SUBJECT REVIEW REPORT

DEPARTMENT OF PHYSICS

FACULTY OF SCIENCE
UNIVERSITY OF COLOMBO

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CONTENTS

1. PURPOSES AND AIMS OF THE SUBJECT REVIEW

Subject review process formulated by the University Grants Commission evaluates quality of education within a specific subject or discipline. It is focused on the quality of the student learning experience and on student achievement. It has been designed to evaluate the quality of both undergraduate and postgraduate programs offered by academic departments of Sri Lankan Universities.

This report describes the outcome of a review carried out to evaluate the quality of the academic programmes and related issues in the Department of Physics of the Faculty of Science of the University of Colombo during the period from mid 1999 to mid 2005. In this exercise the following aspects were examined and evaluated.

1. Curriculum Design, Content and Review
2. Teaching, Learning and Assessment Methods
3. Quality of Students, Student Progress and Achievements
4. The Extent and Use of Student Feedback
5. Postgraduate Studies
6. Peer Observations
7. Skills Development
8. Academic guidance and counselling

There has been a major curriculum revision in the Physics Department in the latter part of 2003. As the old curriculum has been in operation for more than 75 % of the review period, more emphasis has been laid on the activities carried out under this curriculum. However, the matters related to the new curriculum have also been discussed in some detail under Curriculum Design, Content and Assessment. Further, some comments on the new curriculum too have been made in the remaining sections of the review report.

2. BRIEF HISTORY AND THE CURRENT STATUS OF THE UNIVERSITY AND THE DEPARTMENT

University of Colombo was established in 1978 by the Universities Act No. 16 of 1978. Though it was formally established 1978, it is strongly linked to the University of Ceylon, which inherits a proud and long history that runs back to 1942. As a result

of a recommendation made by Sir Walter Buchenen Riddell, Chairman of the University Grants Commission, United Kingdom, University of Ceylon was moved to a new site in Peradeniya in 1952. Although the University moved to Peradeniya in stages, the Faculty of Science continued its teaching activities in Colombo together with several other faculties. In 1967, Faculties that continued their teaching activities in Colombo became the new University of Colombo. With the establishment of University of Sri Lanka in 1972, University of Colombo became one of its five campuses. Once again it became an autonomous university in 1978 with the implementation of universities Act no. 16 of 1978. The University of Colombo has six faculties; Medicine, Arts, Science, Law, Management Studies and Commerce and Graduate Studies. The university also has two affiliated colleges namely the College for Indigenous Medicine and Spirali College for fine arts and a School for Computer Science.

The Vision and Mission of the University are as follows.

Vision Statement

The University of Colombo as metropolitan national university with historic links to the first University College, strives to be a centre of excellence of regional and international repute, that will create new knowledge and sustain a culture of service and commitment to national development and democratic values in a plural society

Mission Statement

To be a centre of excellence in teaching and research, with commitment to producing men and women of high ethical standards and social responsibility who are capable of creative, analytical and independent thinking and facilitate the creation and dissemination of knowledge through partnerships between staff, students and relevant sectors of the society.

The Faculty of Science of the University, which was in existence since beginning of University College days, has the following Vision and Mission.

Vision of the Faculty of Science

To be a centre of excellence of scientific and technological excellence nationally and internationally.

Mission of the Faculty of Science

To develop honest, adaptable productive citizens with multidisciplinary knowledge, creative thinking and analytical skills with a high degree of civic conscientiousness. To articulate and promote interaction with public and private sector and society at large, with the view to contributing towards the development of the nation. To institute mechanisms for partnership programmes for improving resources and infrastructure facilities.

At present the Faculty of Science has little over 1500 students, 88 academic staff members 113 non-academic staff members. Present annual intake of students is 600. The Faculty of Science has seven academic departments namely Chemistry, Mathematics, Nuclear Science, Physics, Plant Sciences, Statistics and Zoology.

Physics Department at present offers courses for four degree programmes: General Degree Programme, Physics Special Degree Programme, Engineering Physics Special Degree Programme and Computational Physics Special Degree Programme. Each year approximately 240 students are admitted to the Faculty of Science for the Physical Science Stream. Almost 160 students opt to follow combinations that include Physics as a subject. Normally about ten students are selected for each special programme conducted by the Physics Department. In addition, there are some students who are not offering Physics as a subject following some of the Physics units as optional courses.

The Physics Department is located in a four-storey building that provides reasonable space to conduct its academic activities. There is one main lecture theatre, which can accommodate approximately 250 students and three other lecture rooms with capacities varying from 20 to 50. In addition to these facilities the Department uses one of the oldest lecture theatres in the faculty, Old Physics Lecture Theatre (OPLT), which can accommodate approximately 200 students. At present this is maintained by the Department of Chemistry.

All lecture theatres/rooms are equipped with basic teaching aids such as black/white boards and overhead projectors. A few multimedia projectors are also available in the Department and staff seems be making the maximum use out of them.

The department has five laboratories (three Physics laboratories, one Computer laboratory and one Electronics laboratory) to conduct undergraduate laboratory course units. Three of the laboratories have dark room facilities to conduct experiments in physical optics. Each laboratory is manned by one technical officer and one to two laboratory attendants.

In addition to the laboratories the Department has a well equipped mechanical workshop and electronics workshop that provide services to undergraduate and postgraduate students as well as the academic staff. Recently established Centre for Instrument Development also provides assistance to students as well as the academic staff to carryout research.

The Department has well qualified academic staff who are having good research records. In addition to their routine teaching and research activities they assist the head of the Department by shearing some administrative burdens. This is a very healthy trend that we observed in the Colombo Physics Department. The following table gives the names, credentials and involvements of the academic staff of the Physics Department.

Name of staff member	Status as at July 2005	Year appointed	Teaching Administrative responsibilities and membership of committees
Prof. T.R. Ariyaratne	Professor	1972	Director - Centre for Instrument Development Advisor - Final Year Research Projects Group Leader - Molecular Desorption Mass Spectrometry Research group
Dr. S.R.D. Rosa	Sr. Lect. I	1980	Academic Advisor - Department f Physics
Dr. M.K. Javananda	Sr. Lect. I	1985	Coordinator - M.Sc. course in Applied Electronics
Dr. J.K.D.S. Javanetti	Sr. Lect. I	1984	Head - Department of Physics
Dr. D.U.J. Sonnadara	Sr. Lect. I	1995	Director of Studies - Faculty of Science
Dr. D.D.N.B. Dava	Sr. Lect. I	1984	Coordinator - Industrial management and Medical Physics course units

Dr (Mrs) KA.I. L. Gamalath	Sr. Lect. I	1979	Member - Library Committee, Faculty of Science
Dr. K.P.S.C. Javaratne	Sr. Lect. II	1984	Coordinator - Industrial Placements of undergraduates
Name of staff member	Status as at July 2005	Year appointed	Teaching Administrative responsibilities and membership of committees
Dr. W.M.K.P. Wijayaratna	Sr. Lect. II	1984	Coordinator - Enhancement Course Units, Faculty of Science Coordinator - Examinations Matters of the Department
Dr. G.A.C. Gomes	Sr. Lect. II	1994	Coordinator - M.Sc. Course in Atmospheric Physics and Dynamic Meteorology
Dr. R. Lelwala	Sr. Lect. II	1993	Secretary - Departmental Committee Coordinator - Final year Undergraduate Research Projects Network Administrator - Dept. of Physics
Dr. I.M.K. Fernando	Sr. Lect. II	1993	Coordinator - Procurement of Laboratory Equipment and computers Group Leader - Atmospheric and Lightning Physics Research group
Dr. R.V. Coorav	Sr. Lect. II	1993	Coordinator -Industrial Placements of undergraduates
Mr.C.M. Edirisinahe	Probationary Lecturer	2002	

In addition to the above permanent carder, the Physics Department is having two temporary Assistant Lecturers, fifteen Temporary Demonstrators and one research assistant.

3. AIMS AND THE LEARNING OUTCOMES

3.1 Aims

The Department of Physics falling in line with the vision of the University and Faculty, aims to provide following through its degree programmes

3.1.1 high quality learning experience so as to expose students to recent advances in knowledge and techniques, particularly those represented in the research strengths of the Department;

3.1.2 knowledge and understanding of fundamental concepts, solving problems, independent thinking and reasoning and analysis;

3.1.3 training in scientific research, self studying and application of such training in real world situations;

3.1.4 skills in use of instruments through laboratory classes, workshop practice and exposure to research;

3.1.5 skills in computing and information and communication technology (ICT), report writing and presentation;

3.1.6 career guidance for students so that they can apply their knowledge and training in a wide variety of areas such as research, industry, university teaching, computing and management.

3.2 Learning Outcomes

On the successful completion of any of the programmes offered by the department, students are expected have

3.2.1 a basic knowledge in fundamental principles of Physics and ability to use them in problem solving;

3.2.2 an ability to use scientific method in investigations and analysis and make use of recent advances in technological developments related to Physics in drawing conclusions and justification of results;

3.2.3 ability to decide suitable equipment, instrumentation for an experimental investigation and safe and proper handling of such equipment & instrumentation in research and other areas;

3.2.4 competence in use of information technology and computer software and hardware;

3.2.5 an ability to apply their theoretical and experimental knowledge and training in soft skills for addressing real world problems.

4. OVERALL JUDGMENT - Suspended

EVALUATION OF DIFFERENT COMPONENTS

4.1. Curriculum Design, Content and Review

4.1.1 Curriculum Design: Academic programmes of the Physics Department operate on a Course Unit System. A course unit is a suitable subject module having a credit value. In this system one unit is equal to 15 hours of lectures or 30 hours of practical work or an appropriate combination of lectures and practical work.

Physics Department conducts courses for both General and the Special Degree Programmes. There are three special degree programs namely Physics, Engineering Physics and Computational Physics.

Physics curriculum has been designed on the assumption that most of the students who read for the General Degree find employment opportunities in industry while those who read for the special degree end up either as university academics or researchers in local or foreign universities/institutes. It is evident that in designing the curriculum the department has assumed that students entering the university have reasonably high knowledge of Physics.

4.1.2 Content: Physics component of the General Degree Programme comprises eight compulsory units (18 credits) and eleven optional units (18 credits) spread over three academic years. Modern physics, waves & vibrations and circuit theory and practical physics are compulsory in the first year. Practical units have been designed to develop systematic approach of experimental work to gain necessary skills and understanding.

In the second and third years, students are being introduced to more intellectually challenging aspects of Physics as well as employment oriented physics courses. Analogue and digital electronics, electromagnetic theory, physics of semiconductor devices, special relativity and practical physics are offered at the second year. Quantum mechanics, astronomy, nuclear physics, environmental physics, medical physics, and introduction to computer hardware, operational amplifier applications and computational physics laboratory are being offered at the third year level.

Special Degree curriculum comprises all the General Degree compulsory units and additional 18 compulsory units which cater for in-depth understanding of Physics relevant to each special degree programme. These units are spread equally over the third and fourth academic years.

In the B.Sc. Special Degree program in Physics more emphasis has been laid on the fundamental aspects of Physics while in the Special Degree Programs in Engineering Physics and Computational Physics emphasis is directed towards applications of Physics. However, there are common units to all three programs and the credit value of common units is almost one third of the total credit value of courses of each program.

Third and fourth year course units offered in the special degree programs are depicted in the table below. In this table compulsory units are marked as 'x' while the optional units are marked as 'o'.

Course Unit	*Title*	*Credit Value*	*Physics*	*Engineering Physics*	*Computational Physics.*
PH 3001	*Quantum Mechanics I*	*3*	*x*	*x*	*x*
PH 3007	*Analogue & Digital Electronics Ii*	*3*	*x*	*x*	
PH 3008	*Astronomy*	*3*	*o*		
PH 3030	**Advanced Physics Laboratory I**	6	x		
PH 3031	**Engineering Physics Laboratory I**	6		x	
PH 3051	Instrumentation Physics	3		x	
PH 3052	Electromagnetic Fields I	3	x	x	x
PH 3053	Statistical Physics	3	x	x	x
PH 3004	*Nuclear Physics*	*3*	*x*		
PH 3002	*Environmental Physics*	*3*	*o*		
PH 3020	***Computational Physics Laboratory***	*2*		*x*	
PH 3021	***Computational Physics Seminar***	*1*		*x*	
PH 3054	*Classical Mechanics*	*3*	*x*		*x*
PH 3055	*Data Acquisition and Signal Processing*	*3*	*x*	*x*	
PH 3057	*Mathematical Physics*	*3*	*x*	*x*	*x*
PH 4001	Solid State Physics	3	x	x	x
PH 4002	Methods in Computational Physics	3	x	x	x
PH 4011	Electromagnetic Fields II	3	x		
PH 4012	Advanced Optics	3	x		
PH 4030	**Advanced Physics Laboratory II**	6	x		
PH 4031	**Engineering Physics Laboratory II**	6		x	
PH 4040	**Physics Project**	6	x		
PH 4041	**Engineering Physics Project**	6		x	
PH 4042	**Computational Physics Projects**	6			x
PH 4004	*Electronics and communication Techniques*	*3*		*x*	
PH 4007	*Industrial Management*	*3*		*x*	*x*
PH 4008	*Nuclear and Particle Physics*	*3*	*x*		
PH 4009	*Mathematical Physics II*	*3*	*x*	*x*	*x*
PH 4010	*Quantum Mechanics II*	*3*	*x*	*o*	*x*
PH 4013	*Solid State Devices and Opto Electronics*	*3*		*x*	
EC 4001	***Industrial Training (Enhancement Course)***	*2*	*o*	*o*	*o*

Students who do not offer Physics as a main subject are also given an opportunity of offering some optional course units in physics.

The department offers an elementary electronics course unit especially for the biological science students. In addition students are required to complete satisfactorily at least two enhancement course units during the first year and second year. These courses are specially designed to enhance their opportunities in job market.

4.1.3. Review: Curriculum of the Physics Department has been revised two occasions since 2001. Major revision came into effect in the academic year 2001 and a minor revision in the academic year 2005.

A Faculty Curriculum Development Committee comprising Director of studies, Heads of departments, Departmental academic advisors and enhancement course unit coordinators were involved in formulating the present curriculum. This new system was implemented in 2001/2002 academic year. Present first, second and third year students are studying under the new system.

Department of Physics has well understood the need of curriculum revision regularly and has made a genuine effort to improve its curriculum. All the staff members have contributed in the curriculum revision process. As such, reviewers observe that the **curriculum design content and review aspect in the Department is good**. However, reviewers feel that in future curriculum revisions it is desirable to consider the possibility of including more fundamental units in Physics (eg. Solid state physics, Mechanics, etc.) and also some practical units in the third year of the general degree.

4.2. Teaching, Learning And Assessment Methods

4.2.1 Teaching and Learning Activities

Teaching has been designed to meet the objectives of the academic program of the department and the faculty. Lectures, practical work and tutorial classes are the main methods that are being used in the teaching process. From the first year onwards courses are being conducted in the English medium.

4.2.1.1 Lectures: In lectures, an attempt has been made to inculcate enthusiasm towards learning Physics. A list of references is normally given for each lecture series at the beginning so that the student can explore further and enrich their knowledge. Physics Department mostly uses traditional teaching methods in imparting the knowledge. For classroom teaching the staff uses black/white boards, visual aids and handouts. Whenever possible, lecture demonstrations are used to make the lectures more effective. Some of the teaching materials have also been made available via the

web. Department has realized the importance of use of modern equipment in teaching.

4.2.1.2 Tutorial Classes: Students progress in understanding course contents covered by theory course units are supplemented through tutorials prepared by the lecturer of that particular course unit. In general for first, second and third year students, tutorial classes are conducted by instructors other than the lecturers who teach the particular course unit. However, tutorial classes for special degree students are conducted mainly by the lecturer who teaches the course.

4.2.1.3 Laboratory Classes: Laboratory courses have been designed for students to acquire hands-on experience, transferable skills and further improvement of knowledge that they gain through their lectures. In the first, second and third year General Degree students carry out their practicals in pairs with the guidance of the laboratory demonstrators. An instruction sheet is provided for each practical that will help students to come prepared for the practical class. The duration of one practical is four hours. Each pair of student carries out approximately 8-12 such practicals per semester.

Structure of the laboratory courses at third and forth year Special Degree is somewhat different to that of the General Degree. In order to allow more independent growth, practicals have been designed for students to carry out individually with the guidance of self-teaching work sheets. A particular practical extends over a period of four weeks at a rate of one day per week. Comparatively higher availability of computers enables the students use information technology (IT) to a larger degree.

During the general degree program students spend at least 120 hours in the Laboratory conducting experiments. In case of special degree programs student spend at least 480 hours in laboratory during four years.

4.2.1.4 Research Project (Special Degree programs): In the final year of the special degree, each student has to carry out a research project on a topic assigned by one of the academic staff member of the Department Normally this staff member will act as the supervisor and provides the necessary advice and guidance. Each topic has to be approved by a panel comprising all the senior academic staff members of the

Department. Projects that come through external supervisors are also allowed depending on the availability of necessary facilities. Opportunity has also been given for the student to propose their own projects. In such cases, a suitable staff member in the department is assigned to supervise the project. Overall coordination of research projects is handled by the Research Project Coordinator appointed by the department.

4.2.2 Assessment Method

4.2.2.1 Theory Examination: The Faculty has been using a uniform semester based assessment scheme since 2001. At the General Degree level, students have to sit for theory papers at the end of each semester. Duration of theory papers is one, two and three hours depending on the credit value of the course. In order to maintain the standard of the examination, a moderator who will also serve as a second examiner reviews the question papers. Answer scripts of first and second year examinations are marked by internal examiners where as those of the third and forth year are marked by internal (first) examiners and local/foreign (second) examiners.

4.2.2.2 Practical Examination:

Evaluation of laboratory courses in the first two years is made using a two-step process that includes a continuous assessment and an end of semester practical test. Each student working in pairs in the laboratory has to produce a report at the end of each practical exercise. Laboratory demonstrators evaluate the performance of the students at the laboratory and the reports they produce. Lecturers-in-charge (senior academic staff members) evaluates reports and questions students on a random basis. At least 40% of the practicals carried out by a student are evaluated by the lecturers-in-charge. At the end of the semester, a practical test is conducted for each student. Final grade is computed taking 40% of the marks of the end of semester practical test and 60% of the marks received for continuous assessment.

Laboratory course units of special degree students are evaluated based on a report and a viva voce examination. For each practical, a report submitted by the student is evaluated by the lecturers-in-charge of the laboratory. A viva voce examination is also held by the lecturers-in-charge after the completion of each practical. Final grade will

be computed taking into account 40% of marks received for the viva voce examination and 60% of marks received for the report.

Final year research projects are evaluated based on a dissertation submitted by the student and an oral presentation made by him/her. At least two senior academic members with relevant expertise evaluate each thesis. The oral presentation is made in the presence of the entire panel of examiners that questions the student regarding the project. The panel also examines and evaluates any device/apparatus that a student has designed and constructed for his /her research project. All of the above components contribute to the final grade of the project.

4.2.2.3 Examiners: All examinations are conducted by the qualified examiners. Normally lecturers who conducted the relevant course unit will be appointed as examiners by the university on the recommendation of the faculty board. In the instances where a probationary lecturer teaches the course unit, a senior staff member does the evaluation.

4.2.2.4 Moderation and Second Marking: In order to make sure that the questions in an examination paper are clear, fair, balanced and appropriate, examination papers are reviewed by a moderator who will also later serve as a second examiner. In the first two years the examination papers are reviewed by internal moderators. Third and fourth year examination papers are reviewed by external (local/foreign) examiners. Examination answer scripts of first and second year examinations are marked by internal examiners whereas those of the third and fourth years are marked by internal (first) examiners and local/foreign external (second) examiners.

Based on the above observations reviewers conclude that **Teaching, Learning and Assessment Methods in the Department is good.**

4.3 Quality of Students, Student Progress and Achievements

4.3.1 Quality of Students

Students for various degree programs are selected by the UGC based on their Z-score. Those who seek to study in the Faculty of Science of the University of Colombo have shown good performance at the A/L examination. These students are

the best among those entering the Faculties of Science and Applied Science in Sri Lanka.

Review team had a lengthy meeting with the students and in this meeting it was revealed that the students are well articulated and have good communication skills. All of them have good future goals and seem to be working towards achieving them.

4.3.2 Student Progress

In all years (at all levels), progress of the students is monitored by tutorials, practical work, assignments and end of semester examinations. Performances in the practical classes are being assessed continuously and students are advised on how to overcome their weaknesses and improve the expected skills.

Almost all students following Special Degree programs successfully complete their degrees. In a situation where a Special degree student's performance in the final year is so poor that he/she is unable to complete the degree successfully, he/she is allowed to graduate with the General Degree.

Majority of students complete the program successfully and there are very few dropouts. Performance at all course unit examinations seems to be very good. There is a fare distribution of classes obtained in each special degree program testifying the validity of the evaluation.

4.3.3 Student Achievements

It is noted that department has not carried out any formal surveys to ascertain the job-profile of the past students. However, it is generally known that most of the General Degree graduates who have offered Physics as a subject finds employment in the private sector mainly in the IT industry.

Most of the Special Degree graduates prefer to pursue further studies abroad especially in USA and UK. Usually they end up as researchers or university teachers once completed the postgraduate studies. No detailed statistics regarding their performance and progress are available.

However, reviewers are of the opinion that **the Quality of Students, Student Progress and Achievements are good.**

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

There was no formal mechanism to obtain student feedback. Views of the students regarding the course units were obtained through informal discussions with students and through recently passed out students who have been employed as temporary demonstrators having closed contact with the students. The Review Team feels that this is not a suitable method as it provides second-hand information. It may be dangerous to carry out changes based on such information, as they could be misleading. Reviewers are glad to note that the Department has now realized the importance of formally obtaining the feedback from the students and a questionnaire has been prepared for this purpose.

Therefore the Department deserves a **satisfactory** grade for the student feedback aspect.

4.5. Postgraduate Studies

The department recruits a significant number of students for postgraduate degrees every year. The department conducts MSc programs in Atmospheric Physics & Dynamic Meteorology, Atmospheric Dynamics & Lightning Protection and, Applied Electronics. The first batch of fourteen students has successfully completed the MSc in Atmospheric Physics and Dynamic Meteorology in 2004. The second batch currently in progress consists of 18 students. The M.Sc. program in the newly introduced Applied Electronics course will be commenced in the latter half of 2005. These programs consist of theory course units with and a research component of 6 month duration. In addition, the department awards M.Phil and Ph.D degrees that are based mainly on research.

Reviewers are of the opinion that the Department has made a good progress with regard to postgraduate studies. As such **reviewers grade this aspect as good**.

4.6. Peer Observation

At present there is no formal mechanism in the Department to make peer observations. However, the quality of teaching material that is being used in educational programmes constantly reviewed at Departmental meetings. This will serve as an indirect way of obtaining the views of the peers. Comments and compliments received from the second examiners will also considered as peer reviews of the teaching programmes and these information are very often used to improve them.

It was revealed at discussions that the review team had with the academic staff that they are concerned with regard to the status of this aspect and are making necessary arrangements have an effective and regular peer review process.
Considering the above, the reviewers are of the opinion that this aspect is **satisfactory**.

4.7. Skills Development

Physics curriculum has been designed in such a way that it provides opportunities for students to improve their practical as well as transferable skills. In addition, through the theoretical course units such as quantum mechanics, statistical mechanics, logical and analytical thinking of the students are improved considerably. Physics degree programme has a reasonably large component of analogue and digital electronics providing essential skills needed for operating and handling modern equipment. Further they get an opportunity to develop their skills related to computers and application packages. Seminars and report preparation, which are compulsory activities of the programme, enhance written and oral communication skills of the students.

In view of the above **skills development aspect has been graded as good**.

4.8. Academic Guidance and Counseling

Generally students are guided with regard to academic matters by the academic staff of the Department. The faculty hand book which is published annually provides

almost all the information that a student should know about the academic programs. This information is also available in the faculty website.

It is normal practice of the Department for the lecturer in charge of each course unit to recommend relevant textbooks at the commencement of the course unit. Very often printed notes and other relevant materials are distributed in lectures.

The Physics Department has correctly noted that tutor-small group interaction is an ideal way of providing academic guidance. At the moment timetable constraints hinders having such interactions. The Department being aware of its importance is trying to find ways and means of overcoming these constraints.

There is a group of student counselors in the Faculty appointed by the University who would help and assist with regard problems that they face as junior as well as senior students.

The Department is keen in channelling academic guidance and computer aided teaching support via the web. This will certainly circumvent the time table restrictions as the teacher-student interaction in the classroom is not required. However, the department is in need of proper networking facilities and computers to improve ICT facilities to achieve this objective.

Reviewers think that **Academic Guidance and Counseling of the Department is good**.

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

Aspect reviewed	Judgement given
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	Satisfactory
Postgraduate studies	Good
Peer observations	Satisfactory
Skills development	Good
Academic guidance and counselling	Good

5. RECOMMENDATIONS

Based on the findings indicated above we wish to make the following recommendations.

1. Reviewers are happy to note that the Department is seriously trying to get the student feed back with regard to the quality of teaching and courses. We recommend implementation of the proposed teacher and the course evaluation process soon.

2 After recent revision of the curriculum, two new Special Degree Courses, Engineering Physics and Computational Physics have been started in addition to the conventional Special Degree programme in Physics. While commending the commencement of two new Special Degree programmes we noted that this improvement has been done at the expense of the B.Sc. General Degree. We are of the opinion that a student who is offering Physics, as a main subject will get less exposure to the subject compared one who has undergone through the previous scheme. Therefore reviewers feel that in future curriculum revisions it is desirable to consider the possibility of including more fundamental units in Physics (eg. Solid state physics, Mechanics etc.) and also some practical units in the third year of the general degree.

3 The Department is having 14 lecturers and all of them are graduates of the University of Colombo. Six of them have postgraduate degrees from the same University. All the foreign external examiners as well as the local the external examiner are again graduates of the same University. This might create inbreeding problems, which might hinder the progress of the Department in the future. We hope Department will have courage to address this problem before it is too late.