SUBJECT REVIEW REPORT

DEPARTMENT OF APPLIED NUTRITION

FACULTY OF LIVESTOCK, FISHERIES AND NUTRITION

WAYAMBA UNIVERSITY OF SRI LANKA

21st to 23rd February 2007

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1. SUBJECT REVIEW PROCESS

The subject review evaluates the quality of student learning experience in terms of the management and quality assurance at the program level. This report reviews the quality and management of academic programs delivered by the Department of Applied Nutrition (DAN) in the Faculty of Livestock, Fisheries and Nutrition, Wayamba University of Sri Lanka located at Makandura. The review was carried out following the guidelines established by the CVCD and the University Grants Commission in the Quality Assurance Handbook for Sri Lankan Universities, published in July 2002.

The review team consisted of Prof. Upali Samarajeewa (Senior Professor of Food Science & Technology, Faculty of Agriculture, University of Peradeniya - Team Chair), Prof. (Ms) Rohini De A. Seneviratne (Professor of Community Medicine, Faculty of Medicine, University of Colombo), and Dr. K. K. D. S. Ranaweera (Senior Lecturer in Food Science & Technology, Faculty Applied Sciences, University of Sri Jayewardenepura). The review was carried out from 21st to 23rd February 2007. The agenda of the meetings, lists of the persons met, lists of documents, and facilities observed are given as annexes.

The review team examined the following specific 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
5. Postgraduate Studies
6. Peer Observation
7. Skills Development
8. Academic Guidance and Counseling

The primary source of documented information for this review was the Self-Evaluation Report (SER) prepared by the DAN. The review team was also provided with supporting documents by the Department including the curriculum, detailed syllabi, teaching materials, student work records, question papers, marking schemes, answer scripts, marks, student feedbacks and peer observations. The team had useful discussions with the Head/DAN, academic and non-academic staff of the Department, and students from the first, second, third and final years. The team also visited laboratories, lecture theatres, library, and the computer unit. The team was able observe 2 lectures, 1 student presentation and 1 practical class. On the last day, the review team had a final meeting with the academic staff of the DAN to present the observations at a wrap up meeting.

The reviewers are thankful for the assistance of the academic and non-academic staff, and the students during the review process. The reviewers are grateful to the Vice Chancellor, the Dean of the Faculty and the Head of the Department for the hospitality and the excellent arrangements made for the review team to carry out the review process. The review team specially appreciates the enthusiasm and the dedication of the Head of the Department Dr. K.D.D.R Silva towards the development of the Department under many constraints.

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2. BRIEF HISTORY OF THE DEPARTMENT, FACULTY AND UNIVERSITY

The Wayamba University of Sri Lanka was established in August 1999 upgrading the Wayamba campus of the Rajarata University of Sri Lanka. It has two campuses at Kuliyapitiya and Makandura with the administrative departments and Faculties of Applied Sciences and Business Studies & Finance located at Kuliyapitiya campus. The Makandura campus houses the Faculties of Agriculture & Plantation Management and Faculty of Livestock, Fisheries & Nutrition (FLFN). The FLFN consists of 4 departments of study namely, Department of Food Science & Technology, Department of Applied Nutrition, Department of Aquaculture & Fisheries, and the Department of Livestock & Avian sciences.

The DAN was earlier attached to the Faculty of Applied Sciences at Kuliyapitiya as the major contributor to the B. Sc. (General) degree program in Nutrition & Community Resources Management and the B. Sc. (Special) degree program in Nutrition offered during 1999 to 2005. In 1999, DAN was attached to the Faculty of Livestock Fisheries & Nutrition located at Makandura campus. The Bachelor of Food Science & Nutrition degree program commenced in the year 2001, which is currently titled B. Sc. Food Science & Nutrition. It is a four-year degree program. The major contribution examined under this subject review is the Applied Nutrition program currently in operation leading to B. Sc. in Food Science & Nutrition with specialization in the area of Applied Nutrition.

The total number of the students in the Faculty currently is 246 with an annual enrolment of 65. It appears that the vacancies occurring due to students leaving the course and not registering at the beginning are not filled. There are a total of 44 students specializing in the 3rd and 4th years currently.

The vision of the University is “To achieve and be recognized as a centre of excellence in higher education, research and development of technologies whilst training and developing human resources to meet national and global needs”.

The mission of the Department is to “Improve nutrition and health states of the population in Sri Lanka through learning, research, service and practice”.

3. AIMS AND LEARNING OUTCOMES

3.1 Aims

Nutritional Sciences integrate knowledge of biological principles to interpret emerging knowledge of cellular and physiological systems and use knowledge of biochemical processes and nutrient functions to interpret effects of changes in nutrient availability on metabolic functions. The DAN offers curricula and professional development for students pursuing careers in government, the food industry or other sectors involved in the food chain, education or health, consumer organizations, international aid as scientists, nutritionists, foodservice managers, with further study, dietitians, and to develop their capacity to undertake research into the science of food and health. The emphasis of the Nutrition specialization program is on utilizing knowledge of nutrient requirements, food sources and physiological systems to determine nutrient and dietary needs of individuals in various life cycle stages and/or with nutrition-related diseases. This program is student focused with contact hours provided through lecture-laboratory courses and field experiences with practitioners.

The aims of the Nutrition specialization program of B. Sc. in Food Science & Nutrition degree are:

1. to offer a curriculum that provides foundation knowledge and skills in nutritional sciences.
2. to offer a curriculum that provides the opportunity to develop strong verbal and written communication skills.
3. to offer a curriculum that promotes critical thinking skills.

3.2. Learning Outcomes

On successful completion of the specialization program in Applied Nutrition, students should be able to:

1. use knowledge of nutrient functions and food sources and physiological systems to determine nutrient and dietary needs of individual in various life cycle stages and/or with nutrition related diseases.
2. use knowledge of biochemical processes and nutrient functions to interpret effects of changes in nutrient availability on metabolic functions and emerging knowledge of cellular and physiological systems.
3. use knowledge and understanding of role of agriculture, food production, marketing, economic, social and behavioral factors affecting dietary adequacy.
4. develop technical and intellectual skills needed for practicing in the field of nutrition.
5. communicate effectively with others in informal and formal settings.
6. prepare and deliver effective presentations, orally and in writing, of technical information to professionals and to the general public.
7. successfully solve complex problems on their own and as members of a team.
8. correctly interpret and critically evaluate research literature as well as data from professional practice.
9. critically evaluate information related to food science and nutrition issues appearing in the media.

Learning outcomes for the study program are not stated clearly in students' prospectus/ handbooks. However, these were made available to the review team, and the team was informed that learning outcomes are with students at introductory sessions. They are also posted on the web.

4. FINDINGS OF THE REVIEW TEAM

4.1 Curriculum Design, Content and Review

The Faculty offers four specialization programs namely in the areas of Food Science & Technology, Applied Nutrition, Aquaculture & Fisheries, and Livestock & Avian Sciences within the degree B. Sc. Food Science & Nutrition. The course structure of the four-year degree program offered by DAN consists of basic or common courses offered during the first 4 semesters and specialization courses offered in semesters 5, 6 and 7. The specialization courses are offered mostly by DAN and the Department of Food Science &

Technology. In semester 8 the students follow either a research project or an in-plant training assignment. In addition, several courses (Design & Analysis of Experiments, Statistical Methodology, and Research Planning & Scientific Writing) are followed by students during semesters 5 to 7. A total of 123 credits are compulsory for all students. The total course followed by students specializing in the Applied Nutrition degree program consists of 164 credits containing 84 credits in the semesters 1 to 4, and 80 credits in the semesters 5 to 8. The students are also given an intensive English course for 3 weeks before commencement of the degree program. The English course continues in to end of the second semester. It is compulsory for the students to pass the English program before graduation.

The accommodation of four diverse specialization areas within the B. Sc. Food Science & Nutrition degree program has resulted in inclusion of too many subjects from the four areas as common courses generating a bulky curriculum. The relevance of some of the courses offered in the common program to the respective specialization areas is thus questionable. Both students and staff are aware of this problem. Reduction of the courses from relatively less important areas would definitely ease the work load of students and move towards a more healthy balance of the subjects in the degree program. Minutes of the staff meeting held in March 2005 indicate that a decision has been taken to reduce the curriculum to 130 credits and combine some of the courses. The students have given feedback highlighting the issue. However, this does not seem to have happened.

Of the 164 credits followed by a student specializing in Applied Nutrition, up to 69 (42 %) are offered by DAN and 30 (18%) by Department of Food Science & Technology. Increasing the total percent of courses in Food Science & Technology and Applied Nutrition areas to 65% would be more appropriate in adhering to the principles used in identifying course structures in relation to the title of the degree, Bachelor of Science in Food Science & Nutrition. In the current thinking on student workload, about 120 credits are accepted as the most suitable for semester-based four-year degree programs. When one follows the historical development of the degree program, it appears that the introduction of the courses was probably done in the same lines as the development of the departmental structure within the Faculty.

The balance between theory and practical components of each of the courses and the total degree program need to be reexamined. The compulsory courses in the degree program contain 1435 hours (71%) of theory and 580 hours (29%) of practical. In the optional courses the corresponding values are 360 hours (65%) and 190 hours (35%) respectively. If the activities carried out by the students during the 8th semester is considered totally as practical (equivalent of 600 hours in 15 weeks), the time spent on the practical component will increase to 45%. The effectiveness of student learning increases as the ratio of time allocated to theory and practical approach 1:1. This needs to be addressed in the next revision of the curriculum. The total number of hours spent by the students in the direct learning experiences in the 7 semesters work out to be 2015 hours for compulsory courses and 550 hours for optional courses making a total of 2565 hours. Assuming all optional courses are followed by students during the seven semesters, the work load appears to be around 25 hours per week, which is reasonable although the students complain of heavy workload.

Some of the concerns expressed by the students on the bulkiness of the degree program appear to arise from the large number of 4 credit courses in the degree program. Limiting as many courses as possible to 2 or 3 credits would minimize the feeling of heavy workload among the students.

The students expressed their concern on overlapping of contents in different course units like Physiology I (AN 1208) and Physiology II (AN 2113), during the meeting with reviewers. The students are of the view that field visits like the one incorporated into the course unit Nutritional Aspects of Foods AN 2219 do certainly give them an exposure to real world experience and encourage them.

The experience gained by students in working under real life situations in the final semester is an important contribution to degree program. However, equalizing the research experience with an in-plant training experience is difficult to be justified as the two activities develop the skills of students in two areas. While in-plant training appears to be more attractive to the quick job seeking student, giving satisfaction and edge in the competition for jobs, it takes away the opportunity a student get to develop an inquiring and analytical mind, strengthening the critical evaluation capabilities, which is of greater importance in long time career development. The Department needs to closely follow the in-plant training reports as to whether the learning outcomes identified for the course are achieved adequately by the students. In our observation this becomes questionable in some of the situations. The students should be given explicit learning outcomes, the skills to be developed, and the attitudes to be inculcated. The trainers too should be made aware of these.

The reviewers are satisfied that the learning outcomes of the courses are reflected in the content of the curriculum, which would facilitate obtaining employment in the Food Science & Nutrition sector. The curriculum covers the subject area in Applied Nutrition adequately with supporting knowledge and skills in Food Science. The use of modern methods of teaching, multi-media presentations and audio visual equipment in teaching were observed during assessment.

In general, the curriculum content of the degree program reflects adequate academic standards and in the opinion of the reviewers, curriculum enables the students to achieve the intended learning outcomes of the degree program in the form of knowledge & understanding, and intellectual & transferable skills. The review team also noted the absence of specific learning outcomes in the areas of attitudes, ethics, social and legal responsibilities and recommend that these be addressed during the planned curriculum review.

Based on the documentary evidences and the discussions with the staff, it is understood that the Intended Learning Outcomes (ILOs) need to be reexamined and the current curriculum revised. The review team is informed that this would be done this year with the assistance of an expert from abroad. There is evidence that a tracer survey and comments from stakeholder have been obtained already to be used in the intending curriculum revision. It is strongly recommended to improve the syllabi and course materials systematically based on ILOs using inputs from stakeholders.

It is essential at this stage during review of the curriculum, to reconsider the specialization areas, recognize the ILOs and redesign the course structure of the degree program. It is also important to recognize the major subject areas of the degree program, namely Food Science and Applied Nutrition as the major field, and the supporting subject areas which may be drawn from other Departments and the Faculty of Agriculture and Plantation Management. In a well focused curriculum allocation of about 65% of units to the major field/s and 35% to the balance leads to a sound degree program. It is important to prevent a four-year degree appearing like a “general degree” due to diversity of the courses, sometimes with low relevance.

It appears that the title and duration of the degree has been revised at close intervals. This can lead to difficulties, especially, when the students apply to foreign universities for further education. It is suggested that the title of the degree/s be identified more carefully to reflect the strength of the knowledge and capabilities of the students considering long term benefits to the University, and be retained for long durations once established. This aspect also needs to be addressed at the next curriculum revision as well as by the University at the level of top management. The team also observed that the title of the degree program, the name of the Faculty, and the Department names/specialization subject areas are not congruent to each other.

In the light of our observations it appears more logistic for the Faculty to consider two degree programs instead of one or to increase the duration of specialization by 1 or 2 semesters.

Based on the observations the review team is of the opinion that the achievement under this aspect is SATISFACTORY.

4.2 Teaching, Learning and Assessment Methods

The above aspects of the DAN were evaluated using (a) the SER (b) peer observation of lectures (c) meetings with academic and supporting staff and students. The review team also examined the detailed syllabus in Nutrition courses, final year research project reports, in-plant training reports, question papers, marking schemes and answer scripts.

The review team noted that courses are delivered through a combination of lectures, practical, tutorial classes, assignments, group work, PowerPoint presentations, and field visits, and in-plant training programs. The review team also observed that, at the beginning of each lecture or practical course, the students are provided with a detailed information on aims, expected learning outcomes (in terms of knowledge and skills), outline of course contents with hourly breakdown, assessment method/methods and a suggested list of references. The small number of the students in batches has provided more opportunities for group discussions. Teachers use multimedia and PowerPoint as teaching aids making the lectures more effective. Teaching has been evaluated by peers using a very comprehensive format which could have had an impact on these improvements.

The document available at the DAN provides clear information regarding expected learning outcomes, skills to be achieved, and assessment strategy to students, staff and any outsider. The current teaching-learning and assessment methods appear to facilitate achievement of the stated aims of the DAN. Examination questions were found to be aligned with the respective intended learning outcomes. The team also observed that the third year students were able to get hands-on experience on the use of laboratory equipment from the course unit Practical Nutritional Skills (AN 3252) and they were required to submit a proforma with regard to the experiment immediately after the work before leaving the lab. The marks given were summed up to the final marks.

The students expressed concern regarding the low practical component in first two years and a heavy workload in the course due to the large number of course units they have to follow. The teaching-learning methods do not specifically contribute to development of ethics and attitudes. The tutorials are taken mostly by junior staff and needs to be improved to achieve the true benefits of the tutorial process. The final year research project is not compulsory (some students undertaking alternate topic of in-plant training) and it is recommended to be made compulsory.

The students were concerned of undue delay in releasing Year I Semester II examination results, and they were of the view that this delay prevents the students from correctly selecting their areas of specialization. However, the review team was informed that the obstacle for such a delay is associated with the time required by the second marking examiner. Long delay in release of examination results appeared to create a difficulty to the students in their efforts to understand their strengths and select their future specialization areas as well as take action to address their weaknesses. This needs serious attention of the staff.

The review team noted that students' evaluation of teachers, peer observation of teaching activities, *etc*, are used regularly to strengthen the teaching-learning process. The reviewers also observed that all question papers are routinely moderated in the department (often by a Senior Academic) or outside the University. However, not all question papers carried marking schemes. The team would like to propose the preparation of marking schemes be introduced throughout all courses when papers are sent for moderation and scrutinizing. The students also indicated their eagerness to get more formative assessments to sharpen their capabilities.

The reviewers rate this aspect of the DAN as SATISFACTORY.

4.3. Quality of Students including Student Progress and Achievements

All admissions to the University are handled by the University Grants Commission which considers the students' choices and national policy in the selection process. The selection process at the UGC generates Z-score cut off marks for different degree programs. The Z-scores reflect the demand for degree programs and as such entry of better students to a given degree program.

In the last few years the ranking of Food and Nutrition has remained relatively high at 6.84 with a slight loss of the rank at the AL 2006 examination. Although slight, this may indicate the beginning of entry of students with lower quality and the Department should be vigilant about at the review of the curriculum being planned under the IRQUE QEF grant to ensure that the Faculty maintains or improves its ranking at selection for University admissions by UGC. However, it appears that the vacancies occurring due to refusal of admissions of students at registration and movement of students to other universities and courses are not filled.

There does not appear to be a barrier related to successful completion of courses in the semesters 1 to 4, before the students enter the third year specialization course. This should be considered by the Department, a suitable mechanism established, and brought to the notice of students. There is also a need to release examination results in a fixed time so that students are able to judge there progress and performance and make informed decisions about the area of specialization they are eligible fairly early and qualify to undertake. In this context a transparent approach where the course units required for specialization and the minimum cut off GPAs for eligibility and method of selection (for example in order of ranking) has to be identified and brought to the notice of students.

A disparity appears to exist in the cut off of GPA for the award of classes between the degrees awarded by the 2 campuses, at Kuliyapitiya and Makandura. The cutoff for a First Class for this degree program at Makandura Campus is 3.75 while for those at Kuliyapitiya is 3.5. This discrepancy pertaining to the standard should be addressed at Faculty and at University level. The students expressed their concern that the difference

was unjust as it meant the award of a second upper second at Makandura while a colleague would get a first for the same GPA at Kuliyapitiya.

With the shifting of the DAN to its current location in Makandura from the Kuliyapitiya campus the General degree awarded at the end of third year was discontinued and only a special degree at the end of the 4th year is now being awarded.

Within the course, the progress of students for the past few years in Food Science and Nutrition is shown in Table 1.

Among the students who followed the former course (B. Sc. Nutrition - general degree), 11.5% had been awarded the first class, 10.3% second class upper, 14.9% second class lower, while in the B.Sc. Nutrition Special degree, the equivalent values have been 14%, 36.5%, and 15.8%, indicating a satisfactory level of achievement. In the new course special degree students (23 students), 13% has second upper, 52% had second lowers while for the balance 8 students results have not been released. The absence of first classes was noted by the review team.

Table 1: Student Performance during the course of the batch graduated in 2007

Criteria	Progress	Comments
Marks at entry	Average aggregate of 236: Range 190-269	Indicate high quality of students
Mean GPA semester 1	2.33	Indicate satisfactory progress of students
Mean GPA semester 2	2.86	
Mean GPA semester 3	2.79	
Mean GPA semester 4	2.94	
Mean GPA semester 5	2.60	
Mean GPA semester 6	2.63	
Mean GPA semester 7	2.72	
Distribution of classes among 23 students at graduation	First class = (0) 0% Second class (upper) = (3) 13% Second class (lower) = (12) 52% Results not released = (8) 35%	Indicate good level of performance

The students have been awarded prizes for the best performance in Nutrition and Community Resource Management and this award has been made for 2003 (2), 2004, and 2005 and is commended. The review team also appreciates the recognition brought to the Faculty and to the Department though receiving the 2005 Development Cooperation Award on the basis of a student research project. The student research reports, under Directed Study and the Final Year research program appear to be of a satisfactory level. However, the research project is not compulsory (some students undertaking the alternative option of in-plant training), and is recommended to be made compulsory.

Several student reports and assignments were made available to the team. These were of generally satisfactory quality, compiled according to the recommended format and indicating that students had gained experience in the desired learning areas. However, some of the in-plant training reports made available indicated that the training appeared to be unfocused without specific learning outcomes being achieved. Ethical issues which were apparent were also not discussed.

The symposia conducted by the DAN with emphasis on presentations by final year students provide a forum for them to develop many skills and the abstracts have achieved quality level.

The DAN appears to set questions based on the learning outcomes and the pass rates are indicative of success in achieving the identified learning outcomes.

The judgment of the review team for this aspect is GOOD.

4.4. Extent and Use of Student Feedback, Qualitative and Quantitative

The DAN appears to have initiated the process of obtaining student feedback which subsequently has been adopted by the Faculty (page 2, SER). Recently this has been endorsed by the Senate and recommended as a good practice to be used by all faculties. The feedback is obtained both informally (by individual lecturers regarding their own teaching) and formally by the DAN. The formal feedback from students is obtained in two areas. The course evaluation is carried out at the end of each course unit, and program evaluation at the end of the programme using a format developed for the purpose. Teacher evaluation of teaching is implemented using a second format.

There is qualitative feedback obtained by individual teachers as a part of the tutor program which was initiated about 2 years ago. It has provided a method for students to discuss issues such as assignments, deadlines, on work, overload *etc*. Based on these comments, minor adjustments such as deadlines for assignment, instructions in the form of handouts, have been carried out. The other change made to the course has been in increasing credits assigned to the course unit on dietetics based on student feedback.

The student feedback forms were analyzed quantitatively and were said to be discussed at the department level. However, the minutes of department meetings do not provide evidence in support of this. Keeping minutes on comments made by the students at feedback and confirming changes identified for implementation might be a useful practice to complete the feedback evaluation cycle.

The qualitative comments are extensive and appear to have a recurrent theme. For example, these comments include, too much of content ("bulk"), too many lectures and insufficient teaching-learning methods (with request for more practical, tutorials and field visits), repetition of subject matter (for example between different course units - Physiology 1 and 2, Vitamins being taught in 2-3 course units *etc*.), and inclusion of unnecessary details relating to food processing. These comments need to be considered by the DAN and appropriate changes made where relevant.

The students were of the opinion that no appreciable changes have been made based on this feedback. It may be useful to indicate to students, by action, of changes made to courses based on feedback. The feedback is obtained by the DAN and not by an independent body such as the Faculty. The students also expressed concerns on negative responses from teachers after submission of evaluation reports. It is essential that the comments by students are examined after the release of results and with an open mind.

The comments on the procedure of teacher evaluation by students warrant considering the use of a neutral mechanism, which would retain the anonymity, preventing recognition of handwriting of students. Operation of the activity through the Dean's office, keeping the original documents with the Dean, and submission of summary of findings to the respective teachers would certainly improve the feedback process from the students.

The team allocates a judgment of SATISFACTORY to this aspect.

4.5. Postgraduate Studies

DAN has not initiated any postgraduate programs due to the limited facilities in the Faculty. However, the young staff members of the DAN have registered at the Postgraduate Institute of Agriculture, Peradeniya for their postgraduate studies and secured grants from the University and Council for Agricultural Research Policy. DAN encourages the young staff to engage with postgraduate studies.

Of 9 academic staff (6 permanent and 3 temporary) members in the department, two members have completed the M. Phil. degrees and two are engaged in research for M. Phil. degrees locally. Head of the Department serves as research supervisor. Most of the research is carried out in the DAN. The activities indicate initial signs of development of a research culture. There were no other evidences to assess research activities of the DAN.

The team recognizes that DAN is yet young to get engaged in its own postgraduate degree programs, but has taken effective initiatives to establish a research culture. Most of the research appears to be funded by the University and it is also important that young research workers are guided to develop proposals to attract funds from outside the University.

The team allocates a judgment of SATISFACTORY to this aspect.

4.6. Peer Observation

The team observed that DAN conducts a peer assessment starting from 2006, for which they use a comprehensive format, where the observer can analytically comment on different aspects. The format contains 30 different measuring tools categorizing into five major divisions: Content/organization, presentation, interaction, use of teaching aids, and credibility & control. The observer also writes comments and suggestion to improve the peer's teaching. Examination of the documents indicated that the observers have looked into details of the process and gone to length in suggesting improvements frankly.

The team allocates a judgment of GOOD to this aspect.

4.7. Skills Development

As evident from the SER and the presentation made by the Head/DAN, the undergraduate academic program conducted by the DAN is structured to provide opportunities for students to develop a variety of skills such as technical skills, intellectual skills, transferable skills (presentation skills, extraction of information from literature sources, critical thinking) in addition to subject-specific knowledge. The laboratory experiments planned in some modules give the students hands-on experience in carrying out experiments, making observations, and in arriving at justifiable conclusions. There is a mechanism for continuous evaluation and assessment of laboratory work.

The final year students have an opportunity to select either in-plant training or the research project. The DAN established a mechanism to get a confidential feedback on the performances of the students from the respective external supervisors. However, the team feels that giving equal weightage for both in-plant training and the research project is not

justifiable as the two address different skills. The team recommends that the final year research project be given higher weightage.

The team had an opportunity to listen to the presentations of third year and fourth year students. The team is pleased to witness their presentation skills. The students are interactive at lectures. Mini projects were found to give the students opportunities to analyze problems that exist in the real world before they carry out the final year project. However, the review team feels that the students carrying out mini projects should be instructed not to make final conclusions based on their mini research as the sample sizes of the projects are too low to understand the true trends.

As for the final year research project, the students carry out research projects relevant to their specialization. The students are required to write up a thesis and present the work after which they are also required to face a viva

The review team understands that all students are provided with a document that gives details of the academic content, assessment methods and type of skills expected in each course module during student orientation program. The assessment strategies used by the DAN evaluates the variety of skills mentioned above. These are all positive aspects of skills development strategies adopted by the DAN. However, the team is of the opinion that the assessments need to be focused to assess the intellectual skills as well.

The team allocates a judgment of GOOD to this aspect.

4.8. Academic Guidance and Counseling

A counseling system is available within the Faculty and DAN. There are two student counselors in the campus and the personal tutors assigned to students work very closely with students. Although the students were informed of the existing counseling system during orientation program, the students do not seem to seek assistance from the system. The issues discussed on three occasions with the Faculty counselor were related to educational activities. However, students have sought assistance from the counselor in the Faculty of Agriculture on 5 occasions in relation to personal matters, which is not surprising due to need for anonymity.

Absence of an identified location, availability of the counselors in rooms at close proximity to other staff, may discourage the students seeking assistance, while low publicity on the availability of counseling facility needs addressing. The counselors are not adequately trained to handle situations. The students do not seem to have got used to the habit of seeking assistance on academic guidance and counseling. Review team felt that the staff members of DAN make a positive effort to assist the students as and when required. Trained student counselors would be a need in time to come.

The team feels that identifying physical location for career guidance and counseling activities and making a dedicated mobile phone available for students to contact on anonymity would be beneficial to the students.

Having considered all aspects of Academic Guidance and Counseling available in DAN, the reviewers are of the view that this section could be rated as GOOD.

5. CONCLUSIONS

Curriculum Design, Content and Review

Strengths/Good Practices:

a) Provide a good exposure to applied nutrition knowledge and skills

Weaknesses:

a) Methods for development of skills should be more specific
b) Curriculum too bulky and too broad area covered; Suggest reduction to 120 credits
c) Balance between theory and practical inadequate; Need more practical
d) Giving equal weightage for research and in-plant training in the final semester is unsatisfactory as they are two skills
e) Need to identify in the curriculum ethics, attitudes and social responsibility in nutritional practices

Teaching, Learning and Assessment Methods

Strengths/Good Practices:

a) Use a wide variety of techniques to deliver the course material
b) Peer observation has contributed to improve teaching/learning
c) Correct alignment observed between ILOs and examinations
d) Use of pro-forma to assess each practical lesson

Weaknesses:

a) Overlap of content delivered in some course units
b) Low practical component in the first two years
c) Delays in release of examination results affecting planning of future by students
d) Marking schemes are available only in some question papers
e) Assignments are not designed to test the skills expected to be achieved

Quality of Students, including Student Progress and Achievements

Strengths/Good Practices:

a) Students enter with high Z-score
b) Students from all provinces of the country are in the program
c) Students are committed and focused on studies
d) The students possess high potential as achievers

Weaknesses:

a) Low focus on extra curricular activities

Extent and use of Student Feedback, Qualitative and Quantitative

Strengths/Good Practices:

a) Availability of end course evaluation of the course and teacher by students
b) Student feedback used to bring about improvements in courses
c) Feedback information discussed analytically at department level
d) Feedback has lead to development and introduction of a new course "Practical dietetics"

Weaknesses:

a) Inability to retain anonymity due to poor feedback mechanism
b) Lack of conversion of assessment observations to quantitative terms
c) Appearance of recurring comments by students
d) Students need to feel that the feedback has made a positive impact on teaching.

Postgraduate Studies

Strengths/Good Practices:

a) Supervision of staff registered at PGIA for M. Phil.
b) Grants obtained from outside the University
c) Postgraduate research carried out at Wayamba University
d) Early signs of a research culture

Weaknesses:

a) University has not addressed postgraduate studies as part of functions
b) Limited staff and facilities for postgraduate studies

Peer Observation

Strengths/Good Practices:

a) A good peer observation practice in operation
b) Use of a comprehensive format

Weaknesses:

a) None

Skills Development

Strengths/Good Practices:

a) In general, students are provided with opportunities to develop skills
b) In-plant training is a good exposure for students
c) Good presentation skills observed
d) Satisfactory dissertation write up noted
e) Mini-projects in the seventh semester a good approach

Weaknesses:

a) Equal credits given to research and in-plant training
b) Making solid conclusions by students based on limited work and limited knowledge at the time of mini-project

Academic Guidance and Counseling

Strengths/Good Practices:

a) Counselor and student tutor system in place
b) Availability and use of counselor from Agriculture Faculty by students having personal grievances
c) Use of own Faculty counselor by students to seek help during academic constraints

Weaknesses:

a) Absence of an identified location for counseling
b) Inadequate publicity of services available to students under counseling

Based on the observations made during the study visit by the review team, the eight aspects were judged as follows:

Aspect reviewed	Judgment given
Curriculum design, content and review	Satisfactory
Teaching learning and assessment methods	Satisfactory
Quality of students including student progress and achievements	Good
Extent and use of student feedback, qualitative and quantitative	Satisfactory
Postgraduate studies	Satisfactory
Peer observation	Good
Skills development	Good
Academic guidance and counseling	Good

6. RECOMMENDATIONS

1. Revising the curriculum incorporating suggestions made by the stakeholders and reducing the content to 120 units are recommended.
2. The format of the question papers including durations, number of questions in each sections and distribution of marks need to be documented and made known to students through the prospectus or otherwise at the beginning of degree program.

3. It is recommended that handling the student feedback forms on teacher evaluation be carried out by a neutral person to gain more effective evaluation by students.
4. Increasing formative assessments during the course is recommended.
5. It is recommended to make efforts to fill the student vacancies created by dropouts at registration by communicating rapidly and effectively with the University Grants Commission.

7. ANNEXES

Annex 1. AGENDA FOR THE VISIT

Day 1: Wednesday 21st February 2007

08.30 - 09.00 Private meeting of Review Panel with QAA Council Representatives
09.00 – 09.30 Discuss the Agenda for the Visit
09.30 – 10.30 Meeting with the Vice Chancellor / Dean / Head of Department /Faculty Quality Assurance Cell (Tea)
10.30 – 11.30 Department Presentation of the Self Evaluation Report
11.30 – 12.30 Discussion
12.30 - 13.30 Lunch
13.30 – 14.15 Observation of the Department Facilities
14.15 - 15.00 Observing other facilities – Computer Unit / Library / ELTU
15.00 – 16.00 Meeting with the Department Academic Staff (Tea)
16.00 – 17.00 Meeting with Undergraduate students (first years & second years)
17.00 - 17.30 Meeting of Reviewers

Day 2: Wednesday 22nd February 2007

08.30 – 10.30 Observing teaching[Level 3 course AN3243 – Nutrition in Life Cycle and Level 1 AN1208 Physiology I
10.30 – 11.30 Observing Documents (tea)
11.30 – 12.00 Meeting with Postgraduate Students
12.00 – 12.30 Meeting with Technical staff and other non-academic staff
12.30 – 13.30 Lunch
13.30 – 14.30 Meeting with final year research students / in-plant trainees
14.30 – 15.15 Observing a practical class
15.15 – 16.00 Meeting with Student Counselors / Academic Advisors (Tea)
16.30 – 17.00 Meeting with third year Nutrition specializing undergraduates
17.00 – 17.30 Meeting of the Reviewers

Day 3: Wednesday 23rd February 2007

09.00 – 10.00 Observing Teaching [Level 3 course AN 3251 – Communication for Nutrition]
10.00 – 11.00 Reviewers private discussion (tea)
11.00 – 12.00 Meeting with Head and Staff for Reporting
12.00 – 13.00 Lunch
13.00 – 17.00 Report writing

Annex 2. LIST OF PERSONS MET

1. Prof. T. S. G.Fonseka, Vice Chancellor
2. Dean, Faculty of Livestock Fisheries and Nutrition.
3. Dr. K.D.D.R. Silva, Head / Applied Nutrition
4. Ms G.A.P.Chandrasekara, Senior lecturer Grade II
5. Ms. R. J. Kamal, Lecturer (probationary)
6. Ms R. M. K. Malkanthi, Lecturer (probationary)
7. Two demonstrators
8. One tutor
9. Laboratory Technician, DAN
10. Computer assistant, DAN
11. Lab attendant, DAN
12. Students from first year, second year and third year and fourth year batches

Annex 3. LIST OF TEACHING SESSIONS OBSERVED

1. Teaching Class (1) - Nutrition in Life Cycle (AN 3243)
2. Teaching Class (2) - Physiology II (AN 1208)
3. Teaching Class (3) - Communication for Nutrition (AN 3251)
4. Practical Class (1) - Third year students

Annex 4. LIST OF FACILITIES OBSERVED

1. Office and staff rooms of the DAN
2. Laboratories of DAN
3. Auditorium of the Faculty
4. Two lecture rooms in the Faculty
5. The library
6. The computer unit

Annex E. LIST OF DOCUMENTS OBSERVED

1. Faculty prospectus
2. Corporate Plan
3. Annual Report
4. Course objectives and detailed syllabi
5. Lecture handouts
6. Teaching materials (Lecture notes, Videos)
7. CARP research funds in and project
8. Nutrition Society work
9. Z-scores and GPA of students
10. Final result sheets of all examinations
11. Appointment of external examiners
12. Examination time tables
13. Marking schemes and reports of second examiners
14. Past question papers
15. Samples of student assignments, in-plant training and research reports
16. Tracer survey of graduate employment
17. Peer observation of teachers (forms)
18. Teacher evaluation by students (summary sheets)
19. Prizes and awards
20. Stakeholder meeting report
21. Minutes of Department meetings
22. Minutes of Faculty Board meetings