SUBJECT REVIEW REPORT

DEPARTMENT OF CIVIL ENGINEERING

FACULTY OF ENGINEERING
UNIVERSITY OF MORATUWA

10th to 12th October 2005

Review Team :
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CONTENTS

1. SUBJECT REVIEW PROCESS

Subject review process of the UGC involves evaluating the quality of education within a specific subject or discipline, focusing on the student learning experience and on student achievement. This subject review process evaluates the quality of both undergraduate and taught postgraduate programs. It is understood that the final responsibility for quality and standards remains within the institution itself, since it alone has the powers to control and to change existing practices.

Subject review process at the Department of Civil Engineering (DCE) of University of Moratuwa was conducted following the guidelines provided in the Quality Assurance Handbook for Sri Lankan Universities, published by the CVCD and University Grants Commission in July 2002. The quality of education was reviewed according to the aims and learning outcomes given in the self-evaluation report.
The following eight aspects of education were reviewed at the Departmental level:
Curriculum design, content and review;
Teaching, learning and assessment methods;
Quality of students including student progress and achievements;
Extent and use of student feedback (both qualitative and quantitative);
Postgraduate studies;
Peer observations;
Skills development;
Academic guidance and counseling.

The review team visited the department on three days, namely 10th, 11th and 12th October 2005. The agenda of the three-day visit is given in Annex 1. The information related to the eight aspects were collected by having discussions with the Dean, Head of the Department, members of the academic and non-academic staff, a group of undergraduate and postgraduate students (see Annex 2 for persons attending), by peer observation of the teaching process (see Annex 3), by observing the facilities at the Department and by examining the documents provided by the Department.

Each of the eight aspects was judged as good/satisfactory/unsatisfactory, noting the strengths, good practices and weaknesses in each. Considering the judgment of the eight aspects, an overall judgment is reported at the end of this report selecting one of the three options; confidence/limited confidence/no confidence; in the academic program.

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

History of the University of Moratuwa (UOM) dates back to 1972. The technical college that had existed in this location has later been converted to a degree-awarding institute. The roots of the Department of Civil Engineering go back to the Civil Engineering section of the Ceylon Technical College, Maradana. At the inception of UOM, the department was well equipped with basic laboratories to start the degree programme in Civil Engineering (CE). From the very beginning of UOM, the DCE has been the largest academic department. DCE was able to start postgraduate activities in Irrigation and Hydropower and Building Science in 1976.

Current annual intake of the Faculty of Engineering is about 600 students and they follow a common course during the level 1 study. From level 2, students specialize in CE and the current intake to the department is 100. The Department is currently offering a modular course unit programme, in line with the rest of the Engineering Faculty. The modular programme has Civil Engineering core subjects that are compulsory and a range of electives. Students can earn "minors" in the following areas, based on the combination of electives they choose – i.e. Structural Engineering, Construction Engineering, Transportation Engineering, Environmental Engineering, Management, and Information Technology (IT) Applications.
The department also offers ten postgraduate taught courses and postgraduate research degrees. As shown in the Annex 7.1 in SER (in August 2003) the Department had 36 students registered for postgraduate research, 27 of them for M.Sc. (full time) degrees, 2 for M.Phil. (full time) degrees, 3 for (M.Phil.) part time degrees, 2 for PhD (full time) degrees and 2 for PhD (part time) degrees. In September 2005 the Department had 38 students registered for postgraduate research, 26 of them for M.Sc. (Full Time) degrees, 1 doing MSC part time, 4 for M.Phil. (Full Time) degrees, 3 for (M.Phil.) part time degrees and 4 for PhD full time degrees.

At present (2005 October) the DCE is the largest entity in the UOM with 36 staff members in the faculty having postgraduate qualifications and 30 non-academic staff members. The department is housed in its own building complex, which has laboratories, computer resource centre, workshop, drawing office, and photograph and audiovisual centre. The principal laboratories are soil mechanics, structures, building materials, hydraulics, building services, climate control, highway engineering, rock mechanics, mechanics of materials, surveying, environmental engineering and traffic analysis.

The computer facility of the department has about 40 computers with specialized computer packages for CE students. The students also have the access to the university computing facilities in the main library.

3. AIMS AND LEARNING OUTCOMES

3.1. Aims

The aims of the undergraduate degree programme in the DCE stem from a variety of contexts, namely:

The subject of CE, which has a very broad scope, range from theories of mechanics and properties of materials to environmental and infrastructure issues.
Its location at the UOM, which from its inception has promoted a strong practical bias in its education.
The resource of an academic staff of around 40 members, having specialization in a variety of distinct sub-disciplines within CE and active in research, postgraduate teaching, industry collaboration and national development.

In the above context, the DCE aims to provide:

- A degree programme that covers the basics of the entire field of CE, while allowing students to specialize in a narrower sub-discipline if they so wish;

- A curriculum that enables students to acquire knowledge, understanding and transferable skills (both intellectual and practical);
- A flexibility in the programme that allows students to make their own choices and become responsible for their customized curricula;
- Effective methods of delivering the curriculum;
- An environment that prepares students for the world of work and self learning;
- Close interaction between students and academic staff;
- Assessment schemes that seek to achieve the learning outcomes in Section 3.2;
- Structures for the evaluation and improvement of DCE's provision including Departmental committees, student feedback, external examiners, industry liaison, accreditation and quality assurance review;
- Mechanisms for maintaining a motivated academic and support staff
- Infrastructure to support all of the above.

3.2. Learning Outcomes

On successful completion of the DCE programme, students should have:

- Formed a knowledge base and conceptual understanding regarding the broad subject of Civil Engineering, in areas such as Mathematics, Mechanics, Measurements, Management (including planning & economics), Materials & construction, and Design (including safety);
- Acquired some specialized knowledge and understanding in at least one branch of Civil Engineering, such as Structures, Geotechnics, Hydraulics, Environment, Transportation, Construction, Management and Information Technology (IT) applications;
- Learnt how this knowledge can be applied in both practice and research;
- Developed analytical skills (through problem solving, information management and data analysis);
- Developed a capacity for independent thought and synthetic skills (through design exercises and assignments);
- Obtained a breadth of perspective by exposure to subjects outside Civil Engineering;
- Recognized the importance of management (including planning and economics) for engineering practice;
- Become confident in using computers and application software, both general (e.g. Microsoft products) and specific to Civil Engineering;
- Been equipped with a range of general competencies (such as oral, audio-visual and written communication, social skills and teamwork); and
- Become employable.

4. FINDINGS OF THE REVIEW TEAM

4.1 Curriculum Design, Content and Review

Information presented to the review team confirms that the DCE curriculum design exercises had been continuing since long ago. The deficiencies in the old system were identified and often highlighted by the stakeholders. Industry (employer) feedback had been constantly considered by the DCE especially through the Departmental Industry Consultative Board (DICB). DCE has also conducted a workshop on curriculum revision

and current market needs, with a strong participation from industry. It seems that these deficiencies were adequately addressed by designing the modular system with several components and combinations. In the mean time, the Ministry of Higher Education also insisted on implementing educational programs based on modular system (semester based) in the University system aiming at a higher level of contribution from the graduates towards national development. The design of new curriculum and its contents is an essential step in bridging the gap between the educational system of the DCE and the market needs. The first batch of students under the Semester system passed out in 2004.

4.1.1 Main features of the new system

In par with the curriculum requirements of the ICE (UK) and IESL, the importance of different components (mathematics, field core subjects, management and related subjects, subjects in other engineering disciplines, humanities and environment etc.) had also been identified by the DCE.

Through concerted efforts, the DCE had been successful in identifying several subject groups in providing the best level of flexibility and the most significant combinations as given below.

Common Core - CC	(35 credits)
Common Elective-CE & Field Elective-FE totaling to	(24 credits)
(Minimum of 4 credits is to be earned under CE)	
Field Core - FC	(91 credits)

The total credit requirement for completing the degree amounts to 150: (1 credit is equivalent to 13 hours of lectures or 3 times that amount of laboratory, tutorial or field work).

Subject combinations in the following minors had also been identified to give the students the needed choice and flexibility. This can be identified as a positive step in catering to the ever-changing market conditions.

Structural Engineering
Construction Engineering
Transportation Engineering
Environmental Engineering
Management
Information Technology

Further, industrial training, industrial visits, survey camp, research project and the comprehensive design project (CDP) which are essential components of the program, greatly assist students in enhancing their exposure and in acquiring desired skills in the related technologies.

Members of staff of the DCE confirm that the academic program enriched with these combinations has helped to a great extent in training undergraduates in gaining the required technical and other competencies. In the DCE the curriculum design process had been timely executed and implemented in delivering the maximum benefit from the

teaching-learning process while preparing the undergraduates in the best possible way to shoulder the responsibilities in their future workplace.

The first group of semester-based undergraduates completed their graduation in 2004 and at present serve industrial and other sectors in both local and international spheres. Next, the feedback has to be obtained from employers in evaluating their performance in relation to serving the needs of the employer/market. The department is confident in regularly updating these combinations with the feedback from relevant sectors, in achieving the expected outcome especially in relation to the market needs.

However the best mix of all these components is still to be fine-tuned as indicated by some members.

Complete program details with available minors/options (i.e. credit requirements in each category (FE, CC, CE, FC etc) and necessary information on prerequisites) should be available to students at an early stage to make up their minds in deciding correct course combinations and their future directions.

It seems that the DCE is at present preparing the information booklet to be distributed among the students soon.

4.2 Teaching, Learning and Assessment Methods

The academic program consisting of the above subject combinations designed by the DCE seems to be the best and that has been implemented in the year 2001.

The mechanisms available for delivering the program efficiently were analyzed in reporting the strengths and weaknesses identified during the review process.

The components involved in the course units are:

Lectures/tutorials
Assignments
Experiments
Fieldwork
Presentations &
Written examinations (mid semester & end of semester)

In the DCE program different assessment methods are used to determine the level of achievement of the stated learning outcomes (Ref. Introduction given to the review team by Prof. Dias). The performances of each student in most of the modules are evaluated by continuous assessment and by an end of semester examination. In most modules the continuous assessment component carries 30% and the end of semester examination 70% of the total marks. The continuous assessment of a student is done based on their laboratory practical class reports, assignment reports, case study presentations, field visit reports, quizzes and mid-term tests. Mid semester component usually conducted in an informal manner is also considered under continuous assessment component for most of the course units. All candidates should obtain at least 40% of the continuous assessment marks at all levels to qualify to sit the end of semester examination. The end of the semester examination assesses student's knowledge transferred during lectures and

information gathered from reading material. Examinations are designed to test student's ability to perform under time limitation without referring to their lecture notes or any other material. Examination questions take different forms such as, short notes, essays, numerical problems, results interpretation and multiple-choice questions. A minimum requirement of 20% should be obtained from the end of the semester examination in order to obtain a pass for a module. This is a University requirement applicable for all modules. The results are given to students in writing.

Review team observed several lectures, practical classes and other facilities such as computer units, library & laboratories etc.

Through the discussions held with the students and the laboratory staff, further information was gathered on the conduct of different components of the program especially outside the lecture room.

Lecture room environment, available facilities and level of attention paid by the students seem to be very good. However the students are to be further encouraged to be interactive in the classroom and during laboratory sessions.

We have also noted some concerns of these groups over the following:

Computer units are largely having outdated computers.
Lower speeds in the use of the Internet.

Duration of 13 weeks in the semester is not adequate to cover certain components of the course unit effectively. (i.e. laboratory practicals)
Inadequate number of field visits

We also hope that the student feedback will effectively be used in enhancing teaching – training practices.

The good practices are

Good results at A/L examination and High demand for UOM [Sources: UGC, SER, Discussions with staff]
Progress monitored at the Dept. level; students are allowed to appeal for re-corrections. . [Sources: Discussions with students, staff and student counselors]
Dean's List – continuous encouragement for improvement [Source: Discussion with HoD]
High achievements at the end [Sources: results sheet for E00 batch, Discussions with Staff]

Assessment of all the courses has been done uniformly throughout the Faculty and it is clearly stated in the Performance Criterion given to all students.

It is made clear that examination papers are moderated by internal moderators to ensure questions are clear, relevant and coverage is appropriate. The answer scripts are marked anonymously according to the marking scheme prepared by the examiner and the answer scripts/marks are moderated by the same moderator for the module. The review team

appreciates the fact that marks are displayed on the notice board and the students are given a chance to apply for re-correction within one week.

4.3 Quality of Students, including Progress and Achievements

Students who apply for the DCE have to be first selected to the Faculty of Engineering, University of Moratuwa by obtaining the required Z score for the physical science stream for the respective year. Out of the three Engineering Faculties in Sri Lanka, University of Moratuwa is the preferred choice of students in the merit list (Source UGC). Unfortunately about 50 of the first year students are leaving the course preferring other foreign scholarships (e.g. Australian undergraduate scholarships) available based on performance in the G.C.E. Advanced Level Examination. Students who are enrolled in the Faculty of Engineering follow a general engineering course of study in the first year conducted by the Faculty of Engineering and supported by all the departments.

On the basis of the results of the semester (one and two) examinations in Level 1, the students are given the option to select their preferred program of study. A total of 100 students are selected to DCE out of a total engineering student population of 660. This number is to be increased to 125 from the next intake of 700.

Usually the Output/Input ratio will be > 0.95. This is in common with other study programs of the university. As a well-recognized institute, there is a great preference for entry. With entry; the intention is to complete the program within the minimum period possible. The length of undergraduate study is 4 years and unless in rare cases, the failures complete the course within another 2-3 years. (Source SER). This shows that the students are adequately prepared to complete the program satisfactorily.

Student performance is monitored at the end of each semester by calculating a SGPA to enable students to assess their own progress, to establish whether they are experiencing problems, and to ensure that they are suitably equipped to proceed to the next year of study. The students who have performed poorly but yet passed are given an academic warning and restricted in their choice of optional subjects.

Students on DCE program achieve a high level of success. In the old system 91.9% of students passed each examination, 6.4% were referred in one, two or three subjects and 1.7 % failed. (Source SER).

In the B.Sc.Eng.(00) batch (the First batch under the semester system) 9% of the students obtained a First Class, 40% Second Upper, 42% Second Class Lower Division, and 7% pass. The number of incomplete students was 2%.

Students who obtain a GPA greater than 3.8 (First Class) are included in the “Deans List”. Inclusion in the Dean’s list serves as a positive encouragement.

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

Qualitative and Quantitative student feedback is obtained by informal discussions between students and level coordinators, Informal discussions between students and academic advisors, student/ staff liaison committees etc.

The DCE has appointed academic staff members as level coordinators for each level. The students discuss all the academic matters related to that level with level coordinator.

The students get the opportunity to discuss any academic or personal matters with their academic advisors, who are appointed by the Head of DCE. Each academic advisor is responsible for a group of students throughout their studies at DCE.

Qualitative student feedback is obtained through discussions at the student/staff liaison committees at the faculty level. Students can raise matters concerning individual staff members with the level coordinator or with the feedback form.

Students agree that student feedback is given due consideration (by the relevant teachers) in the following semesters. The current practice is that the teacher him/herself handles the evaluation of the feedback. The review team suggested during the last meeting with the staff that evaluation of feedback is better taken over by the HoD, and many staff members consented.

4.5 Postgraduate Studies

According to the report (pages 95-114) submitted to the Quality Assurance Committee by the DCE (October 2005), at present, the DCE conducts ten PG taught courses and postgraduate research degrees, namely M.Eng./PG Diploma in, Environmental Management, Environmental Engineering and Management, Construction Management, Construction Project Management, Environmental Water Resources Management, Environmental Water Resources Engineering and Management, Highway and Traffic Engineering, Transportation, Geotechnical Engineering and Structural Engineering Design.

Research degrees awarded are M.Sc. (One Year full time), M.Phil. (Two year full time or 4 years part time), and PhD (Three year full time and six years part time).

At Masters level, students follow course modules during the first year on part time basis. First year work is assessed by the end of semester examinations. Students who successfully complete the first year are registered for the research component. The students select a research topic suggested by a staff member or select an industry related problem at their place of employment. An internal supervisor and an industrial co-supervisor guide the student. A dissertation is submitted at the end of the research project and a viva voce examination is held. The assessment committee will comprise internal & external examiners. Students who are successful in both components are awarded a M.Sc. or M.Eng. Degree. PG Diploma is awarded to those who pass only the written examinations based on the first year taught courses.

The division of PG studies headed by the Director, PG studies of UoM handles administration duties of PG degrees. Introduction of new PG courses or subjects, admission of students, assessments, examinations, appointment of examiners and moderators and other matters related to PG studies, originating from the DCE are approved by the Faculty Higher Degrees Committee (HDC) chaired by the Director PGS, Faculty and the UoM Senate. Entry qualifications of the PG students are governed by the University By-Laws. Division of PG studies stipulates guidelines to research students and supervisors.

PG taught courses are coordinated by two academic staff members in the respective department, course coordinator and the research coordinator, for the specified course. Research degrees are monitored by the Research coordinator of the DCE, who is the member of the HDC representing the Department.

The review team got the feedback from the research students too. They are happy to be students here, and look forward to be guided by a capable panel of teachers. Some students said their expectations were exceeded by the course given here. Only complaints were regarding the lack of space, same lecture theatre being used for all PG courses, lack of Internet facilities and about not having access to labs 24 hours, for their research work. Some students were concerned about the absence of make-up exams even when they miss an exam for a valid reason and the next exam being available only two years later. These problems were discussed with the staff and some solutions were promised immediately, while others are to be addressed with time.

4.6 Peer Observation

Documentary evidence and discussions with the academic staff reveal that peer observations started in late 2003. Staff members arrange for one member of the staff to observe them teaching. The feedback on preparation, method of teaching, delivery, lecture materials, relationship and interactions with students, sequence and sensitivity to students is obtained through a standard form. Then both observer and observee fill up a joint summary sheet. So far six peer observations were done in the department where the last one took place on August 17, 2005. The feedback forms and summary sheets are finally submitted to the HOD. Once the observer jointly summarizes the strengths and weaknesses with the observer, it is expected that the observee improve by him/her self. Even though starting of the peer observation is a commendable task, it is doubtful whether the feedback is used effectively. It is expected that the DCE should take a constructive approach to use the peer evaluation process more effectively to improve ones teaching methods.

4.7. Skills Development

According to the learning outcomes expected from the DCE, the department expects to develop students' analytical skills, independent thought and synthetic skills, communication and team working skills, etc. It was found that students get an opportunity to develop these skills while developing their subject knowledge and understanding. The document on course content (structure) given to the students at the beginning of the course clearly spell out the skills that the students are expected to develop through the course. Then whether students achieve the expected skills and knowledge is assessed through feedback forms given.

Students are on a mentoring program where they will have an opportunity to understand various skills and practices used in industry and other organizations. The review team was quite impressed with this exercise. Further, the CDP and research project are recognized as two activities, which will enhance the interpersonal skills, critical thinking skills and synthesizing skills of students.

Students'communication skills are constantly monitored through presentations, interviews associated with a number of course units such as English, Skill development, etc.

Further their competence in IT will also be developed right through the course by offering IT courses at level 1 and by computer based experiments and assignments in latter part of the course.

Practical classes are structured so as to improve communications and team working skills of the students. However, it was found that the emphasis made on a number of hands-on practical sessions is now being reduced with the introduction of semester system. This may have a consequence on the skills development and transfer of knowledge.

4.8. Academic Guidance and Counseling

The Faculty of Engineering of the UOM has a Chief Student Counselor (CSC), Professional part-time Counseling Consultant (PCC) and 26 Student Counselors (SC) appointed by the Vice Chancellor. It was found that CSC and six SCs are from the DCE. However, when talking to a sample of students it was found that they are not fully aware of this fact.

Also the faculty has Staff-Student Liaison committee at faculty level, having representatives comprising senior academic staff and nominees from student groups.

Ten students are assigned to one academic counselor, who will be guiding them right through the course mainly on academic matters. However, students' opinion is that DCE staff members are very friendly and available, thus allowing students to discuss their problems freely.

It was found that no advisors other than CSC, PCC, 26 SCs (who should cater for 3000 students) are available for the first year students. It was also noted that the first year coordinator and director undergraduate studies are also accessible for the first year students. Reviewers are in the opinion that students need more support and guidance in their first year, as it will take some time for them to get used to the system and get to know each other. Further the review team felt that the mechanisms used to introduce student counselors to students need to be improved.

5. CONCLUSIONS

Curriculum Design, Content and Review:

The review team is in the opinion that curriculum is designed by considering the feedback given by all the stakeholders and in line with the guidelines given by various accreditation bodies.

Judgment: Good

Teaching, Learning and Assessment Methods:

The review team considers that overall teaching, learning, and assessment aspects are good.

Judgment: Good

Quality of Students, Including Student Progress and Achievements:

Considering all the aspects related to quality of students, their progress and achievement the review team judged this aspect as good.

Judgment: Good

Extent and use of Student Feedback, Qualitative and Quantitative:

The review team felt that the students' feed back has generally been effectively used.
Judgment: Good

Postgraduate Studies:

Extensive postgraduate programme is in place which covers all the areas of Civil Engineering and all levels of degrees.
Judgment: Good

Peer Observation:

The review team is in the view that the full implementation of this aspect has not yet been achieved.
Judgment: Satisfactory

Skills Development:

The way the course is structured and delivered, the students' skills are developed upto the expectation of the learning outcome.
Judgment: Good

Academic Guidance and Counseling:

The review team felt that an effective counseling programme should be in place for first years.
Judgment: Satisfactory

6. OVERALL JUDGEMENT

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	Good
Postgraduate studies	Good
Peer observations	Satisfactory
Skills development	Good
Academic guidance and counselling	Satisfactory

Overall Judgment - Suspended

7. RECOMMENDATIONS

- Based on the findings indicated above the review team wish to make the following specific recommendations.

- The complete course description including prerequisites should be given to students at an early stage of their study in the Department so as to facilitate decision making about which courses to follow in the earlier levels.

- The review team is confident about the proposed system of peer observation. Its full implementation is recommended.

- As the First Year is the most important group of students to be guided and counseled (and even though they remain a faculty responsibility), a lot of attention from the Departmental counselors also for this group is recommended.

8. ANNEXES

ANNEX 1
PROGRAM OF THE QUALITY ASSURANCE REVIEW
Subject Review Team (3 days)

Day 1-10th October 2005

09.00-09.30	Welcome meeting with Dean and Head of Department
	Discussion of Agenda
09.30-10.00	Meeting with Vice Chancellor
10.00-11.00	Department Presentation on Self Evaluation Report
	(Heads of Division+ IRQUE Task Force)
11.00-11.30	Tea Break
11.30-13.00	Discussion (Heads of Division+ IRQUE Task Force)
13.00-14.00	Lunch Break
14.00-15.30	Discussion with Academic Staff (All Academic Staff)
15.30-17.00	Discussion with Undergraduate Students
	Reviewers' meeting

Day 2-11th October 2005

9.00-10.00	Discussion with PG students
10.00-11.30	Observe department and other facilities
11.30-12.30	Observing Teaching class (1, 2)
12.30-13.30	Lunch Break
13.30-14.30	Observing Teaching class (3, 4)
14.30-15.30	Discussion with Technical Staff
15.30-16.30	Observe Practical Class (1, 2)
16.30-17.30	Observe documents

Day 3-12th October 2005

9.00-10.00	Observe Practical Class (3, 4)
10.00-10.30	Academic Guidance and Counseling Core Aspect Meeting
10.30-11.00	Reviewers Private Discussion
11.00-12.00	Meeting with Head and Staff for Reporting
12.00-13.00	Lunch Break
13.00-17.00	Report Writing

ANNEX 2

List of persons met during the visit

List of Academic Staff Members:

Prof. Ananda Jayawardene, Dean, Faculty of Engineering, UoM

Prof. (Mrs.) N. Ratnayake, Head/Department of CE

Prof. W.P.S. Dias

Prof. S.S.L. Hettiarachchi

Prof. M.T.R. Jayasinghe

Dr (Mrs.) M.T.P. Hettiarachchi

Dr. A.D.C. Jayanandana

Dr. S.A.S. Kulathilake

Dr. M.A.W. Kumara

Dr. T.A. Pieris

Dr. K.K. Ranasinghe

Dr. S.P. Samarawickrema

Dr. I.R.A. Weerasekara

Dr. U.G.A. Puswewala

Dr. P.P. Gunaratna

Mr. S. Pathinather

Mr. A.H.R. Ratnasooriya

Miss W.B. Gunawardana

Mrs. R.M.N.T. Sirisoma

Dr. H.S. Tilakasiri

Discussions were held with 30 students representing 2nd, 3rd and 4th levels and, and 21 postgraduate students.

Discussions were held with the eleven Technical Staff members of the Department.

Discussions were held with Senior Student Counselor and 8 Student Counselors.

ANNEX 3

List of Teaching Sessions Observed

11th October 2005

Lecture 1: CE 208 Prof. Mrs. N. Ratnayake, Fundamentals of Environmental Engineering, (Level 2 Semester 2)

Lecture 2: Dr. A.D.C. Jayanandana, CE 306 Design of Concrete Structures (Level 4, Semester 1)

Lecture 3: Dr. Mrs. P. Hettiarachchi, CE 302 Basic Structural Design (Level 3, Semester 1)

Lecture 4: Dr. H.S. Thilakasiri, CE 308 – Geotechnical Design (Level 4, Semester 1)

Practical class 1: CE 102 Fluid Mechanics Laboratory (Level 1, Semester 2)

Practical class 2: CE 206 Project Planning (Level 2, Semester 2)

12th October 2005

Practical class 3: Dr. M.A.W. Kumara (Dr. A.A.D.A.J. Perera according to handbook) – CE 205 Building Construction and Materials, Testing of Aggregates and Reinforced Concrete Beam Analysis (Level 2, Semester 2)

Practical class 4: Prof. M.T.R. Jayasinghe, CE 423 Building Engineering, Computer Aided Design (Level 4, Semester 1)