SUBJECT REVIEW REPORT

DEPARTMENT OF COMPUTER SCIENCE

FACULTY OF SCIENCE

UNIVERSITY OF JAFFNA

27th to 29th April 2009

Review Team :

Dr. Prasad Jayaweera, University of Ruhuna

Dr. Ruwan Wickramarachchi, University of Kelaniya

Prof. M. J. S. Wijayaratne, University of Kelaniya

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1. SUBJECT REVIEW PROCESS

University accountability for quality and standards is a key factor required to promote and safeguard public confidence in higher education. As higher education in Sri Lanka is a public good, universities must conscientiously exercise their responsibility for quality and standards. The subject review is one of the components of the external quality assurance programme carried out in Sri Lankan universities. It evaluates the quality of education within a specific discipline. It is focused on evaluating the student learning experience, student achievements 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 discussions with as many stakeholders as possible.

The documents that are observed include, examples of student work, student handbooks, student handouts, lesson guides, statistics on student achievements and progress, samples of answer scripts, external examiners reports, peer evaluation reports, student evaluation reports, minutes of Departmental committees etc. Peer observation carried out during the review process includes observing teaching both in theory and laboratory classes. The stakeholders with whom the discussions are carried out include the Head of the department, members of the academic and non-academic staff, undergraduate students, postgraduate students, alumni, student counselors and academic administrators.

Subject reviews evaluate how teaching-learning process helps in the achievement of intended learning outcomes. They are carried out to evaluate the success of the processes employed to achieve the aims and intended learning outcomes stipulated in the self evaluation report.

Aspects of the subject review
Following eight aspects are evaluated in the subject review process.
 Curriculum design, content and review
 Teaching, learning and assessment methods
 Quality of students including student progress and achievements
 Extent and use of student feedback, qualitative and quantitative
 Postgraduate studies
 Peer observation
 Skills development
 Academic guidance and counseling

Review Process
The review team consisted of the following members
1. Dr. Prasad Jayaweera
   (Senior Lecturer, Department of Computer Science, University of Ruhuna)
2. Dr. Ruwan Wickremarachchi
   (Senior Lecturer, Department of Industrial Management, University of Kelaniya)
3. Prof. M.J.S. Wijeyaratne
   (Senior Professor of Zoology, University of Kelaniya)

The Self Evaluation Report prepared by the Department was provided to the review team on 8th April 2009 by the Quality Assurance and Accreditation Council (QAAC) of the University Grants Commission (UGC). The review team carried out the review process from 27th to 29th April 2009.

On 27th morning, the Quality Assurance Specialist of the QAAC briefed the review team about the Quality Assurance Process and writing of the review report. The review team then met the Vice-Chancellor together with the Chairman/Internal Quality Assurance Unit, Head/Department of Computer Science and the Quality Assurance Specialist of the QAAC. At this meeting, the Vice-Chancellor highlighted the importance of quality assurance and briefed the review team the present situation at the University.

The review team then finalized the agenda for the review visit with Head of the Department. The Agenda for the review visit is given in Annexure 1. The review team then met the Dean of the Faculty with the Chairman of the Internal Quality Assurance Unit and the Head of the Department. At this meeting, the Dean/Science gave a broad overview of the history and the present situation of the University and the Faculty of Science and also explained in detail the study programmes. The review team then met the Head of the Department and other members of the academic staff. At this meeting, the Head of the Department explained the contents of the Self Evaluation Report which was followed by a discussion. During the visit, the review team had discussions with the members of the academic staff, non academic staff, student counselor of the Faculty of Science and the undergraduates following the B.Sc. General and Special degree programmes. The list of persons met is given in Annexure 2.
Several documents were also perused. These included the Structure and Syllabi of the B.Sc. degree programme, documents pertaining to curriculum revision, lists of examiners, assessment criteria, Senate Minutes, Minutes of the Faculty Board, Faculty handbooks, handouts given to students, answer scripts, question papers, marking schemes, external examiners reports, samples of student reports etc. The list of the documents examined is given in Annexure 3.

The review team also examined the facilities available for teaching and learning. These included the lecture theatres, teaching laboratories, equipment, library etc. The list of facilities observed is given in Annexure 4.

The review team observed some presentations of students, and teaching in four theory classes and two laboratory classes.

On 29th April, the review team gave a feedback of the findings to the Head of the Department and other members of the academic staff.

Publication of the review report
After the review visit, a report will be prepared incorporating the findings of the review team. In the report, the strengths, good practices and the weaknesses will be highlighted together with some recommendations. Each aspect will be given a judgment of good, satisfactory or unsatisfactory. The draft report will be sent to the Department and the feedback will be obtained. If there is disagreement with any judgment, it would be resolved by the 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 take action to improve the

quality of the aspects that receive a judgment of unsatisfactory within six months of approving the judgments by the Standing Committee on Quality Assurance of the UGC.

2. BRIEF HISTORY OF THE UNIVERSITY, FACULTY AND THE DEPARTMENT

University of Jaffna was started in 1974 as the Jaffna campus, the 6th campus of the University of Sri Lanka with two Faculties, namely the Faculty of Arts and the Faculty of Science. In 1979, the third Faculty, namely the Faculty of Medicine was established.
It was upgraded to university status in January 1979 with the enactment of the Universities Act No. 16 of 1978. Subsequently, the Faculty of Agriculture was established in 1990, and the Faculty of Management Studies & Commerce and the Faculty of Graduate Studies were established in 1999.

Vavuniya Campus of the University was established in 1993 with two Faculties, namely the Faculty of Business Studies and the Faculty of Applied Science. The University also has an Academy for fine arts, i.e. the Ramanathan Academy. In addition, it has eight Academic Units/Centres, namely the Computer Unit, Siddha Medicine Unit, Distance Learning Unit, Extra Mural Studies Unit, Centre for Fisheries Development, Sports Science Unit, Health Studies Unit, and Human Resource Advancement Unit.

Initially, the Faculty of Science was set up at Vaddukoddai in the premises taken over from Jaffna College. The first batch of students numbering 103 was admitted in 1974 and only a course in Mathematics & Statistics was offered. Later, in 1975, courses in Physical and Biological Sciences were introduced. The Faculty was shifted to the present location at Thirunelvely in 1978.

The Faculty of Science consists of six departments, namely the Departments of Botany, Chemistry, Physics, Computer Science, Mathematics & Statistics, and Zoology. The Department of Fisheries Studies has been approved by the UGC and will be started soon.
The potential annual intake to the Faculty is 250 Physical Science students and 100 Biological Science students. The present student population in the Faculty is around 400. However, in mid eighties, the student population has been around 700. At present, the Faculty has around 60 academic staff members and 80 non-academic staff members.

The Faculty of Science presently offers three degree programmes, *i.e.*, B.Sc (General) degree of three years duration, B.Sc (Special) degree of four years duration, and B.Sc (with education) degree of four years duration. Faculty is also contemplating to start a B.Sc Joint Major degree programme of four years duration. From the traditional system of three terms of teaching and holding examinations annually, the Faculty has changed over to semester based course unit system in 1992. Subsequently, in 2004, the Faculty introduced the modularized credit valued course unit system where each course module is continuously assessed with in-course assessments.

The Department has six academic staff members of which three are on study leave reading for postgraduate degrees. The Department also has a System Analyst cum Computer Programmer who is also on study leave. There are four temporary Assistant Lecturers and five temporary Instructors too. The Department has one Technical Officer who has been

assigned from the Computer Unit of the University, a Data Entry Operator, Computer Application Assistant and a Labourer.

In addition to selecting students from the Physical Science intake, the Department admits students directly to the Computer Science Degree programme since 2005/2006 academic year. The total number of students following Computer Science courses in the Department is around 100.

The Department has one main computer lab with 30 computers and three mini-computer labs with 15, 12 and 12 computers respectively. These computers are connected to the Internet. In all labs, printers are available. The Department also has a workshop room, several staff rooms, a server room, and a Departmental library. This Departmental Library is in a disorganized state and lacks an up to date collection on the subject. However, reviewers were informed that number of books has been already ordered. The Department shares the lecture theatres with some other Departments of the Faculty. The students who are following Computer Science can also use the computer labs belonging to the main Computer Unit. Main library has few of text books on Computer Science, which is also inadequate. Most of the available textbooks were found to be outdated and requires updating.

3. AIMS AND LEARNING OUTCOMES

3.1 Aims

Only within the past two decades, Computer Science has been widely accepted into the family of academic disciplines and developed a considerable body of research knowledge and innovation. On the other hand, in the past few decades computing has dramatically influenced progress in science, engineering, business and many other areas of human endeavour. In this world of information, computing will continue to present challenging career opportunities and those who work in the area of Computer Science will have a crucial role in shaping the future.

In this regard the aim of the department of Computer Science is to produce graduates:
- who are successful academics and researchers
- who are capable of handling the challenging carriers in computing
- who are confident to adopt to the new developments and tools
- who can withstand the ever changing nature of this unique discipline
- who are professionals with adequate knowledge and skills
- who are effective team players and efficient team leaders in various aspects

To achieve the above aims the department of computer science ensures:
- a curriculum that caters the current needs and trends
- an environment that promotes a high quality learning experience
- a good relation and understanding between students and staff
- facilities for the diverse needs of students and staff for learning, teaching and research
- different teaching, learning and assessment methods for developing diverse abilities
- practical experience and hands on training to handle the real world challenges and problems

- a suitable arena for exposing and developing various talents and skills of students and staff
- a manageable workload without compromising the quality of the degree programmes

3.2 Learning Outcomes

The curriculum offered by the Department of Computer Science in conjunction with the Faculty of Science, has been devised to obtain sound learning outcomes including the following:

- The curriculum offered by the Department of Computer Science aims to produce graduates who can not only able to find a suitable carrier but also can excel in that carrier direction.
- The department intends to impart a sound knowledge and understanding of computer science and its applications such that the graduates can enjoy their choice of carrier and be productive.
- The department aims to create graduates who can adopt to the changes in this young and rapidly developing discipline and to actively participate in the process of development.
- The departments teaching and assessment methods intend to produce graduates who are not only technically sound but also with interpersonal, communication and professional skills and to be pioneers and leaders of this society.

Programme Details
The Faculty of Science, University of Jaffna, offers various degree programmes. The Department of Computer Science offers course units to suit the degree programmes offered by the faculty and follows the faculty wide modularised credit value system.

4. FINDINGS OF THE REVIEW TEAM

4.1. Curriculum Design, Content and Review

The Department of Computer Science, established in early 1991 is the youngest department in the Faculty of Science, University of Jaffna. The curriculum offered by the Department has been revised to align with national and international norms twice so far. The latest curriculum revision commenced in 2004 and completed in 2009 with the introduction of the credit based modularized system. For this revision, a curriculum development workshop with the participation of expertise in the subject areas was conducted in addition to taking into consideration the feedback from students. However, the review team did not find any evidence for formal consultation of important stakeholders such as employers and alumni. The new curriculum of Computer Science has been designed based on the Computing Curricula 2005, a joint publication by ACM and IEEE.

The Faculty of Science offers number of degree programmes having computer science as a subject. Firstly, a three year B. Sc. (General) degree with computer science as a subject to which students are selected based on their A/L performance. Secondly, a four year B. Sc. (Special) degree in Computer Science to which students are selected based on their first and second year performance at the University. Finally, a four year B.Sc. (Special) Degree in Computer Science to which students are directly admitted by UGC. The Faculty has also

made provisions to accommodate B.Sc. joint major degrees with subjects offered by other departments in the Science Faculty or in other faculties. These degrees theoretically offer numerous permutations in study programs for students to follow.

The Department offers core and elective course units in order to inculcate sound subject knowledge in students while the Faculty has made arrangements to offer skill enhancement courses as auxiliary course units. Though these auxiliary courses are non-GPA courses, completion of some of these courses are mandatory for the award of degrees (for instance English language courses at levels 1 and 2). Inclusion of auxiliary courses in the areas of Management & Entrepreneurial, Communication Skills, Career Guidance, and Sri Lankan Studies & Social Harmony in the curriculum was also noticed by the review team as a positive aspect to achieve intended learning outcome of developing transferable skills.

Besides all these positive aspects, the review team noted that there is no room in the existing curriculum to include modern developments in such a fast growing discipline. Further, in the prevailing situation, there is no much flexibility in selecting different course modules, especially for the students following the B.Sc (Special) degree in computer science. In some instances, the contents of some course units were found to be course overlapping.

In a given semester, all relevant practical components of theory course units are offered in a single practical unit. Therefore, what is done for practicals is not reflected in the degree transcript which is disadvantageous to the students.

The review team also noted that some of the course titles do not reflect the contents.

In relation to the curriculum design, content and review the judgment of the team is GOOD.

4.2. Teaching, Learning and Assessment Methods.

Teaching and Learning Methods
At the beginning of each academic year, students are provided with the syllabus for relevant levels. However, students are not aware of the learning outcomes of course modules. Teaching activities of most of the courses are based on lectures, practical classes and tutorials. Lectures are conducted in English except for Level one where medium of instruction is both English and Tamil. Majority of lectures are delivered through 'chalk and board approach'. Handouts are distributed to students. The observed lectures were well prepared and delivered well. Although lecturers take an effort to interact with students, reviewers observed that there was a moderate interaction between the lecturer and the students during these lectures. It was also revealed that the academic staff is always available for consultation. However, many students prefer to meet young probationary lectures.

Due to difficulties of assigning lectures, time to time the Department schedules lectures of the semester for a particular level sequentially rather than conducting them in parallel. Level 1 and Level 4 lectures are generally conducted by senior staff. Lectures for other levels are generally taken by junior staff, Temporary Assistant Lecturers and Instructors.

Practical classes which are compulsory provide an opportunity for students to practice concepts learned in theory classes and enhance their IT skills. Except few modules, practical

sessions of theory modules for each semester are combined together and offered as a separate course module called Practical Computing. Students are required to maintain a record book for practical classes. In order to enhance the learning experience two group projects are included in two course modules conducted in Level two and Level three (Software Engineering and Rapid Application Development). Students who follow special degree programme in Computer Science are expected to learn more independently. An individual assignment is given in Practical Computing module for Level three special degree programme and an individual project is part of the Level four programme.

Assessment Strategies

The Department uses a number of different assessment methods to determine the level of achievement of the stated outcomes. They are based on the subject taught and the method of teaching used. For most of the course modules, students are assessed by end-of-course examinations and in-course assessments which may include assignments, short examinations, presentations and mini projects as prescribed in the syllabus. Curriculum clearly defines the number of in-course assessments, the way of assessment and their weightage for each course module. In-course assessments for theory course modules carry a weightage of 30% for the overall course assessment and the rest is covered by the end-of-course examination. For Practical Computing course modules weightages are 40% and 60% for in-course assessments and end-of-course examinations respectively. Time to time, the Department conducts end-of-course examinations before the semester ends.

The question papers for in-course assessments are set by the relevant lecturer and moderated by the lecturer in charge of that unit. The question papers for the end-of-course examinations are set only by senior lecturers and moderated by a second examiner within the department or from other universities. Level four papers are moderated by external examiners and majority of them are from reputed overseas universities.

In relation to the teaching, learning and assessment methods the judgment of the team is GOOD

4.3 Quality of Students including Student Progress and Achievements

The Department receives students through the UGC, based on their performance at the GCE (Advanced Level) examination. As majority of students prefer Engineering or Medical streams, generally the quality of students entering to the Faculty of Science vary from good to average, with more students with average performance in their GCE (Advanced Level) examination.

The Department could accommodate approximately 100 students in each academic year, out of which 50 are to be selected from the physical science stream of Faculty of Science and the rest through direct intake through UGC. Due to factors beyond the control of the university, number of students selected for Computer Science is around half of the capacity of the Department. Reviewers also noted that during past few years only very few students applied to enter into the Computer Science programme through direct entry.

It was observed that the Department does not continuously monitor the student progress in order to identify students who require more attention. Considering the difficult circumstances faced by the Department as well as the University of Jaffna, reviewers felt that the

completion rates are satisfactory. It was also noted that neither the Department nor the university has done any tracer study to explore the graduates' job profile. However, reviewers were pleased to find out that some of the graduates are doing very well both in Sri Lanka and overseas.

In relation to the Quality of students, including student progress and achievement the judgment of the team is SATISFACTORY

4.4. Extent and use of Student Feedback

Students' views had been sought in 2007 to review the curriculum. Other than that, students' feedback on the course modules offered by the Department, quality of teaching and required improvements of facilities has not been obtained.

As per the University Act No. 16 of 1978, two students represent the student body in the Faculty Board. The review team noted that these student representatives attend the Faculty Board meetings regularly. However, there is no mechanism to convey to students the actions taken for their comments.

Review team noted that there are neither staff-student committees nor any other mechanism at the Departmental level to get feedback from the students.

In relation to the extent and use of student feedback the judgment of the team is UNSATISFACTORY.

4.5. Postgraduate Studies

Being a recently established department in the Sri Lankan university system as well as a department currently facing difficulties with lack of sufficient number of qualified senior academic staff, the Department has still not introduced any postgraduate study programme. However, the review team found that the senior members of the academic staff are involved in teaching in some postgraduate courses and also conducting research. Some of the research findings have been presented in some recognized research symposia.

The review team noted that the Department has a good opportunity to offer postgraduate courses to cater to the demand in the region when the academic staff who are reading for their Ph.D. degrees abroad have returned.

In relation to the postgraduate studies the judgment of the team is SATISFACTORY

4.6. Peer Observations

There is no evidence for peer observation of lectures conducted by the academic staff. Senior staff has also never been subjected to peer observation.

However, the review team noted that the senior staff peer observe the junior staff in the laboratory classes. In addition, the model answers prepared by junior staff for evaluating and discussing tutorials are peer reviewed by senior staff. Peer observation in the Department

was also noted in the moderation of question papers and second/external marking of answer scripts.

In relation to the peer observation the judgment of the team is SATISFACTORY.

4.7. Skills Development

The degree programme is developed with an objective of improving soft skills and practical technical skills. For this, the Faculty of Science offers number of Auxiliary course modules such as English language, Sri Lankan studies and social harmony, Management and entrepreneurial skills, Communication skills and Career guidance. In order to graduate, students are required to pass the English language module with at least with a C grade and, Sri Lankan studies and social harmony module with a D+ grade.

The Department also encourages students to participate in extra-curricular activities. The Science Week provides students an opportunity to develop physical, theatrical, writing, oratorical and creative skills as well as allowing them to develop teamwork and management capabilities. It was found that ComSoc, the subject society for Computer Science is inactive at present. In addition, the Department along with the Faculty of Science supports events such as Freshers' Welcome and Final Year Going Down.

The Department in collaboration with the Computer Unit of the university offers basic hardware training and a more advanced training programme in networking. In addition, group projects, individual projects etc. also help to develop soft skills and would contribute towards enhancing their confidence. However, reviewers felt that there is a substantial room for improvement with regard to development of skills. It could also be noted that more interactions in classes result in improving communication skills and higher confidence levels.

In relation to the skills development the judgment of the team is SATISFACTORY

4.8. Academic Guidance and Counseling

Academic guidance is provided by the Dean of the Faculty during the orientation programme. It is commendable that orientation programmes are held for all students, including 2nd and 3rd year students at the commencement of each academic year.

When students have queries regarding the academic programme, the review team was informed that the students direct them to the Dean's Office and the Assistant Registrar of the Faculty attends to them.

There are no academic advisors in the Department. The teacher who served as the academic advisor is on study leave and the Department is yet to appoint an academic advisor.

There is only one student Counselor for the entire Faculty. He too has not got any formal training on counseling. There is no lady student Counselor for the Faculty.

There is no professional counseling centre for the University.

The review team also noted that no mentoring is provided to weak students.

In relation to the academic guidance and counseling the judgment of the team is UNSATISFACTORY.

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	Good
Teaching, Learning and Assessment Methods	Good
Quality of Students including Student Progress and Achievements	Satisfactory
Extent and Use of Student feedback, Qualitative and Quantitative	Unsatisfactory
Postgraduate Studies	Satisfactory
Peer Observation	Satisfactory
Skills Development	Satisfactory
Academic Guidance and Counseling	Unsatisfactory

5. CONCLUSIONS

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

1. Curriculum Design, Content and Review

Good Practices/Strengths:
1. Revision of the curriculum of Computer Science time to time in consultation with the experts, including those from the other universities.
2. Making some of skill enhancement auxiliary courses such as English compulsory to award degrees.
3. Provision of different degree programmes for students to select a programme of their interests.
4. Offering joint major degree programmess
5. Offering core, elective and auxiliary courses to enhance flexibility

Weaknesses
1. In a given semester, all relevant practical components of theory course units are offered in a single practical unit.
2. Titles of practical course units do not reflect the relevant content in the degree transcripts.
3. There is no room to introduce IT and business related computing course units with higher industrial demand into the present curriculum
4. Some of the course titles do not reflect the content

5. No evidence for consulting important stakeholders such as employers and alumnii in the curriculum revision process
6. No much flexibility in selecting course modules, especially in the B.Sc. Special degree programme

2. Teaching, Learning and Assessment Methods

Good Practices/Strengths:
1. Conducting an orientation programme which includes information about the syllabus at the beginning of each academic year
2. Level four individual project allows special degree students to work independently while improving overall learning experience
3. Uniform and clear assessment criteria
4. Results of in-course assessments, grades for end-of-course assessment and overall results are released separately thus providing an opportunity for students consider their performance in different examinations
5. Moderation of Level four end-of-course assessments by external examiners, especially from reputed overseas universities

Weaknesses
1. Students' interaction with the teacher during the lecture seems to be low
2. Collections in Computer Science and related areas are inadequate at the departmental library as well as in the main library
3. Students are not clear about learning outcomes for course modules
4. Due to separation of practical sessions from theory modules students may pass only the theory module and fail the practical component or vice versa which is undesirable for majority of Computer Science course modules
5. Although Level 4 project is compulsory, students could complete the degree without passing the project.

3. Quality of Students, including Student Progress and Achievement

Good Practices/Strengths:
1. Under difficult circumstances satisfactory completion rates
2. Satisfactory levels of student progress

Weaknesses
1. Student progress is not monitored
2. No systematic approach to identify weak students who require more attention
3. No information available on employment of graduates, time taken for first employment and first salary
4. Information about student achievements is not maintained in a proper manner

4. Extent and Use of Student Feedback

Good Practices/Strengths:
1. Student feedback has been obtained for the revision of curriculum

Weaknesses
1. Student feedback on subject contents of each module is not obtained.
2. Student feedback on teaching quality is not obtained
3. There is no mechanism to convey to students the action taken for their comments made at the faculty Board meetings by student representatives.
4. There are no staff student committees at the departmental Level to get students' feedback.

5. Postgraduate Studies

Good Practices/Strengths:
1. Some of the senior staff members are involved in postgraduate supervisions
2. Research activities of some senior staff members have also been publish in different forums
3. Evidence of some staff members' contribution into postgraduate courses not only in subject related but also general courses such as research methodology, etc.

Weaknesses
1. No actions have still been taken to introduce formal postgraduate studies
2. There is a greater demand not only from internal junior academic staff but also from external candidates to follow postgraduate degrees
3. The Department has not still fully utilized existing national and international network in strengthening its research and postgraduate studies.

6. Peer Observation

Good Practices/Strengths:
1. Junior staff is peer observed by senior staff in laboratory classes
2. Model answers for tutorials prepared by junior staff are peer observed by senior staff.
3. Moderation of question papers
4. Second/External marking of answer scripts

Weaknesses:
1. Peer observation of teaching in theory classes is not carried out.
2. There is no peer observation for senior staff

7. Skills Development

Good Practices/Strengths:
1. Offering number of Auxiliary course modules to improve skills
2. Making English language and, Sri Lankan studies and social harmony modules compulsory for graduating
3. Providing an opportunity to participate in sports and cultural activities
4. Training provided in hardware and networking

Weaknesses
1. Limited opportunities to participate in extracurricular activities, sometimes due to factors beyond the control of the University
2. Few modules offer group projects limiting the opportunities of developing team building, communication skills etc.

3. A module each in English and Communication may not adequate to develop the required set of skills

8. Academic Guidance and Counseling

Good Practices/Strengths
1. An orientation programme is conducted for 2nd and 3rd year students at the beginning of each academic year

Weaknesses:
1. There are no academic advisors in the Department
2. There is only one student counselor for the entire Faculty
3. The student counselor has not got any training in counseling
4. There are no lady student counselors in the Faculty
5. There are no personal tutors
6. There isn't a professional counseling center in the University
7. No mentoring is provided for weak students

6. RECOMMENDATIONS

1. combine theory and practical components of a course module together,
2. make provision in the curriculum to teach new developments in the field and reflect it in the transcript
3. introduce IT and business related computing course units with higher industrial demand into the present curriculum
4. revise the titles of some of the course units to reflect the content
5. consult important stakeholders such as employers and alumnii in the curriculum revision process
6. take action to increase flexibility in selecting course modules, specially in the B.Sc. Special degree programme.
7. updating Computer Science related collection in both departmental and university libraries,
8. encouraging students to interact more freely with lecturers during lectures. However, the reviewers also recognize the difficulty of changing staff and student attitudes as well as changing of the culture,
9. scheduling lectures for different course modules in parallel where ever possible,
10. introducing more group work and presentations which may help to develop soft skills of students,
11. providing course descriptions including course content, learning outcomes, assessment criteria and recommended texts at the beginning of the course module,
12. introducing more flexible evaluation criteria where individual lecturers are able to adopt different weightages for different modules within a stipulated range,
13. conducting end-of-course examinations after semester ends where ever possible,
14. making it compulsory to pass the Level 4 project to complete the Special degree programme,
15. providing an opportunity for staff (both senior and junior) to observe and share good practices especially in teaching and learning in other universities as reviewers felt that there is a room to improve in those aspects.

16. Developing an information system to maintain detailed student performance which also enables the DCS to identify weak students
17. Conducting a tracer study to obtain information on employment of graduates, time taken for first employment and first salary
18. Introducing a system to maintain records on student achievements during the undergraduate career as well as after graduating
19. preparing a well structured questionnaire to be distributed among students at the end of each module to get their feedback on the contents, quality of teaching and the areas for improvement,
20. establishing staff student committees and having regular meetings,
21. installing a suggestion box in a suitable place, preferably at the entrance to the Department,
22. establishing a proper mechanism to convey the students the action taken for their comments.
23. offering postgraduate degree programmes when at least another member of the academic staff returns from overseas after completing postgraduate studies.
24. conducting research activities leading to M.Phil. and Ph.D. degrees in collaboration with other local and international universities.
25. utilization of the established networks such the one established under Sida-SAREC-IT programme to conduct research leading to postgraduate degrees.
26. carrying out formal peer observation of all teachers both in laboratory classes and lectures and giving a feedback to them.
27. providing more opportunities to participate in extracurricular activities,
28. offering more training in skills development,
29. reactivate the ComSoc, the association of Computer Science students.
30. appointing an Academic Advisor for the Department,
31. getting more student counselors appointed for faculty,
32. getting few lady student counselors appointed,
33. encouraging authorities to establish a professional counseling centre at the University
34. carrying out mentoring programmes for weak students
35. encouraging authorities to train student counselors on counseling
36. encouraging authorities to appoint staff members as personal tutors of students

7. ANNEXES

Annex 1. AGENDA FOR THE REVIEW VISIT

Day 1 :   *27th April 2009*
08.30 – 09.00	Meeting of the Review Panel with QAAC Representatives
09.00 – 09.30	Discuss the agenda for the visit
09.30 – 10.00	Meeting with Vice-Chancellor, Chairman/Internal QA unit, Head of the Department
10.00 – 11.00	Meeting with Dean / Science (Working Tea)
11.00 – 12.00	Presentation on the Self Evaluation Report by Head of the Department
12.00 – 12.30	Discussion
12.30 – 13.30	***Lunch***
13.30 – 15.00	Observing Department Facilities
15.00 – 16.00	Meeting with Department Academic Staff (Working Tea)
16.00 – 17.30	Reviewers Private Discussion

Day 2 :28th April 2009
08.30 – 09.00	Observing teaching – Lecture (Level 1)
09.00 – 09.30	Meeting with Level 1 Undergraduate Students
09.30 – 10.00	Meeting with Level 3 Undergraduate Students
10.00 – 10.30	Meeting with Level 4 Undergraduate Students
10.30 – 11.00	Observing Documents (Working Tea)
11.00 – 12.00	Meeting with Level 2 Undergraduate Students
12.00 – 12.30	Meeting with Technical staff and other Non-Academic Staff
12.30 – 13.30	***Lunch***
13.30 – 14.00	Observing teaching in Level 2 laboratory Class
14.30 – 15.30	Observing teaching in Level 3G laboratory Class
15.00 – 15.30	Meeting with the Student Counselor of the Faculty
15.30 – 16.30	Observing presentations of Level 4 students (Working Tea)
16.30 – 17.30	Reviewers Private Discussion

Day 3 :29th April; 2009
09.00 – 09.30	Observing Teaching – Lecture (Level 3G)
09.30 – 10.00	Observing Teaching – Lecture (Level 4)
10.00 – 10.30	Observing Teaching – Lecture - Skills Development
10.30 – 11.00	Reviewers Private discussion (Working Tea)
1100 – 12.00	Meeting with Head and Staff for Reporting
12.00 – 13.00	***Lunch***
13.00 – 17.30	Report Writing

ANNEX 2. THE PERSONS MET
Vice-Chancellor
Dean / Science
Chairman / Internal Quality Assurance Unit
Head / Computer Science
Members of the Academic staff
Technical Officer
Data Entry Operator
Labourer
Computer Application Assistant
Faculty Student Counselor
B.Sc. Special Degree Students
B.Sc. General Degree 1st year students
B.Sc. General Degree 2nd year students
B.Sc. General Degree 3rd year students

Annex 3. THE DOCUMENTS OBSERVED
Structure and Syllabi of B.Sc. degree programmes 2005/2006 onwards
External examination papers
Documents pertaining to curriculum revision
Documents pertaining to student consultation in curriculum revision
Approved lists of examiners
Lists of lecturers in charge of each practical class
Assessment criteria
Marking schemes
Practical handouts
Theory handouts
Samples of student work
Samples of marked answer scripts
Report of individual and group reports
Lecture schedules

Annex4. FACILITIES OBSERVED
University Computer Unit
Main Library
Lecture halls
Departmental Library
Computer Laboratory with 30 Computers
Mini Computer Laboratory with 15 Computers
Mini Computer Laboratory with 12 Computers
Mini Computer Laboratory with 12 Computers
Departmental workshop
Departmental Server Room
Staff rooms
Lecture halls
Computer laboratories belonging to the Computer Unit
Science Students Common room
Science staff common room
Health centre and equipment (Computers, Multimedia projectors, Photocopiers, Servers)