Awards	135	75	Yes
8	Innovative and Healthy Practices	40	25	Yes
	Total Score	**847**		
	Total Score (%)	**84.71**		
	Final grade	**A**		

Section 7. Commendations and Recommendations

Commendations on program development and delivery

1. Quality Assurance consultation committee- monthly meeting with Deans, Registrar, Bursar, Librarian, IQAC Chairperson and SDC Chairperson
2. Functional QAC at faculties and separate QA cell for library
3. Participatory Management approach through several committees: curriculum Development, Research, QUAC, Industrial tracings, research ethics, Academic committee, IT, Student welfare, Drug prevention and ragging prevention
4. Alertness to student complaints and suggestions through suggestion boxes
5. Information availability for the students and staff through the website
6. Batch-wise emails for student-program communication
7. Vice Chancellor awards for annual academic achievements
8. Partnerships and collaborative academic works with local and foreign universities and institutions through MOUs.
9. Well organized student mentoring and counselling system.
10. Qualified and committed teaching staff to cover four major thematic areas in the program namely: Sustainable Resource Management, Sustainable Environmental Design, Sustainable Environmental Technology and Sustainable Energy
11. Wi-Fi Coverage in all academic units and buildings
12. There are student association to practice extracurricular activities
13. After analyzing the previous curriculum, revision process has been initiated for a new curriculum
14. Use of Learning Management System (LMS) for almost all the course units
15. Implementing Academic Accountability model from 2017 to ensure work performances of academic staff; this is monitored by the HODS and Dean of the faculty through a digital system

Recommendations

1. Regular monitoring of the action plan and take necessary actions
2. Consultation of related industries /institutes to update the contents and new applications in the area of green technology in the new curricular revision
3. Very clear mapping of Program learning objectives and Intended Learning Outcomes for each course.
4. Development of detail course profiles, notional hours, lesson outcomes and assessment of strategies need to be addressed.
5. Weightage of Continuous Assessment and semester assessment need to be readjusted on the basis of nature of the course unit and required practical component.

6. Annual allocation for the library should be increased and availability of text books to be increased with required number of copies as per the student number.
7. The present electives to consider as compulsory courses in the new curriculum and introduction of new subjects related to basic constructions where new technologies can be applied, is also a request from the students. Subjects related to organizational behaviour was also a need shown by the alumni.
8. Industrial training period to be changed from 3 months to 6 month
9. Laboratories applicable to green technology need to be established together with necessary human resources for the technical support.
10. ELTD, SDC and Career Guidance units should be provided with necessary physical facilities and required human resources to improve their services.
11. Availability of the computer facilities/ labs need to addressed immediately to allocate sufficient hours for the students.
12. Prompt actions to fill already approved nonacademic cadres and expedite the procedure for promotions
13. Include relevant subjects in the new curriculum to impart knowledge and skills in social interactions
14. Revise the enrollment criteria to eliminate the requirement of a credit pass in English

Section 8. Summary

The Faculty of Agriculture, University of Ruhunauses its resources optimally to conduct three special degree programs. TheB.Sc. in Green Technology is the most recent program introduced in 2013, targeting 50 students per year. The aim of the degree program is to produce graduates who could apply green technology in a wider scope in natural sciences and Agriculture to ensure sustainability of energy usage, crop yields and agricultural raw materials for industries and to apply biotechnology in improving the quality of agricultural products while protecting the environment. In order to ensure these, the degree program includes four thematic areas namely; Sustainable Resource Management, Sustainable Environmental Design, Sustainable Environmental Design, and Sustainable Energy. The review team noted that present curriculum is sufficiently organized to serve the purpose and the workload which is 124 credit requirements is also satisfactory.

However, the curriculum introduced in 2013was an effort of senior most staff in the faculty and it seemed that no proper documentation was done in relation to the curricular development. Identifying the lapses and new updates, it is being revised now and follows the appropriate procedure and documentation. In this process, a graduate profile, program objectives and course ILOs are being developed and need improvements in the PLOs and ILOs mapping together with developing course profiles alignment with assessments.

The faculty has 72 permanent staff members, among which professors and senior lecturers are the most. These staff have been qualified in the relevant disciplines and they representseven departments of the faculty. However, majority of the courses are undertaken by the Dept. of Agricultural Engineering.Approximately 25 temporary academicsare available in the faculty to share their responsibilities in the program. Laboratory and other physical resources in the Faculty for their B.Sc. in Agricultural Resource Management and Technology and B.Sc. in Agribusiness Management are being shared with the newly introduced B.Sc. in GT. Hence new laboratories to demonstrate the new applications in the GT program is an urgent need to improve the quality and relevance of the program. At present, students become acquainted with some of these practices from the outside organizations, through field visits and industrial trainings. However, industrial training is restricted to 3 months. The review team proposes to increase the same to 6 months which is also the request of the students.

Teaching and Learning is quite satisfactory and LMS is applied for almost all the courses.IT integration into the program delivery is also noteworthy. Staff commitment to provide a conducive environment for students is to be praised and several strategies are being used to have a good rapport with students. Appointing an academic coordinator for each year of the program is one of such strategies.

Present industry and community relations play an important role in delivering a good program. Therefore, it could be more beneficial if the inputs are taken from the industry who use current technologies. Collaborations with foreign universities, student exchanges and research are given due consideration and faculty staff is encouraged and supported by the management.

Management of the program is consistent with the university procedures, rules and regulations. Quality Assurance units, their commitment in staff training and adopting new quality improvement strategies are in progress.To ensure the key functional areas, several committees are in place with the commitment of the senior staff. Lack of physical resources seemed a hindrance for better staff development programs, career guidance and activities of English Language Teaching Department. The non-academic staff are supportive to the needs of program improvement in their areas of involvement. However, filling of non-academic cadres appears to be unnecessarily delayedand affects the performances in some areas.

Review team is of the opinion that to bring this program to the highest possible standard some remedial actions are required, particularly development of laboratory and other practical facilities, deployment of necessary academic and non-academic cadres and their knowledge updates in changing technologies, increasing the relevant reading materials in the library and access to new knowledge through outreach activities.Averting these weaknesses and lapses will pave the way to a successful program to produce globally employable graduates in this unique area.

Annex 1. Schedule for site visit

PROGRAMME REVIEWS 2019

SCHEDULE FOR SITE VISIT (16th December – 19th December 2019)

Bachelors in Green Technology

University of Ruhuna

Day 1 (Monday 16th December)

Time	Activity	Venue	Participants
9.00 AM – 9.30 AM	Meeting with the Vice Chancellor	University of Ruhuna, Wellamadame	Vice Chancellor/ Dean, Director – IQAU/ Coordinator – FQAC, Chair – SER Preparation
9.30 AM – 10.00 AM	Meeting with the Director - IQAU *(Working Tea)*	IQAU, University of Ruhuna, Wellamadame	Director – IQAU
11.00 AM – 11.30 AM	Presentation about the Faculty and the degree programs	Conference Hall - Dean's Office, Faculty of Agriculture,	Dean/ Director- IQAU/Coordinator FQAC/All HODs of the Faculty/ Chair and SER Team
11:30 AM -12.30 PM	Observing documentation	Conference Hall - Dean's Office	Review Team/ Facilitators
12.30 PM -1:30 PM	*Lunch*		
1:30 PM -4:00 PM	Meeting with the students	Conference Hall - Dean's Office	Review Team/ Students/ Facilitators
400 PM -4.15 PM	Meeting with Student Counselors and Mentors	Conference Hall - Dean's Office	Senior Student Counselors, Student CounselorsandMentors

1

28

PROGRAMME REVIEWS 2019

SCHEDULE FOR SITE VISIT (16th December – 19th December 2019)

Bachelors in Green Technology

University of Ruhuna

Day 2 (Tuesday 17th December)

Time	Activity	Venue	Participants
9.00 AM – 10:30 AM	Observing Documentation	Conference Hall - Dean's Office	Review Team/ Facilitators
10.30 AM – 12.30 PM	*Meeting with the academic staff* **(Working Tea)**	Conference Hall - Dean's Office	Academic staff except HODs/ Review Team
12:30 PM -1:30 PM	*Lunch*		
1:30 PM – 4.45 PM	Observing Physical Facilities - Team 1 • Administration Division • Finance Branch • Sub Warden Office • Student counter • Medical Centre • Career Guidance Unit • English Language Training Unit • Lecture Hall • Prayer Room • Examination Hall	In around Dean's Office	Review Team/ Facilitators

- IQAC
- Computer Unit
- Library
- Department of Agric. Engineering
- Workshop

(Working Tea)

Observing Physical Facilities - Team 2   Around hostels

- Agro - Meteorological Station
- Drip Irrigation Demonstration Unit
- Student Hostel
- Compost Unit
- Student Canteen

Review Team/ Facilitators

(Working Tea)

Observing Physical Facilities – Team 3   Around Security Office

- Auditorium
- Bio gas Unit
- Science Park
- Budu Madura
- Play Ground/Sport Room/Physical Gymnasium
- Student Common Room
- Counseling Room

(Working Tea)

3

PROGRAMME REVIEWS 2019

SCHEDULE FOR SITE VISIT (16th December – 19th December 2019)

Bachelors in Green Technology

University of Ruhuna

Day 3 (Wednesday 18th December)

Time	Activity	Venue	Participants
9.00 AM – 09.30 AM	Meeting with Administrative Staff	Conference Hall - Dean's Office	DR/AB/FM/Curator
09.30 AM -10:00 PM	Meeting on HODs contributing to academic programme	Conference Hall - Dean's Office	HODs, Head/DELT
10.00 AM -11:15 PM	Observing a practical session (Working Tea)	Field or laboratory	Students/Review team/facilitators
11.15 AM – 12.00 PM	Meeting with external stakeholders, alumni members and other stakeholders	Conference Hall - Dean's Office	Group of external stakeholders (employers, industry, private sector, representatives with link to or involvement with the University) and Alumni
12:00 PM -1:00 PM	Lunch		
1.00 PM -1:30 PM	Meeting with Temporary Academic Staff	Conference Hall - Dean's Office	Temporary Academic Staff
1.30 PM -2.30 PM	Meeting with Proctor and Deputy proctor	Conference Hall - Dean's Office	Review Team/ Proctor/ Deputy Proctor/ Facilitators
2.30 PM -3.00 PM	Meeting with Technical Officers and lab Attendants	Conference Hall - Dean's Office	All Technical officers and lab Attendants
3.00 PM – 5.30 PM	Observing Documentation (Working Tea)	Conference Hall - Dean's Office	Review Team

4

31

PROGRAMME REVIEWS 2019

SCHEDULE FOR SITE VISIT (16th December – 19th December 2019)

Bachelors in Green Technology

University of Ruhuna

Day 4 (Thursday 19th December)

Time	Activity	Venue	Participants
8.30 AM – 9.30 AM	Observing documents	Conference Hall – Dean's Office	Review Team, Facilitators
9.30 AM – 10.00 AM	Committees	Conference Hall - Dean's Office	Chairperson/ Secretary of the committees
10.00 AM –10.30AM	Meeting with a cross section of academic support staff and non-academic staff	Conference Hall - Dean's Office	Representative group of academic support staff and non-academic staff (10)
10.30 AM – 12.30PM	Observing Documentation, Private meeting/ Report Writing	Conference Hall - Dean's Office	Review Team
12:30 PM - 1:30 PM	*Lunch*		
1:30 PM - 2:00 PM	Private meeting of reviewers and report writing	Conference Hall - Dean's Office	Review Team
2:00 PM - 3:00 PM	Closing meeting for debriefing *(Working Tea)*	Conference Hall - Dean's Office	Dean/Director – IQAU/ HODs/ Coordinator – FQAC/Chair & the SER – Team