SUBJECT REVIEW REPORT

DEPARTMENT OF FOOD SCIENCE AND TECHNOLOGY

FACULTY OF APPLIED SCIENCES
UNIVERSITY OF SRI JAYEWARDENEPURA

18th to 20th March 2010

Review Team :

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ndards is an important feature required to promote and safeguard public confidence in Sri Lankan Higher Education.. Hence Universities must undertake the responsibility for maintaining quality and standards. To achieve these objectives, a process of subject review and institutional review was introduced by the Committee of Vice Chancellors and Directors together with the University Grants Commission.

The subject review process evaluates the quality of education within a specific discipline and is focused on evaluating the student learning experience, student achievement and the teaching-learning process. Key features of the subject review process include the critical analysis of the self evaluation report prepared by the academic department concerned, peer observation of teaching, observation of documents, observation of the facilities available, and gathering information on activities towards quality assurance through conducting discussions with students and staff and other possible stakeholders. Subject reviews assess how the teaching-learning process helps in the achievement of intended learning outcomes. A report on the subject review process will be prepared after the review incorporating the findings of the review. In the report, the strengths and good practices will be highlighted and the weaknesses will also be stated together with some recommendations. Each aspect will be given a judgment of good, satisfactory or unsatisfactory. The draft report will be then sent to the department concerned and the feedback will be obtained. If there is disagreement with any judgment, it would be resolved by the Quality Assurance and Accreditation Council (QAAC) through discussion. The judgment will be submitted to the Standing Committee on Quality Assurance of the UGC for approval. After its approval, the report will be published in the QAAC website, *www.qaacouncil.lk*. The department has to improve the quality of the aspects that receive a judgment of unsatisfactory within 6 months of approving the judgments by the Standing Committee on Quality Assurance of the UGC.

Aspects of the subject review

In the subject review process, the evaluation was directed at the following eight aspects.

(1) Curriculum Design, Content and Review
(2) Teaching, Learning and Assessment Methods
(3) Quality of Students Including Student Progress and Achievements
(4) Extent and Use of Student Feedback, Qualitative and Quantitative
(5) Postgraduate Studies
(6) Peer Observation
(7) Skills Development
(8) Academic Guidance and Counseling

The following review team was appointed by the QAAC of the University Grants Commission to conduct the subject review of the Department of Food Science and Technology (DFST), Faculty of Applied Sciences, University of Sri Jayewardenepura.

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(2) Dr M. S. W. de Silva, Faculty of Livestock, Fisheries and Nutrition, Wayamba University of Sri Lanka
(3) Mr D. A. M. Arsecularatne, Ceylon Cold Stores, PLC

The Self Evaluation Report (SER) prepared by the DFST was provided to the review team on 01st March 2010 by the QAAC of the University Grants Commission. The review visit

ch 2010. The subject review was mainly directed at cesses employed by the DFST to achieve the *aims and* e degree programmes stipulated in the self evaluation report.

Peer observation was carried out during the review process, including observing teaching both in the theory and laboratory classes. The documents that were observed included assignments, minutes of Curriculum Development and Quality Assurance Committee meetings, department meetings and board of graduate studies meetings, examination papers, faculty board minutes, handouts, in-plant training, Masters degree programme, outreach activities, peer evaluation, practical schedules, students research proposals and theses of both undergraduate and post graduate students, curriculum, student handbook, samples of answer scripts, student feedback reports etc.

The review team had meetings with the Vice Chancellor, Head of the Department of FST, members of the academic & non-academic staff, undergraduate students, student counselors, Directors of Career Guidance, Director of Staff Development Center and the Coordinator of the ELTU (Annexure 1).

On the first day (18th March 2010) of the review, the team met the QA Specialist Professor Colin N. Peiris who briefed the review process and then together with Prof Colin Peiris met the Vice-Chancellor and the Head of DFST at the Vice Chancellors office. The Vice-Chancellor at this meeting briefed the present situation of the University of Jayewardenepura with regard to the quality of students. The review team discussed with the Head of DFST and finalized the agenda for the review process (Annexure 2). This was followed by the presentation by the Head of DFST and a follow-up discussion. The self-evaluation report prepared by the DFST was the primary source of documented information for this review.

The review team also examined the facilities available for teaching and learning at the department and faculty. The team gathered more information through meetings with various parties including non academics, academics and the present and passed out students and postgraduate students. Facilities at the department, Faculty computer unit, Career guidance center and libraries were also observed.

On the 20th March 2010, the review team gave feedback at a wrap-up meeting with the Head of DFST and other members of the academic staff.

2. BRIEF HISTORY OF THE UNIVERSITY, FACULTY AND DEPARTMENT

Faculty of Applied Sciences (FAppSc)

The Faculty of Science was established in 1962 with a single Department of Science and a few staff members to offer the traditional courses in Physical and Biological Sciences. In 1965, the Faculty was upgraded to include four departments of study, namely Physics, Chemistry, Mathematics and Biology. Two more departments, namely the Department of Forestry and Environment Studies and the Department of Statistics and Computer Science have been added to the faculty in 1996 and 1998, respectively. With the addition of the Department of Food Science and Technology in 2002, the faculty now functions with eight departments. Presently, the Faculty with nearly 100 academic staff members caters to over 1000 undergraduate students and about 100 postgraduate students.

Technology (DFST)

…ur year undergraduate degree titled *Bachelor of Applied …nology* (BASFT). DFST commenced the BAFST degree programme in 2005 with an intake of 31 students. The BAFST degree programme has been strongly influenced by the postgraduate programmes in Food Science and Technology which was commenced in 1969 by the Faculty of Applied Science. In addition to the BAFST degree (which has an annual intake of about 30 students), the DFST continues with the M.Sc. programme in Food Science and Technology (with a bi-annual intake of 40 students) and a Diploma in Food Science and Technology.
The present situation is that the Department has 117 BASFT students, and 40 MSc students, in addition to seven PhD students and two M.Phil students.

Human Resources of the DFST

It was revealed at the presentation made by the Head of DFST that the present cadres of the department are for six Senior Lecturers / Probationary Lecturers and two Scientific Assistants as well as one Temporary Demonstrator. The Department has no cadre chair. Since the recent retirement of Prof Bamunuarachchi, two academic staff posts are vacant at present. In addition, the DFST has one Technical officer, one Computer Application Assistant, two Laboratory Attendants and a labourer.

The degree programme is multi-disciplinary (Annexure 3). All teaching is conducted in the English medium. Students follow a rigid curriculum of 120 credits which includes course units related to core areas of Food Science and Technology, Chemistry, Biology, Microbiology, Physics and units from supportive subjects of Statistics, Computer Science and Management. The delivery of the curriculum is supported by the services offered by well-recognized persons as visiting lecturers. This programme of Food Science and Technology is designed with contact hours provided through lecture and laboratory courses, industrial training, research project placements and field excursions. Academic staff of the DFST also contributes to the other degree programs conducted by the Faculty of Applied Sciences.

3. AIMS AND LEARNING OUTCOMES

3.1 Aims of the Department

As stated in the SER, the DFST has the following aims:

a. Teaching the Applied Science in the field of Food Science and Technology to in Certificate, Diploma, B.Sc., M.Sc. and Ph.D studies.
b. Conducting research programmes in the field of Food Sciences, Food Technology and Nutrition with special emphasis on to solve the problems and related issues of the food industry.
c. Working with local and international research institutions to conduct joint research projects related to Food and Nutrition.

To reach these broader aims, the department specifically intends to;

- Transmit scientific knowledge to the undergraduates enabling them to serve in the fields of Food Science and Technology.
- Offer a range of learning opportunities within the credit unit teaching structure of the department and the Faculty thereby to develop necessary skills to work in challenging environments.
- Ensure a conducive environment for students to develop positive attitudes that help them to employ their potentials in a socially friendly manner with the help of

and skills during their undergraduate studies and after

pportive and responsive learning environment which encourages students to work towards higher achievements of individual learning objectives.

- Enhance the professional orientation of undergraduates via having links with professional bodies in the relevant research and development institutions and food sector establishments so as to meet the necessary requirements of the industry.
- Encourage research at undergraduate and postgraduate levels in national and international context in the related fields.
- Support the academic and academic supportive staff in their career development including provision of feedback and peer advice/observations.
- Have periodic revisions of teaching, learning and evaluation and so on with the view to be in line with the changing environment

3.2. Learning Outcomes

As stated in the SER, on the completion of the degree programme successfully, students should have;

- wider knowledge and conceptual understanding of areas of Food Science and Technology.
- ability to perceive the behaviour of the food sector institutions dealing with the manufacture of different kind of foods and related services.
- technical and intellectual skills to gather data/information and critically analyze the needs of local and international food sector.
- learnt the way of searching new knowledge through research.
- developed a range of transferable skills, which are useful in decision making with regard to food resource matters such as handling data/information and interpretation, computer literacy, information management, teamwork, oral and written presentation/ communication etc.
- built self-confidence for independence, self-motivation for life-long-learning in the relevant field and for proceeding with postgraduate studies.
- qualified to commence professional practices in food industry and related academic and research and development institutions.

4. FINDINGS OF THE REVIEW TEAM

The findings of the review team are presented under the eight aspects listed in the ñIntroductionò. Each aspect will provide the evidence gathered during the visit, highlight strengths, weaknesses and good practices along with recommendations and suggestions where needed.

The major part of the FST programme is delivered by one professor, two lecturers and one probationary lecturer. In addition, DFST has two Scientific Assistants and one Temporary Demonstrator as academic support staff. DFST also has one Technical officer, one computer application assistant, two lab attendants and laborer. Two academic staff posts are unfilled at present since the recent retirement of the Chair Professor. There is also input to the courses from lecturers of other departments and recognized persons as visiting lecturers in some subjects. DFST has one laboratory which is used by both undergraduate

gh the DFST is under staffed, it is making every effort to fectively as possible.

4.1. Curriculum Design, Content and Review

Curriculum Design and Content

The review team noted that students follow a well-structured series of basic and advanced interdisciplinary and multidisciplinary course units throughout their student career, which provides required theoretical knowledge and opportunity to develop subject specific skills and generic skills required to work in the real world. However, the BAFST which is offered on a course unit-based semester system, is a rigid programme of 120 credits, which is the credit requirement for the degree; this situation has left students with no flexibility for choice within the programme (Annexure 3). At the commencement of the program in the first year, Food Science and Technology students are provided with a copy of the Faculty handbook which clearly outlines the syllabi of course units offered by the DFST. The handbook also provides information in relation to course structure, assessment criteria and syllabi of course units of the program.

In the first two years, students are required to follow basic and fundamental subjects offered with partial contribution from the other departments of the Faculty of Applied Sciences (Departments of Chemistry, Physics, Botany, Forestry and Environmental Science and Zoology) and the Faculty of Management Studies. A few course units related food science and technology, and offered in the first two years along with other units, set the foundation for the advanced units offered in the next two years. In the third and fourth years, courses which are more practically applicable in the food industry are offered. In the last two years, students are required to follow the applied and advanced subjects offered by the DFST. This includes a four-month, compulsory industrial training placement for all students and a research project. The large majority of course units related to the core area of Food Science and Technology is offered during the 3rd year. In addition to a range of course units in core areas, all other units from supporting subjects such as Statistics, Computer Science and Management are also included within the 120 credit structure. An English course which has been designed in common to all students of the Faculty of Applied Sciences, is offered to the BAFST students in a separate group. It is compulsory for the students to pass the English program before graduation.

The structural arrangement of the curriculum also facilitates students become independent or self-learners in the end. Final year students and the recent graduates confirmed that perquisites offered during early years made them confident in taking up their Research Project and In-plant Training competently.

Almost all practical components are offered in separate units which allow students to be evaluated effectively. Practicals are compulsory in the FST degree programme for all students. The students are provided with practical schedules beforehand. Students are required to wear an overcoat and shoes as safety precautions and inculcating good habits appropriate for those working in the food industry. The required IT knowledge is offered to students in an appropriate way of a few separate units of Computer applications for Food Science & Technology and Nutrition during the first three years which has motivated students learn and apply IT for their learning activities.

Reviewers noted inclusion of some irrelevant course units in to the present curriculum (e.g. some units offered by the Department of Botany); it was also confirmed by the students.

should be remedied as much as possible in the next duled to take place in late 2010.

Curriculum review

The BAFST degree was introduced in 2004 and the present curriculum has been in implementation since the recruitment of the first batch to the BAFST degree. After completing one cycle of the programme in the late 2009, DFST is now making arrangements to effect a major curriculum revision. By going through the minutes of the Faculty Board, the review team noticed that the DFST has taken several measures to upgrade the curriculum with minor changes. The team would like to suggest that, in order to define the competencies and profile of the BASFT graduate, the DFST seeks the views of a range of parties covering a wide spectrum of stakeholders, especially recent graduates and representations from industrial, research, educational & other related organizations. It is also important to get views from non-academics, current students and staff members. The team recommends that DFST designs the curriculum based on the graduate profile and competencies which would allow restricting irrelevant subject materials getting in to the curriculum.

At the meeting with students, it has been pointed out that new technologies need to be introduced into the field. The chemistry content offered in the curriculum appears adequate for BAFST students, except for the absence of a basic unit in Biochemistry. The review team is also of the opinion that it would facilitate the students learning process if more units related to food science and technology were moved from the 3rd year to 2nd year.

The reviewers rate this aspect of the DFST as 'GOOD'.

4.2. Teaching, Learning and Assessment Methods

The information provided in the Self-Evaluation Report and gathered during peer observation of lectures and laboratory practical classes, meetings with academics and present students and recent graduates, along with other relevant information gathered through perusal of the Faculty Student Handbook, time tables, project reports, question papers and answer scripts, were used to evaluate the above aspect. The review team noted that courses are delivered through lectures, practicals, discussions, assignments, group work and Power Point presentations, and field / industrial visits. DFST uses a credit value based end-semester-examinations for each course unit. The review team was informed that, at the beginning of almost all course units and practical courses, the BAFST students are provided with sufficient information such as objectives, intended learning outcomes, assessment procedure and a list of reference material; this was also confirmed by the students. The current teaching-learning and assessment methods appeared to be appropriately for achieving the stated outcomes. Multimedia projectors are provided for lecturers when needed.

The only laboratory of the department is well-equipped with a large number of pieces of equipment and its environment seemed to be very much conducive for both undergraduate and post graduate students to conduct their experiments. There are two well trained and experienced Scientific Assistants who assist practical classes in many ways. Students are in the opinion that important pilot plants for processing foods will be an added advantage for both undergraduates and post graduate students.

and several periodicals are available in the main library aturday from 8.00 am to 6.00 pm and extended till 8.00 main library also has a media room which the research students and final year students can use for IT related work. A department mini library with a collection of theses of B.Sc. and postgraduate students and some other materials is manned by the students. The Faculty library is another place for students for studying which can be improved. The review team was informed that the Medical Faculty Library too has a collection related to food science and technology and Nutrition, which is accessible to the BFST students. Important books are in the reference area and time given to return the reference books is not sufficient. At least a week should be given or books are made available as E books.

DFST exercises the practice of the examination paper moderation and second marking with the service of the senior academics of the department and some other specialists from other recognized organizations.

It should be mentioned that students appreciated the dedication of the limited DFST staff and their effort to meet the human resources needs by organizing the services of visiting staff. The department, at present has one cadre for Technical Officer (TO) which is filled; however, the team realized that at least two full time TOs are required to cope with the workload carried by the DFST at present.

The reviewers rate this aspect of the DFST as 'GOOD'.

4.3 Quality of Students including Student Progress and Achievements

As for all other internal degree programmes in Sri Lankan universities, student recruitment and admissions are carried out centrally by the University Grants Commission. About 30 students are allocated to the SJPU FST programme each year and there are enough applicants (with high z-scores, average of 1.7 and above, each year) to fill all vacancies.

However, during the re-allocation process, many students are re-directed to other courses and their vacancies remain unfilled because the academic programme has already commenced and it becomes too late for new admissions to catch up with course work.

The first intake of students graduated in 2009. Of the 24 students in this batch, 6 had 1st class honours, while 17 had 2nd class honours and 2 had ordinary passes. Students have also shone in extracurricular activities, winning an award for best product development at the ProFood ProPack exhibition in 2008, and winning scholarship awards. As of January 2010, 15 of the 24 graduates (about 60%) had obtained employment, mostly in the private sector. The in-plant training and research projects project conducted in the industrial setting pave the way for graduates to find suitable jobs.

The Review Team had an opportunity to meet with ten graduates, and all those who are in employment reported that the FST study programme prepared them well for the work that they are now engaged in. However, it was noted that awareness in both private and public sectors regarding the degree is lacking, and this may affect the employability of graduates. Moreover, while the male graduates have not experienced any difficulty in obtaining jobs, several of the female graduates have not yet found employment.

The reviewers rate this aspect of the DFST as 'GOOD'.

eedback

de available for perusal by the review team, student feedback has been obtained regularly using a pre-set questionnaire, with regard to teaching conducted by all internal staff (professors, lecturers, and scientific assistants) and several visiting lecturers. These responses have been analyzed and converted to a quantitative measure. The documents indicated that in general, the students are satisfied with the teaching-learning activities.

During discussions with students, it was confirmed that the academic staff welcome student feedback (formal and informal), seek it frequently, and act on it whenever possible.

However, the review team noted that the DFST does not have regular, formal meetings of staff and students. The review team feels that it would be more appropriate to organize a staff-students consultative committee to represent all academic staff members, academic supporting staff and library with a cross section of students, with records of proceedings. The meeting of the above committee at appropriate time would enable to identify problems and issues which can be discussed and resolved early.

The reviewers rate this aspect of the DFST as 'GOOD'.

4.5. Postgraduate Studies

Well before the establishment of a separate Department of Food Science & Technology, the Dept of Chemistry started a Diploma programme, which was subsequently upgraded to a M.Sc. study programme in Food Science and Technology. This programme is now managed by the relevant Board of Study in the Faculty of Graduate Studies of the University of Sri Jayewardenepura.

The MSc course is conducted over 2 academic years and requires students to complete a minimum of 60 credits. The curriculum has been designed to serve the needs of different personnel in the food industry. The 2nd semester of the 2nd year is set aside for a research project conducted on a specific area in Food Science & Technology. The dissertation is expected to demonstrate that the student has mastered the techniques in a specialized area of research and can design and carry out controlled, informative experiments in this area.

To date, the DFST has completed 8 MSc courses, resulting in a total of about 300 graduates. The current course has 40 MSc students. In addition, the DFST has 7 PhD students and 2 MPhil students. This is a very impressive output for a small Department that has been in existence for less than 10 years.

The review team had an opportunity to meet several postgraduate students (both on the taught course and research degree). These students affirmed the fact that the course has a sufficiently broad scope in coverage of the theoretical aspects of Food Science and Technology and appreciated the opportunity given to them to learn from leading figures in industry. However, they noted a few areas that could be improved, especially inclusion of more practicals relating to modern technology (which would require a bigger, upgraded laboratory).

ment prospects would be further enhanced if, once they for the MSc, the University could provide them with a he Dean or the Registrar) that lists their course units and the grades obtained by them for each.

The reviewers rate this aspect of the DFST as 'GOOD'.

4.6 Peer Observation

The DFST staff has implemented a process of formal, documented peer observation of teaching over the last year. Documents made available to the review team indicated that each academic staff member with the exception of the Head of Dept, and both scientific assistants (who are largely responsible for conduct of FST practical classes) have been observed at least once during a teaching activity by a colleague within the department, with subsequent feedback on their teaching practices. However, the review team noted that the peer evaluation form has not been designed to accommodate written comments regarding different aspects and this has limited the implementation of outcome of peer observation on each member.

In addition, the staff assists and learns from each other in preparing teaching materials and student assessments, as well as in other general functions within the department.

The Head of DFST is currently the Director of the Staff Development Unit of the University, and in this capacity, responsible for organizing the induction programme for probationary lecturers in the university. The current course is being followed by the probationary lecturer in the DFST.

The reviewers rate this aspect of the DFST as 'SATISFACTORY'.

4.7. Skills Development

The DFST places great emphasis on the development of generic, soft skills among the FST students. Students are given an opportunity to participate in an English course in the 1st three semesters, to improve their English proficiency. They are required to prepare and present assignments and reports on a regular basis, thus encouraging them to improve their English proficiency as well as communication and presentation skills.

There are several computer based course units that enable students to develop IT skills in a general sense as well as in a manner that is applicable to Food Science & Technology. These course units are taught as hands-on classes in computer laboratories in the Science Faculty. There is however, a dearth of access to computers and the internet for general use by FST students, since they are compelled to use a lab that serves the entire university student body for this purpose. Thus students who do not have the resources to purchase their own computers face some difficulties in preparation of assignments, reports and dissertations.

The inclusion of several course units that are taught by staff from the Faculty of Management Studies was particularly appreciated by the final year students and recent graduates since this has helped them to fit into the roles expected of them when working in industry. Some students suggested that more in-depth coverage of Marketing Management would be particularly useful.

developing studentsô innovativeness, time management
raining component encourages students to develop skills
ral presentation exercises aimed at discussing outcomes
of the Research Project and various other units help the students to develop communication skills, computer skills, preparing visuals and defending the ideas and outcome. Various other exercises such as written examinations and practical examinations are designed to develop all necessary skills required to achieve high standard of performance.

The Career Guidance Unit of the University offers a comprehensive 60-hour course intended to enhance the employability of graduates, but few FST students have utilized this opportunity. The final year students and the recent graduates explained this was mainly because of clashing timetables, which prevented them from following the course in its entirety.

The reviewers rate this aspect of the DFST as 'GOOD'.

4.8 Academic Guidance and Counseling

Students are provided with detailed information regarding the degree programme and examination procedures through the Science Faculty student handbook. At the beginning of most course units, students are informed of the course objectives and intended learning outcomes, as well as the assessment procedures.

The orientation programme for freshers includes a component entitled ôLearning in Universityõ, which is meant to help students in the Science Faculty make the transition from school and tuition classes to university-style learning. While the aims are praiseworthy, discussions with the students suggested that the students had not really found the activity very helpful. It is suggested that staff re-consider the teaching-learning activities within this component in order to make it more effective.

Students are given the opportunity to learn about the scope of the subject and future employment prospects through industry visits, workshops and guest lectures conducted at intervals throughout their period of study. Students suggested however, that introduction of industry visits earlier on in the course (2^{nd} instead of 3^{rd} year) would give them a greater opportunity to understand the relevance of their theory knowledge, and learn about the food industry in general.

Students are prepared for their research project through a series of workshops and feedback sessions with internal and external supervisors, together with clear instructions and a timeframe.

The reviewers rate this aspect of the DFST as 'GOOD'.

uring the study visit by the review team, the eight aspects

Aspect Reviewed	Judgment
Curriculum Design, Content and Review	Good
Teaching, Learning and Assessment Methods	Good
Quality of Students including Student Progress and Achievements	Good
Extent and Use of Student feedback, Qualitative and Quantitative	Good
Postgraduate Studies	Good
Peer Observation	Satisfactory
Skills Development	Good
Academic Guidance and Counseling	Good

5. CONCLUSIONS

The strengths/ good practices and the weaknesses of each of the eight aspects considered in the subject review process are summarized below.

1. Curriculum Design, Content and Review

Good Practices/Strengths

1. The curriculum covers all the core areas of Food Science and Technology
2. It prepares students to enter industry and the world of work through industrial placements as well as research projects
3. The curricular content includes a thorough foundation in Chemistry, as well as coverage of important support areas such as statistics, principles of management and marketing, and computer applications applied to FST
4. In general, almost all course units are not more than 1 or 2 credits, and therefore the student workload is limited.

Weaknesses

1. Inclusion of a few areas that appear irrelevant to the main programme of study, e.g. plant diversity in Botany module
2. Students are expected to do practical classes in Mycology before lectures have been conducted in the subject.
3. The curriculum is rigid in that all 120 credits must be earned through set course units with no options.

2. Teaching, Learning and Assessment Methods

Good Practices/Strengths

1. A variety of teaching-learning methods are used, including lectures, laboratory classes, discussions, assignments (including feasibility reports on new product development), group work, team presentations and field and industrial visits.

ourse outlines and assessment methods at beginning of

ndustrial visits during the third year.

4. Student evaluation is based on a number of different assessment methods, including continuous assessments, laboratory practicals and theory papers.
5. The length of the examination papers is based on the credit weight of the course unit.
6. All examination papers are moderated by a senior academic.
7. Laboratory practicals comprise separate course units, which allow them to be assessed comprehensively.
8. Practical classes are conducted in small groups, so that every student is given the opportunity to

Weaknesses

1. Lack of computer facilities in the department for general student use
2. Insufficient internal departmental staff (academic and non-academic) to carry existing workload.

3. Quality of Students, including Student Progress and Achievement

Good Practices/Strengths

1. High average AL z-score of FST students.
2. Good pass rate with very high proportion of students being awarded honours.
3. Students have won an award at the ProFoods ProPack 2008 exhibition.

Weaknesses

1. Significant proportion of student places remains unfilled because of re-allocation by the UGC.
2. Lack of awareness among the stakeholders about the BASFT degree.

4. Extent and Use of Student Feedback

Good Practices/Strengths

1. Student feedback is obtained regularly using a standard questionnaire and informal discussions with students.
2. Student feedback has been statistically analysed and returned to the relevant staff member.
3. Follow-up action is taken on suggestions made by students, and students are aware of such actions.
4. Student feedback has been obtained on some visiting lecturers.

Weaknesses

1. Lack of formal meetings with students, with recorded minutes of meetings

5. Postgraduate Studies

Good Practices/Strengths

1. Well-established MSc study programme has been conducted regularly since the 1980s.
2. Several postgraduate students are registered with the DFST for research degrees

ot include practical classes in modern analytical methods
ssed out students in obtaining adequate documentation

6. Peer Observation

Good Practices/Strengths

1. Almost all academic staff members have been the subject of peer observation, adopting a standard process with recorded documents.
2. Moderation of all question papers used in examinations

Weaknesses

1. No written comments on various aspects of peer observation process
2. No record on follow up action.

7. Skills Development

Good Practices/Strengths

1. The curriculum includes many courses that provide students with the opportunity to develop skills, both subject-specific and generic.
2. Participation and successful completion of the English course for 1st and 2nd years is compulsory

Weaknesses

1. The English course is not sufficiently flexible to suit different levels of English proficiency at entry into the course.

8. Academic Guidance and Counseling

Good Practices/Strengths

1. The Career Guidance Unit of the University offers a comprehensive course designed to improve graduate employability.
2. Freshers are expected to participate in an orientation programme that introduces them to university life and the Faculty of Applied Sciences
3. The Faculty has designated academic advisors

Weaknesses

1. Students are unable to follow the CGU course in its entirety because of constraints in timetabling.
2. Counseling activity is not sufficiently formalized with trained counselors.

view, the review team wishes to make the following recommendations that the DFST may consider for improving the quality of the study programmes further.

At Departmental level

1. Commence the impending process of curriculum revision with consultative meetings with various stakeholders to decide on the competencies and profile of a FST graduate.
2. Consider removal of irrelevant course units
3. Introduce some degree of choice in course units in core areas.
4. Explore possibility of conducting a more flexible English course that takes into consideration students with different levels of English language competencies.
5. Consider introduction of industrial visits by students in 2nd year of BAFST programme.
6. Ensure that students are not expected to follow laboratory based course units without the relevant theory based course unit.
7. Consider possibility of setting up a small computer room with 5 ï 6 terminals with internet connectivity for use by DFST students.
8. Consider possibility of expanding laboratory space and bringing in state-of-the-art technology for analytical work for the Masterôs degree programme
9. Consider instituting formal meetings with staff and students at least once a semester, with recorded minutes of such meetings.
10. Keep records on follow up action on peer observation.
11. Consider better coordination between CGU and DFST timetabling, to enable third / fourth year BAFST students to follow course conducted by CGU.

At Faculty / University level

12. Take steps for immediate recruitment of additional academic staff to vacant positions.
13. Consider increasing academic staff cadre to at least 8-9 positions instead of the current 6, taking into consideration the fact that the total student population is about 120, and the recommended UGC student staff ratio is 10:1.
14. Find a mechanism to retain the two scientific assistants on the departmental staff.
15. Allocate an additional technical officer to the department in view of the extensive use of processing equipment in the FST laboratory.
16. Find a mechanism that minimizes student vacancies on the FST course.
17. Consider possibility of issuing a Qualification Supplement containing titles, credit values and the Grades obtained in respect of the modules pursued by a student, as well as details of the extra-curricular activities in which the student participated, together with the Bachelor / Master degree certificate.

Acknowledgements

The Review Team appreciates the hard work done by the DFST in facilitating the review process. The team also appreciates the cooperation extended by the Head of the Department of FST and all others to perform our duty well.

ET BY THE REVIEW TEAM

Vice-Chancellor, University of Sri Jayewardenepura

Dean, Faculty of Applied Sciences

Academic and academic support staff, Department of Food Science & Technology:

- Prof KKDS Ranaweera, Head of Dept
- Mr MAJ Wansapara, Lecturer
- Ms Indira Wickramasinghe, Lecturer
- Ms Mihiri Gunathilake, Lecturer
- Ms Rupika Perera, Scientific Assistant
- Ms Suraji Senanayake, Scientific Assistant
- Ms N Perera, Temporary Demonstrator

Non-academic staff, Dept of Food Science & Technology

- Mr WMSK Weerasinghe, Staff Technical Officer
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- Mr DP Rupasinghe, Laboratory Attendant
- Ms NAH Silva, Labourer

Other Academic staff from Faculty of Management Studies and Commerce

- Mr D Kuruppuarachchi, Dept of Decision Sciences
- Ms JS Senevirathne, Dept of Business Administration
- Mr KHH Kottawatta, Dept of Human Resource Management

Academic staff from ELTU

- Ms S Adhihetty, Lecturer

Others

- Ms Tamara de Silva, Student Counsellor, Faculty of Applied Sciences
- Dr PN Dasanayake, Student Counsellor, Faculty of Applied Sciences
- Mr DC Wickramarachchi, Academic Counsellor, Faculty of Applied Sciences
- Dr Upul Subasinghe, Academic Counsellor, Faculty of Applied Sciences
- Mr KKWA Sarath Kumara, Deputy Proctor, Faculty of Applied Sciences
- Mr WM Dhanapala, Director, Career Guidance Unit
- Prof KKDS Ranaweera, Director, Staff Development Unit

VIEW VISIT

Day 1: 18 March 2010

8.00 am	Meeting with Vice-Chancellor
8.30 am	Meeting with Dean
9.00 am	Private meeting of Review Team with QAA Specialist
9.30 am	Presentation of SER and meeting with departmental staff
11.00 am	Observe teaching: FST practical for 3rd years
11.30 am	Observing facilities: FST Laboratory and Library; Science Faculty Library; Main Library
1.00 pm	Lunch
2.00 pm	Observing documents
3.30 pm	Meeting with academic staff and academic support staff
4.00 pm	Meeting with 1st and 3rd year students
5.00 pm	Brief meeting of reviewers

Day 2: 19 March 2010

8.00 am	Observe teaching: Computer Applications in Food Science & Nutrition for 3rd years ï Mr Sunimal
8.30 am	Observe teaching: Lecture on Food Physics for 2nd years ï Ms Mihiri
9.00 am	Meeting with Deputy Proctor, student counselors, Director /SDU, Director / CGU
10.00 am	Observe facilities: Career Guidance Unit
10.30 am	Observe teaching: Lecture on Chemistry of Living Systems for 1st years ï Mr Wansapala
11.00 am	Meeting with English Instructors and Academic staff from Management Faculty
12.00 pm	Lunch
1.00 pm	Meeting with 2nd year students
1.30 pm	Observe teaching: Chemistry lab class for 1st year students; Food Science practical for 2nd years
2.30 pm	Meeting with non-academic staff
3.00 pm	Meeting with 4th years
4.00 pm	Meeting with passed out graduates
5.00 pm	Brief meeting of reviewers

Day 3: 20 March 2010

8.00 am	Observe documents
10.00 am	Meeting with postgraduate students
11.00 am	Meeting of reviewers
12.00 pm	Wrap up meeting with Head and academic staff of DFST
1.00 pm	Lunch
2.00 pm	Close of review visit

Course Code	Course Title	Credit Hours
FST 151.1.0	Principles of Mathematics	1
FST 152.1.0	Introduction to Computer Science	1
FST 156.1.0	Principles of Management I	1
FST 178.1.0	Principles of Physics	1
FST 168.1.0	Introduction to Food Science and Technology and Nutrition	1
FST 172.1.0	Food Resources I	1
FST 193.1.0	Food Science and Technology Practicals I	1
FST 169.1.0	Biomolecules and Cells (Based on BOT 113.1.0)	1
FST 170.1.0	Enzymology (Based on BOT 102.1.0)	1
FST 194.1.0	Practicals and field classes I (A part of BOT 111.1.0 is also included)	1
FST 160.2.0	Principles of Organic Chemistry (Based on CHE 102.2 0)	2
FST 161.1.5	Bonding and structure of Inorganic Molecules/ions (Based on CHE 101.1.5)	1.5
FST 162.1.5	Main group and Transition elements (Based on CHE 105.1.5)	1.5
FST 195.2.0	Chemistry practicals (Inorganic, Organic, Physical, sem. I & II for the 1st year) (Based on CHE 107.1.0)	2
	Total	**17 (15)**
YEAR II - SEMESTER II		
FST 153.1.0	Computer Application for Food. Sciences 1	1
FST 157.1.0	Principles of Management II	1
FST 179.1.0	Food Physics Principles	1
FST 173.1.0	Biology of Food Animals	1
FST 163.1.0	Chemistry of living systems	1
FST 174.1.0	Principles of Human Nutrition	1
FST 175.1.0	Needs of Food Crops	1
FST 196.1.0	Food Science and Technology Practicals II	1
FST 176.1.0	Plant Diversity (Based on BOT 101.1.0)	1
FST 170.1.0	Plant Anatomy and Morphology (Based on BOT 103.1.0)	1
FST 197.1.0	Practicals and field classes II (Based on BOT 112.1.0)	1
FST 164.1.0	Principles of Analytical Chemistry (Based on CHE 104.1.0)	1
FST 165.1.0	Chemical Thermodynamics (Based on CHE 103.1.0)	1
FST 166.1.0	Structure and Properties of matter (Based on CHE 106.1.0)	1
FST 195.2.0	Chemistry Practicals (Org. , Inorganic, Physical, semester II) (Based on CHE 107.2.0)	2
	Total	**15 (15)**

II

Code		Credit Hours
FST 251 1.0	Mathematics for Food Sciences	1
FST 252 1.0	Computer Applications for Food Sciences II	1
FST 256 1.0	Management for Food Sciences	1
FST 278 1.0	Applied Food Physics	1
FST 268 1.0	Fundamentals of Microbiology	1
FST 269 1.0	Food Resources II	1
FST 270 1.0	Applied Human Nutrition	1
FST 293 1.0	Food Science and Technology Practicals III	1
FST 271.1.0	Plant Nutrition (Based on BOT 208.1.0)	1
FST 272.2.0	Pest Management of Food Crops (Continued in the semester II) (Based on ZOO 338 1 0 and ZOO 339 1 0)	2
FST 294.1.0	Practicals and field classes III (Based on BOT 211.1.0)	1
FST 260.1.0	Chemistry of coordination comp. (Based on CHE 202.1.0)	1
FST 262.1.0	Electrochemistry (Based on CHE 204.1.0)	1
FST 295.2.0	Chemistry practicals (Inorg, Organic, Physical) (Based on CHE 209.2.0)	2
	Total	**14 (12)**
YEAR II - SEMESTER II		
FST 253.1.0	Statistics for Food Sciences I	1
FST 254.1.0	Computer Applications for Food Sciences III	1
FST 257.1.0	Food Business Management I	1
FST 279.1.0	Physics of Food Processing Equipment and Products	1
FST 272.2.0	Pest Management of Food Crops (Based on ZOO 338 1 0 and ZOO 339 1 0)	2
FST 273.1.0	Environmental Management and Water quality assurance	1
FST 281.2.0	Food Preservation Technology	2
FST 296.1.0	Food Science and Technology Practicals IV	1
FST 274.1.0	Plant physiology (Based on BOT 206.1.0)	1
FST 275.1.0	Developmental Physiology (Based on BOT 215.1.0)	1
FST 297.1.0	Practicals and field classes IV (Based on BOT 212.1.0)	1
FST 264.1.0	Chemical Kinetics (Based on CHE 206.1.0)	1
FST 261.1.0	Organic spectroscopy (Based on CHE 203.1.0)	1
FST 295.2.0	Chemistry Practicals (Based on CHE 209.2.0)	2
	Total	**17 (15)**