



Annual Report 2014



UNIVERSITY OF COLOMBO
SCHOOL OF COMPUTING

UNIVERSITY OF COLOMBO SCHOOL OF COMPUTING

CONTENTS

Vision and Mission	01
Director's Review	02
At a Glance.....	03
Overview of the UCSC	05
Governance	06
Education	08
Programmes and Students	08
Undergraduate Education	08
Postgraduate Education	15
External Degree & Extension Courses.....	17
Foreign Students	19
New Courses Started	20
Research	20
Research, Innovation and Publications	20
Conferences, Seminars & Workshops	21
Awards Received	22
Academic Staff	22
Non-Academic Staff: Permanent (P) Contract/Assignment (C/A)	23
Finance	24
Recurrent Expenditure	24
Capital Expenditure	25
Projects (Local/Foreign Funded).....	25
Project Expenditure (Local/Foreign Funded).....	26
Financial Progress (Expenditure)	27
Financial Progress (Generated Income)	27
Financial Performance Analysis	27
Infrastructure Facilities Received in 2014	28
Any Other Details / Performance Relevant to this Report	28
Audited Financial Statement 2014	29
Auditor General's Report 2014	33
UCSC Comments on AG's Report 2014	39

UNIVERSITY OF COLOMBO SCHOOL OF COMPUTING

ANNUAL REPORT AND ACCOUNTS FOR 2014

VISION & MISSION

Vision Statement

Be a Global Leader in Computing, Advancing the Frontiers of new knowledge through Learning and Research.

Mission Statement

To advance and enhance computing knowledge, fostering global strategic alliances, promoting cross disciplinary research, producing socially responsible professionals with entrepreneurial skills, leadership qualities and integrity contributing to position the country as a knowledge hub in the region.

Goals

1. To be a centre of excellence in teaching and learning in computing
2. To extend boundaries and promote cross disciplinary research in computing
3. To create socially responsible professionals with entrepreneurial skills, leadership qualities and integrity
4. To establish and maintain conducive environment for productive work and career enhancement
5. To enhance the institutional image
6. To empower society through ICT
7. To make significant contributions and to provide professional services to position the country as a knowledge hub

DIRECTOR'S REVIEW

As a centre of Higher Learning in Computing the UCSC has continued to train students at undergraduate and postgraduate levels as well as those in the IT industry with the latest developments in this field. 757 internal undergraduates enrolled for the four degrees programmes offered via the UGC intake based on the revised curriculum. Beside 1,119 science graduates were trained in use of IT in respective scientific domains and 2,379 students were provided the opportunity to do the BIT degree as an external student. 370 students were trained for the master's degree while 41 enrolled for research degrees. From those who enrolled in previous years 440 completed degrees at undergraduate level and 111 at postgraduate level including 1 PhD and 3 MPhil graduates.

Masters and BIT external degree are the two main income sources of the UCSC which contributed towards 67m and 73m income respectively. 71m was invested on buildings, 37m on equipment as Government grant for both was just 15m. UCSC contributed 4.9m toward staff participation at international conferences, 4.7m towards staff insurance scheme and 2.9m towards student distress fund.

To distinguish from other training institutes UCSC put a lot of emphasis on creating new knowledge through research. Staff published 67 conference and journal papers. UCSC also continued to carry out consultancy projects for the government ministries and other organizations. Staff and Students continued to be successful at national and international events winning 7 major awards including Sri Lanka Emerging Young Leader Award, CIMA Global Business Challenge and Ten Outstanding Young Persons awards. Staff continued to be involved in many external committees, boards and professional bodies as their contribution to the society, while students continued with their IT outreach programmes to rural areas targeting school children.

Our strategic plan was reviewed to look into new avenues. Work proposed for external degree and commercialization of research through the Higher Education for the 21st Century (HETC) initiative continued successfully. UCSC continued to support the HETC funded programmes such as testing students' university competency test for IT at all universities, the university selection and allocation system for the UGC and many other challenging projects. UCSC staff also was successful in securing several NRC grants and NSF grant for research projects.

Long due physical infrastructure development of the UCSC continued during the year with some of the completed areas already used by undergraduate and postgraduate students. This will partially address some critical space issues faced over the last five years. However few more infrastructure improvement projects are in the pipeline to facilitate future expansion. UCSC while continued to hold the most qualified computing staff in the country with 20 PhD holders further strengthen its academic pool to partially address the shortage of its Human Resources. Overseas staff and student exchange programme with Umea University was continued.

With the completion of the curriculum development to align existing degree programmes with international standards took placed the employability of our graduates also match or bettered the top Engineering and Medical graduate levels. Increase in undergraduate and postgraduate intakes as well as graduate and postgraduate outputs including in research was observed during the year. This year too UCSC attracted a foreign student for our degree programmes.

UCSC AT A GLANCE

		2012	2013	2014
Education (Enrolled/Graduated)				
Internal Undergraduates	All	738	769	757
	In	-	254	212
	Out	220	212	215
Science Undergraduates		1267	1275	1119
External Diploma	All	4166	4175	4535
	In	2029	2034	2379
	Out	654	611	515
External Higher Diploma	All	2390	2391	2583
	In	974	714	721
	Out	262	305	339
External Degree	All	1413	1416	1537
	In	476	312	347
	Out	172	194	225
Postgraduates	All	523	303	370
	In	158	143	209
	Out	156	122	107
Extension Programmes		528	309	389
Research				
Research (MPhil/PhD)	All	41/01	39/07	41/09
	In	10	09	07/06
	Out	3	6	3/1
Research Projects	All	05	05	10
	New	2	1	6
Publications		68	70	67
Consultancy Projects				
	Local	12	10	10
	Foreign	01	-	-
Social Responsibility Programmes		10	10	10

		2012	2013	2014
Governance				
Permanent Academic Staff	All	37	36	40
	Professors	02	02	03
	PhD	19	20	20
	Masters	12	10	11
Permanent Academic Support Staff		04	04	04
Temp Academic Staff (Instructors & Asst. Lect.)		12	15	30
Permanent Admin and Non-Ac Staff		34	40	40
Contract Staff (including casual & trainee)		67	49	42
Research/Project Staff		10	11	27
Finance				
Annual Recurrent Expenditure (Millions SLR)		111	133	161
Treasury Grant (Recurrent) (Millions SLR)- Act.		92	90	94
Treasury Grant (Capital) (Millions SLR) – Actual		19	26	15
Generated Income		194	242	247
UCSC Contribution for UG (Millions SLR) (Generated %)		31 (16%)	88 (37%)	185 (75%)
UCSC Budget (Millions SLR)		246	363	577
Research/Project (Millions SLR)		5.6	9.3	9.7
Cost per Employee (SLR '000s) per annum		670	774	795
Cost per Student (SLR '000s) – Treasury Recurrent		151	152	190
Infrastructure				
Library Books		10,405	8,303	8,678
Computers : staff		1:1		
Computers : students (General students)		1:4		
(Special students)		1:1		
Space Utilization (employee) (sq. m.)		9.42	10.42	11.70
Space Utilization (student) (sq. m.)		2.32	2.68	4.77

OVERVIEW OF THE UCSC

The University of Colombo School of Computing (UCSC) was established on 1st September, 2002 by merging the Institute of Computer Technology (ICT) and the Department of Computer Science (DCS), both of the University of Colombo, by an Order made under Section 24 A(1) of the Universities Act No. 16 of 1978 as last amended by Universities (Amendment) Act No.1 of 1995, as a Centre of Higher Learning for the purpose of providing, promoting and developing higher education in Computer Science, Information and Communication Technology. It is a Higher Educational Institution within the meaning of the Act. The UCSC Ordinance was Gazetted on 15th Nov 2002 (GZT NO. 1262/32) and Amended to include the Centre for Digital Forensics on 22 July 2011 (GZT NO. 1715/32).

A Brief History

The teaching of Computing in the University of Colombo first started way back in 1967 by the setting up of the Statistical Unit as a separate unit of the Department of Mathematics. Later with the initial guidance of Professor V.K. Samaranayake, the statistical unit was enhanced as the Statistical Consultancy and Data Processing Service Centre. This had paved the way to many future developments. By 1985, this Centre had grown into the Department of Statistics and Computer Science (DSCS). The major function of this department was to conduct special degree programmes in Statistics and in Computer Science. The DSCS offered Computer Science specialization programme, producing just 40 students per batch, in no way sufficient to meet the growing demand in the field of Computer Science (CS).

In 1997, a batch of 50 students was taken directly to study Computer Science, through the University Grants Commission, however, by this time, it was realized by many that the Computer Science subdivision of the DSCS need to be expanded as a separate department to meet the growing demand in the field of Computer Science. As a result, in 2001, the DSCS was separated into two departments namely Department of Computer Science and Department of Statistics.

The Department of Computer Science identified its own limitations of operating in the restrictive framework of a Faculty and at the same time it understood the importance of having a strong industry relationship for exploiting future growth potential. The university understood the importance of a strategic merger between the industry focused Institute of Computer Technology (ICT) and the more theoretically oriented Department of Computer Science of the University of Colombo.

The ICT had a strong relationship with the industry at the same time a high institutional profile among foreign donor agencies. The ICT also enjoyed much more autonomy in their business operations making it easier for receiving large amounts of resources from Japan International Cooperation Agency (JICA), Swedish International Development Agency (Sida) and several other donors.

This merger gave birth to the University of Colombo School of Computing (UCSC) on 1st September 2002. Prof. V.K Samaranayake became the founder Director of the UCSC, whose proactive thinking set the path to achieve success in several succeeding endeavours of the UCSC. Through all this, the UCSC has been able to position itself as a Centre of Excellence in ICT in the university system of Sri Lanka.

Due to expansion limitations within the University premises, the UCSC constructed additional floor and rooftop by extending the current West and East building complex. The UCSC also put up a North and South wings to slightly expand the floor space. Currently the UCSC have constructed a two story of the administrative and canteen building and is in the process of constructing the auditorium and lecture halls in

order to increase the undergraduate intake. These initiatives have provided the students a reasonable working space of 4.8 sq. m. per student to carry out their studies, which was initially below 2 for a long period.

ORGANIZATION OF THE UCSC

The three departments and six Centres continued to plan and execute their programmes of activities for the current year too.

Departments of the UCSC

For the undergraduate academic programme, government funding is directly received by the UCSC through the UGC. Money received is inadequate to carry out the planned activities for the year and hence some of the generated income is used for undergraduate academic activities. The UCSC has three academic departments and the academic staff is allocated to these departments based on their specialization and teaching expertise. Three department heads are assigned to look after the undergraduate, postgraduate and external & extension programmes respectively as none of them offer programmes of its own. The three departments are,

1. Computation & Intelligent Systems (CIS);
2. Communication & Media Technologies (CMT);
3. Information Systems Engineering (ISE).

Centres of the UCSC

UCSC also performs many secondary activities. These activities are organized under six separate centres. Each centre has a coordinator who manages the day-to-day operations of the centre. The six centres are as follows:

1. Advanced Digital Multimedia Centre (ADMTC);
2. Computing Services Centre (CSC);
3. External Degrees Centre (EDC);
4. e-Learning Centre (e LC);
5. Professional Development Centre (PDC);
6. Centre for Digital Forensics (CDF).

GOVERNANCE

During the year the corporate plan was prepared for 2014-2018. Several meetings with staff and special board meetings were held to finalize the plan. Its focus moved away from previous core areas of activities which were classified as Education, Research, Consultancy and Social Responsibility etc. to programmes identified for strategies based on its goals and objectives of the UCSC.

Management

Management of the UCSC is handled by the officers of the UCSC with the assistance of the heads of the departments and centre coordinators. Director chaired all UCSC Statutory and Selection Committees.

Officers of the UCSC

Director: Prof GN Wikramanayake; **Deputy Director:** Prof ND Kodikara (up to 01 Oct) & Prof KP Hewagama (from 01 Nov);

Heads of the Departments of the UCSC

CIS: Mr GP Seneviratne (up to 14 Dec) & Dr DAS Athukorala (from 15 Dec); **CMT:** Mr GKA Dias; **ISE:** Prof KP Hewagamage;

Centre Coordinators of the UCSC

ADMTC: Mr ST Nandasara; **CSC:** Mr. LP Jayasinghe; **EDC:** Mrs SP Ariyaratne (up to 15 Sept); **eLC:** Dr DD Karunaratna; **PDC:** Dr SMKD Arunathilake; **CDF:** Mr KS Goonathilake.

Authorities

The Authorities of the School are the Board of Management; Academic Syndicate; Boards of Study; Departments of Study and Centres.

Board of Management

12 monthly meetings and 02 Special Meetings of the Board of Management were held during the year. The composition of the Board of Management is given below.

Director (Chairman); Deputy Director; Heads of Dept (CIS/CMT/ISE); **Nominee/Secretary, Ministry of Higher Education:** Mr Piyasena Ranepura; **Nominee/Ministry of Finance:** Mr DCA Gunawardena; **Dean, Faculty of Science:** Prof TR Ariyaratne (Jan), Prof KRR Mahanama (from Feb); **Nominees of Council, UOC:** Mr C Maliyadda & Mr. HMN Warakaulle (Jul), Mr. RG Rubasinghe (Aug); **Nominees of Senate, UOC:** Prof KH Thennakoon & Prof. PSM Gunaratne; **Nominees of the UGC:** Mr S Mudalige & Deshamanya Mr MDD Pieris; **Representatives of the IT Industry:** Mr Mano Sekeram & Mr DB Saparamadu; **Nominees of Academic Syndicate, UCSC:** Dr DN Ranasinghe, Dr GDSP Wimalaratne, Dr DAS Athukorale; Former Director (Invited): Dr AR Weerasinghe.

Two Sub-Committees, the Finance & Management Committee and the Audit Committee assisted the Board of Management. The two committees held 04 and 04 meetings respectively during the year. Composition of the two committees is given below.

Finance and Management Committee

Director (Chairman); Deputy Director; Mr Piyasena Ranepura; Mr DCA Gunawardena; Prof KRR Mahanama; Deshamanya Mr MDD Pieris.

Audit Committee

Mr Sujeewa Mudalige (Chairman Finance Specialist); Deputy Director; Mr C Maliyadda; Mr Piyasena Ranepura; Mr DCA Gunawardena, Ms. S Sunanda (Auditor General's Representative), Internal Auditors (E&Y).

Academic Syndicate

11 meetings of the Academic Syndicate were held during the year. The composition of the Academic Syndicate is given below.

Director; Deputy Director; Heads of Dept (CIS/ CMT/ISE); Centre Coordinators (ADMTC/CSC/ EDC/eLC/PDC); **Nominee (Faculty of Science):** Prof RD Wijesekara; **Representatives/IT Industry:** Dr RAC Ranasinghe; Senior Academics (UCSC); **Two Teaching Staff:** Mr MPMK Silva; Dr. TMHA Usoof.

Boards of Study

There are three boards of studies, namely IUD, RHD and EEP. They focus on Internal Undergraduate Degrees (IUD), Research and Higher Degrees (RHD) and External and Extension Programmes (EEP). The

three boards had 10, 11 and 11 meetings respectively during the year.

EDUCATION

Programmes and Students

UCSC offers a wide variety of programmes at different levels. Table 1 identifies the courses (programmes) conducted by the UCSC along with the students and staff involved.

Table 1: Type of Courses Offered

Course	Total Students	Total Academic Staff	Total non Academic Staff
Undergraduate and Postgraduate Programmes	1,125	64	62
Research and other Projects	49	19	25
Extension courses	389	33	25
External degree	8,655	48	39
Online	16,278	4	9
Other – Faculty of Science	1,119	21	2

Undergraduate Education

Computing for undergraduates were first introduced way back in 1967 as part of Faculty of Science. UCSC continues to offer this opportunity for faculty of science 1,119 students. Computing as a degree commenced in 1990. All together 1,876 undergraduates are being trained at the UCSC. UCSC currently offers Computer Science (CS) degree for 486 students and Information Systems degree (IS/ICT) for 271 students.

Internal Degrees

The University Grants Commission approved the proposed restructuring of the degree programmes and its implementation came into effect from the Academic Year, 2012/2013.

The Bachelor of Computer Science was restructured to offer the following degrees. The curriculum proposed was designed to achieve the expected graduate attributes and to conform to the IEEE/ACM curriculum recommendations in addition to catering to the high demand of IT, IS and Computer Science professionals worldwide.

- (i) A Three year, Bachelor of Science in Computer Science (BSc in CS);
- (ii) A Four year Bachelor of Science Honours in Computer Science (BSc Hons. in CS)
- (iii) A Four year Bachelor of Science Honours in Software Engineering (BSc Hons. in SE)

The Bachelor of Information and Communication Technology Programme (BICT) has been restructured as the Bachelor of Information Systems in order to produce a new kind of IT professional to fill the gap between business requirements and technical solutions. The IS degree Programme is designed to produce this new breed of ICT professionals. The curriculum of this programme also emphasizes the importance of soft skills such as communication and teamwork.

The degrees offered under this programme will be as follows:-

- (i) A Three year Bachelor of Science in Information Systems (BSc. in IS)

(ii) A Four year Bachelor of Science Honours in Information Systems (BSc Hons. in IS).

The degree programme was redesigned to offer as 2+1 (3 year) and 2+2 (4 year) degrees instead of existing 3 year exist and 3+1 (4 year). New CS stream programme now contain a 4 year Software Engineering (SE) stream in addition to the existing 3 and 4 year CS exists. Due to the above changes the UCSC had to conduct six Internal Undergraduate Degree programme in the year 2014 as well instead of the usual four.

Under the Computer Science stream degree programmes conducted in the year 2014, the degree of Bachelor of Science in Computer Science (BSc. in CS) was conducted for 1st & 2nd year students and the degree of Bachelor of Computer Science (BCS) was conducted for the 3rd year students. The degree of Bachelor of Science in Computer Science (BSc. in CS) was conducted for the 4th year students. CS degree stream select students from A/L physical science stream while the ICT degree is open to all streams.

Under Information Systems stream, the degree of Bachelor of Science in Information systems (BSc. in IS) was conducted for 1st & 2nd year students, and the degree of Bachelor of Information and Communication Technology (BICT) was conducted for the 3rd year students. The Bachelor of Science in Information and Communication Technology (BSc. In ICT) was conducted for the 4th year students. The curriculum of this programme also emphasizes the importance of soft skills such as communication and teamwork. Programme also open for any A/L stream and hence a screening aptitude test is held to qualify students. Aptitude test to select students for the next intake was held on 22 June and 1355 students sat the test.

UCSC submitted the undergraduate programme for their approval by the UGC standing committee. UGC had published new Admission Book to Undergraduate Courses of the Universities in Sri Lanka 2013/2014. They have increased our intake from 240 to 275 (Computer Science 175; Information Systems 100) without informing us.

Enrolment

Under the 2013/2014 intake, the UCSC admitted a batch of 143 students for the Degree in Computer Science, while 69 students were admitted for the Degree in Information Systems. In 2014, the total number of registered students at the UCSC stood at 757. The breakdown of this number is given in Table 2. It was observed that most of the students were recruited by reputed firms in the IT industry on lucrative contracts, even before they could complete their 3rd year industrial placements.

Table 2: Internal Undergraduate Programmes

Course	Intake 2013	1st Year Students	2nd Year Students	3rd Year Students	4th Year Students	Total	No of Graduated
BSc in Computer Science	143	143	149	-	-	292	-
Bachelor of Computer Science	-	-	-	154	-	154	103
BSc in Computer Science	40	-	-	-	40	40	39
BSC in Information Systems	69	69	101	-	-	170	-
Bachelor of ICT	-	-	-	78	-	78	53
BSc in ICT	23	-	-	-	23	23	20
UCSC Undergraduates	275	212	250	232	63	757	215
BSc Faculty of Science	-	474	349	262	34	1119	-
Internal Undergraduates	275	686	599	494	97	1876	215

All courses are conducted in English Medium

Visiting Staff

All the academic and academic support staff participated in delivering the internal undergraduate

programmes. ICT degree programme consists of many courses that require external support. 13 persons were invited as visiting lecturers to conduct 10 ICT/IS degree courses and one CS degree course.

Industrial Placement

PDC continued to keep a close liaison with the IT industry and for improvement of the academic programmes through industry partnership thereby enhancing the quality of the undergraduates. During the year PDC placed 230 undergraduates at 70 organisations for their 6 months training, including 9 UCSC projects. This included two UCSC students placed at Umea University under the Linnaeus-Palme student exchange programme. Two students from Umea University were placed in Colombo, Sri Lanka. PDC organised companies to voluntarily take part in a series of guest lectures, through which the undergraduates are made aware of the role they have to play as professionals after they graduate. Credit transfer was offered for these two students. Through these lectures, the undergraduates were provided with a good orientation program and preparation before being sent for Internship. They were clearly communicated of the objectives and skills to gain during the internship.

Apart from the industrial training, the PDC organised Soft Skill Development Programme, Tech-talk sessions and mock interviews, while providing employment opportunities for pass out students.

MIT Global Start up session are held at the UCSC from 16th June until 25th July on even weekday from 4.30-7.30pm. Two teams of the UCSC is part of the training programme conducted by 4 trainers from MIT, USA.

Hostel

In the year, the UCSC provided residential facilities for the most needy 1st year as well as needy 3rd and 4th year undergraduate students in keeping with the policy adopted by the University of Colombo. The following hostels were rented and leased for this purpose. Boys' Hostel for First Year students in Kirulapone which was subsequently moved to Battaramulla and Girls' Hostel for First Year students in Kohuwala accommodated 38 students each with care taker and sub-warden. Searching for land to construct a new hostel was done during the year, but with little success as prices quoted was above our budget.

Canteen

In spite of several canteens functioning within the University premises, during the year under review, the UCSC maintained a separate student canteen specifically for its students. Construction of a new canteen which began last year was completed during the year. New canteen can accommodate 120 students and has facilities to serve food, watch TV and browse internet.

Counselling

Services of four Student Counsellors (one Lecturer and three Senior Lecturers) were provided to all students. Also, the service of a Professional Counsellor was obtained for a duration of 3 hrs a week to facilitate the students who required counselling.

Financial Assistance to undergraduate students

Financial assistance was given to students in the form of Mahapola scholarships Bursaries, Industry Scholarships and Personal Scholarships.

Mahapola Scholarships

The Mahapola scholarships sponsored by the Mahapola Trust Fund of the Ministry of Commerce & Consumer Affairs were awarded to 329 students. The value of Merit and Ordinary scholarships were Rs 2,550/= and Rs 2,500/= respectively.

Bursaries

Bursaries were awarded in accordance with UGC Circulars which governs the selection of students for bursaries. The breakdown of the Bursary recipients for the year 2014 is depicted in the following table. The value of a full bursary and a half bursary was Rs 2,000/= and 1,900/= respectively.

Hostel Facilities

Hostel facilities usually provided only to 1st years as 3rd years spend half the year at industry placement. As there were vacancies it was open for 3rd years as well.

Details of the number of students who received the Mahapola, Bursaries and Hostel are given in the following table.

Year of Intake	Year of Study	Mahapola Scholarship Awardees	Bursary Recipients	Hostel Facilities
2013	1 st year	82 (39%)	12 (06%)	49 (23%)
2012	2 nd year	117 (47%)	39 (16%)	-
2011	3 rd year	108 (37%)	26 (11%)	22 (09%)
2010	4 th year	22 (35%)	04 (06%)	-

Industry Scholarships

Three external organizations had sponsored Scholarships for the needy students, namely: BSharp; IFS R&D Limited (IFS); and MIND.

Shorea Robusta Scholarship

A Special scholarship named “Shorea Rubusta” scholarship was introduced by an Alumni of the former CS Special degree programme in 2007 in respect of 4th year undergraduate students. Two scholarships were granted under this scheme in the year 2013 and the value of the Scholarship was Rs. 2,500/= per month for 10 months of the Academic year. Selection was based on the academic performance and financial needs of the students.

UCSC Student Union

In terms of the Sub-Paras 25 and 26 of the University of Colombo School of Computing Ordinance No. 01 of 2002, the Student’s Union election was held for the year 2012/13 and the office bearers were elected uncontested. President: Mr. DVBC Jayasinghe; Vice president: Mr. SLR De Silva; Secretary: Mr. KMSA Kallora; Editor: Mr. DMP Dangalla; Junior Treasurer: Mr. MGD Madusanka; Committee Members: Mr. GN Wanigasinghe; Mr. T Jayanath; Mr. MF Jaleel; Mr. WAMS Weerasooriya; Mr. BN Dahanayake; Mr. TS Sahanayake; Mr. CP Rajapaksha; Mr. AAM Afzar. Mr. MGNAS Fernando continued as the Senior Treasurer.

Student Activities

Student activities are carried out through the student union mainly to promote cultural, ritual and recreation activities. Students organized Vidunethata Dam Sisila in March; Pirith Chanting ceremony on 4th April; Avurudu Ulla on 2nd May; Students and staff took part at Bakthi Gee event on 11th May to celebrate Vesak. Students also make a big lantern near UCSC canteen as well as contributed towards University of Colombo decorations by making over 300 small lanterns; Students organized a "Dharma Desanawa" on 3rd June to commemorate the death anniversary of Prof Samaranayake; Poson Ceremony (Shakyasinha Guna Gee Dahana) in June; Donation for Cancer Hospital in June; Cricket tournament in July; Students organized a sports day on 18th Sept; Students organized Paramitha blood donation event on 24th Sept; UCSC students organized a Fresher's welcome on 8th Nov; Several UCSC students were recognized at UoC colours night held on 24th Nov; Pass out students had a dinner for academic staff on 4th Dec; Going Down Party; Christmas Crib and Carols; Vani Vila Ceremony in November; Batch trip was also among the activities they organized. UCSC students conducted several workshops at UCSC and at Schools to assist students and teachers with GCE (O/L) & (A/L) ICT. Students also conducted a computer workshop at a remote school in Anuradhapura and donated a computer.

Student Achievements

Harsha Perera of UCSC emerged as the Winner of **Sri Lanka Emerging Young Leader Award (EYLA 2014)**. Grand finale was held on 27th June at National Youth Centre, Maharagama.

The team Corporate Consultants representing the University of Colombo emerged as the Sri Lanka Champions of the CIMA Global Business Challenge 2014 held on 21st June. P Samarakone (UCSC) also adjudged the best speaker at the competition, S Abeysirigunawardena (UCSC), S Herath (Faculty of Management, University of Colombo) and B Awanthie (Faculty of Science, University of Colombo) were the team members. The team represented Sri Lanka at the **CIMA Global Business Challenge 2014 Global Finals** in Mumbai, India during the first week of August and emerged as the **Winners**. CIMA recognized the Global CIMA winners where two of them were from UCSC on 12th November at their Business Case Awards night.

Students won the **National Best Quality ICT Awards (NBQSA) Gold** for Tertiary (Business): PN Peiris; MH Perera; MS Kumarage; D Chandana for "ta.lk – Public Complaining System"; NBQSA **Bronze** for Tertiary (Business): GW Wakista; SJ Abhayarathne; GT Mendis for "Alco tracker: Recognizing Level of alcohol intoxication in Sri Lankans through changes in suprasegmental effects and reaction time"; NBQSA Two **Merits** for Tertiary (Technology): Y Sampath for "Obstacle Classification through Acoustic Echolocation" and TSR Peiris; RA Amarasinghe; LK Sivaganeshan; TL Senavirathna; GM Priyankara for "Sens" and **Merit** for NBQSA Tertiary (Business): for "Sasthara".

Imagine Cup is an annual competition held under different categories among university students. Students **won** the Games category: B Senarathne, M Wijewickrama, P Samarakone and S Gunasinghe: Fat and Thin Studios "Bird Academy"; became **1st runners-up** at World Citizenship category: YK Lokuge (Team Leader), P Madumal, T Kumara, D Ranasinghe: Techsurge "Navisys" and **2nd runners-up** at innovation category: We_Cobraz "V-Detector".

IEEE Extreme 8.0 global programming competition was successfully with the participation of 280 students (86 teams) on 18th October for 24 hours from UCSC. UCSC top teams were able to get the best ranks that UCSC gained in the Extreme history yet. Our top team "Freakz" was the 7th in Sri Lanka and 109 in the World. We were able to get 4 teams in the first 200 of the world.

UCSC students won the **Gold** Award with prize money of 70,000 for securing the first place at the **Code Fest 2014** held at SLIIT Malabe from 23-24 Oct. Gold Award won by PN Peiris, MA Shelton, H Perera and S

Udeshini for Falcon.

UCSC won **4 awards** (3 winners and 1 special merit) at the **e-Swabhimani** 2014 Awards held on 5th November 2014. e-Science and Technology category: 'Siyara' Harbour Vessel Traffic Management System produced by Staff; e-Government and institutions category for the Automated Fingerprint Identification System (AFIS) produced by Theekshana together with the Criminal Record Division of Sri Lanka; and e-Inclusion and Participation category for Swaraloka produced by 4th year ICT students of the UCSC, namely: SC Kumari, DB Kiriella, KC Ranasinghe under the supervision of Dr. KL Jayaratne were among the winners. e-Government and institutions category for Title Registration System produced by Software Development Unit of the UCSC on the special merit.

Automated Guided Wheelchair by Yasith Lokuge, Prashan Madumal, Tharindu Kumara & N. Ranasinghe was placed **1st Runners-up** at Inter University Innovations Championship 2013 held on 21st February 2014 at the UCSC. m-Education & Learning category: Sipsala a student project by Y Lokuge won the **mBillionth** Award held in India.

Project of Maneesha Wijesekara, a UCSC 3rd Year student was awarded as runner-up from my crowd funding category in the grand finale of **Social Media for Digital Empowerment** Awards 2014 which held on 20th November in New Delhi.

TAD Hackathon a Telecom Application Development Hackathon organized by hSenid Mobile was held on 6th-7th June. A team from UCSC qualified to participate at the global event held on the 7th in Madrid, Spain.

Two 2nd year students, namely: MS Kumarage and PAA Randika successfully completed the **Google Summer of Code** 2014.

HHAT Asanthi (2010/ICT/099) and MS Yatigala (2010/ICT/05) participated at a conference from 16-17 December in Pattaya, Thailand.

Sports

WARR Somawera (2013/IS/055) and KJMC Tharanga (2013/CS/128) took part at the international inter varsity invitational cricket tournament held in Malaysia from 6-18 November.

Following UCSC students were appointed captain and vice-captain of the University of Colombo for respective sports or UCSC team have won the mention trophies at the 2013 colours night.

Athletics / Track & Field: Colours List (W) - SNN Hettiarachchi.

Badminton: Colours List (M) - GKRB Gajanayake, PM Ranathunga; **Colours List (W)** - *DGU Amarasinghe, *TDP Peiris.

Baseball: Colours List (M) - TS Dahanayake, *IA Wijesinghe.

Carrom; Colours List (M) - HMAU Bandara, *EDSC Karunapala; **Colours List (W)** - BS Wijerathna, TAK Lochana, *PMKA Madugoda, *HHID Florence.

Chess: Colours List (M) WARM Wijesooriya, MDY Perera, *DC Malimage; **Colours List (W)** - COB Weerathunga.

Elle: Colours List (M) - GA Madushanka

Football: Colours List - WAMRC Abhyarathna, GWSC Gintota.

Hockey: Colours List (M) - KKTP Ranathunga, *AAJ Bhagitha; **(W)** WCE Wickremasinghe, *KGHU Deshappriya.

Karate: Colours List (M) - *IADKCW Gunarathna; **(W)** - *Ms. LGA Thilanka; **Captain (M)** IADKCW Gunarathna; **(W)** - Ms. LGA Thilanka.

Road Race: UCSC Challenge Cup for Road Race, **Faculty Trophy**.

Rowing: Colours List (M) N.A.N.S.S. Mihindukulasooriya (2010/ICT/001)

Rugby: Colours List - HPIV Pathirana, IMSM Herath.

Swimming: Colours List (M) - *GBS De Silva.

Teakwondo: Colours List (M) - WAMS Weerasooriya, *APT Visvakula; **Captain (M)** - APT Visvakula

Tennis: Colours List (W) - *Ms. GADM Ganepola, *Ms. BLW Witharana.

Volleyball: 2013 - Colours List (M) - YMKK Yaparathne, *RMKH Ranasinghe; **Captain (M)** - RMKH Ranasinghe.

Graduation

Graduation ceremony was held on 10th June 2014 for 215 students from 4 degree programmes. Students for the ICT degree programme are selected from any A/L stream. In table 3 student performance by stream is also shown for these students.

A survey was carried out by the Ministry during the convocation which was held seven and ten months after completing the degree for 4th and 3rd years respectively. Details of the survey is not yet available to include in this report.

Table 3: Performance of UCSC Graduates

Intake	First	Upper	Lower	Pass	TOTAL
BSc	2	1	17	83	103
BICT	0	0	15	38	53
Mathematics	0	0	8	16	24
Biology	0	0	3	3	06
Commerce	0	0	4	14	18
Arts	0	0	0	5	05
BSc CS	10	14	10	5	39
BSc ICT	4	12	3	1	20
Mathematics	2	10	2	0	14
Biology	2	2	1	1	06
Commerce	0	0	0	0	00
Arts	0	0	0	0	00
TOTAL	16	27	45	127	215

Figure 1 shows that the UCSC graduands employability similar to Medicine and better than Engineering based on Ministry data collected in 2013. Similar survey carried out for the external degree two months (much short than internal period) after the graduation showed that of the 139 graduates 77% were employed while only 13% was looking for employment.

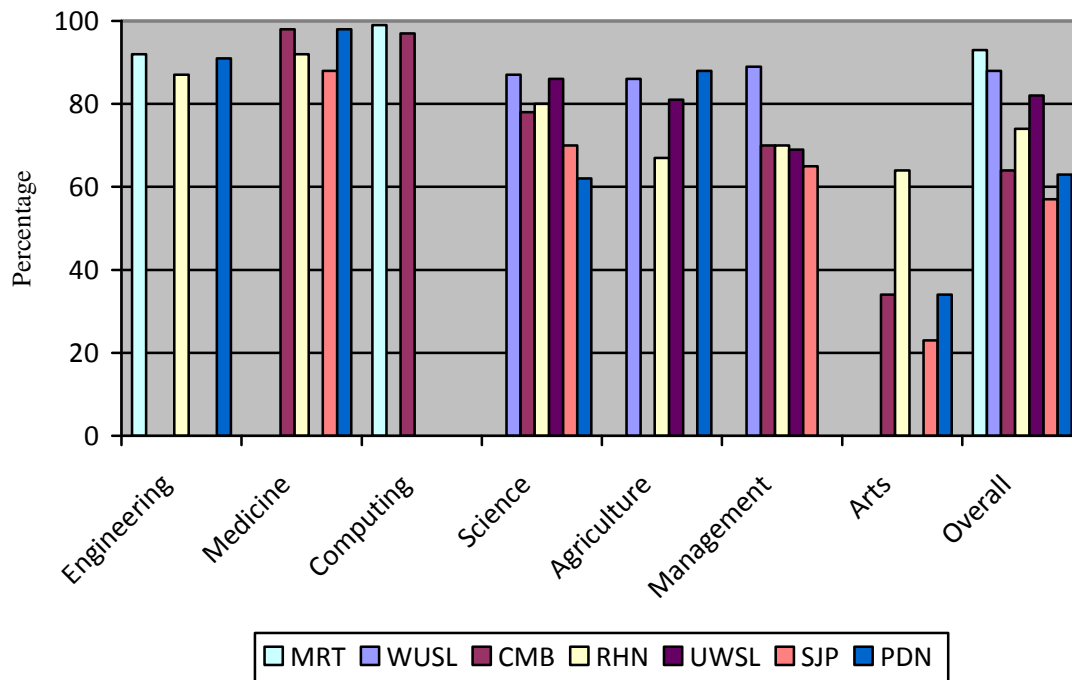


Figure 1: Employability of University Graduates

Awards

Prof. V.K. Samaranyake Medal for the most outstanding Graduate of the UCSC was awarded to Ms. M.G.D.K. Fernando. In the CS Degree Programme three awards, namely Prof. Mohan Munasinghe Award for Computer Studies, David Peiris Group Gold Medal for the Best Performance in Industrial Training and Virtusa Academic Excellence award for the Best Performance were awarded to Mr. C. Pankajan; four students jointly (W.L. Ranaweera, M.J.M. Shazan, W.A.A.M. Weerasinghe, W.D.N.Y. Gunathilake), and T.M. Gamalath respectively while CINTEC Award for the Best Computer Science Final Year Project was awarded to M.J.M. Shazan. In the ICT Programme Ms. H.D.S.T. Wijerathne, R.P.H. Vithanage and T.G.E. Perera were awarded the IFS Academic Excellence Award for the Best Performance, David Peiris Group Gold Medal for the Best Performance in Industrial Training and Motorola Academic Excellence Award for the Best Performance respectively. Ms. H.D.S.T. Wijerathne & Mr. G.B.I. De Silva were awarded the Sampath Bank Award for the Best Final Year Project for the ICT Programme.

Attracting good students is our primary concern as it contributes towards the quality of the students we produce. Students enrolling for the undergraduate programme are selected centrally by the University Grant Commission (UGC). It is based on student preference. Currently most student's first choice is either Engineering or Medicine. Also most students were unaware of the UCSC degree programmes and career opportunities in the computing field. Thus UCSC continued to organize workshops over two days for potential new admissions which were well attended. So far those shown interest have not had the opportunity to enrol for the internal programme.

Postgraduate Education

Postgraduate programmes were first offered at Colombo in 1986 through postgraduate diploma programmes. During the year under review the UCSC continued to conduct three (03) Master's Courses. Computer

Science Course is intended for those with a Bachelor's Degree or equivalent in Computing and the Master of Information Technology programme which is intended for graduates and practitioners in other disciplines. MIT programme included e-Learning and Multi-Media streams. The Master of Information Security which has been designed for graduates who wish to acquire a postgraduate qualification in the area of Information Security. This programme offers mid-career opportunities for those working in the areas of Information Technology, Information System Audit and Information Security.

The Master's Programmes offered by the UCSC are two year part-time courses and of four semesters' duration. The courses commenced in January 2014 for the 2013/2014 intake. The recruitment of students for the 2014/15 was initiated during the year holding selection tests and interviews. Increased number expected to be enrolled to commence the programme in January 2015.

A total of 30 internal staff and visiting lecturers contributed to the programme. Total population of Master's students was 368. The income derived from Master's programmes contributes to the UCSC generated fund in a considerable manner and plays an important role in providing support towards its infrastructure and research activities.

UCSC now offers three master's degree programmes and research degrees have 368 students (Table 4). Master of Computer Science offered since 1990 had 149 students. Information Technology programme offered since 2000 had 166 students. Information Security programme had 53. First Bioinformatics programme offered with IBMBB which had 13 students was completed this year with results pending. 47 research students are carrying out research leading to MPhil/PhD. Emphasis put on research is becoming evident with the highest number of research students graduating this year.

Seven new students (04 Part-Time and 03 Full-Time) registered for the M.Phil Degree programme while six full-time students got upgraded from MPhil to the PhD Programme.

Table 4: Postgraduate Degree Programmes

Course	Intake 2013	1st Year Students	2nd Year Students	3rd Year Students	4th Year Students	Total	No of Graduated
Master of Computer Science	81	81	68	-	-	149	42
Master of IT	100	100	66	-	-	166	46
MSc in Information Security	27	27	26	-	-	53	12
PGD in Computer Science	-	-	-	-	-	-	04
PGD in IT	-	-	-	-	-	-	02
PGD in Information Security	-	-	-	-	-	-	01
Taught PGD	208	208	160	-	-	368	107
PhD	02	-	02	03	02	07	01
MPhil	07	07	10	08	15	40	03
Total	217	215	172	11	17	415	110

All courses are conducted in English Medium

Awards

Postgraduate convocation was held on 23rd September 2014 at BMICH. Kingslake award for the best student for Master of Computer Science Degree Programme was given to Mr. HR Yatawatte while JICA award for the best student for Master of Information Technology was awarded to Ms. DGR Dilrukshi. The University of Colombo Research Award (UCSC) - 2013 was awarded to Dr. KL Jayaratne, Senior Lecturer of the UCSC.

External Degree & Extension Courses

External degree programme commenced had 6,235 enrolled while 389 followed the extension programmes. In addition the UCTIT & UTEL programmes 10,995 and 5,283 sat the exams respectively. FIT programme had 799 registered students and 936 sat the examinations during the year of which 257 passed the FIT theory papers and 5 students qualified for FIT having also passed the practical papers. During the year e-Learning centre conducted online examinations for UGC and KPMG.

BIT programme alone has attracted 31,561 since its inception and has produced 1,661 graduates; 3,127 higher diploma holders and 6,518 diploma holders. In 2013/14 had 2379 new enrolments and produced the highest graduate output (Table 5). Recruitment process for 2014/15 also commenced during the year with over 1500 enrolled before the end of the year.

Table 5: External Degree Programme 2013/14

Course	Intake	1st Year Students	2nd Year Students	3rd Year Students	Total	No of Graduated
Diploma in Information Technology	2379	3058	1154	323	4535	515
Higher Diploma in IT	721	1154	486	943	2583	339
Bachelor of Information Technology	347	323	620	594	1537	225
All		4535	2260	1860	8655	

Table 6 highlights the performances of the BIT students over the last three years identifying number registered and graduated along with targets.

BIT institute meeting was held to brief the curriculum changes and obtain institute feedback on 30th April. BIT examinations were held in Colombo, Kandy, Galle and Jaffna.

Table 6: External Degree Performance over last Three Years

External Undergraduates	KPI	2011/12	2012/13	2013/14
DIT - New Intake	2000	2365	2034	2379
DIT – Registered	4000	4287	4175	4535
DIT - Diplomas	600	654	611	515
HDIT - Higher Diploma Intake	600	648	714	721
HDIT - Higher Diploma Registered	2000	2019	2391	2260
HDIT - Higher Diplomas	300	262	305	339
BIT - Degree Intake	300	279	312	347
BIT - Degree Registered	1500	1293	1416	1860
BIT - Graduates	200	172	194	225

Graduation

Performance of those participated at the 2013 convocation held on 10th February 2014 is shown in Table 7. Record number of 194 graduates were conferred the degree at this Convocation. 181 (93%) responded to the employment survey held two months after their project examinations. 139 (77%) were already employed, 24 (13%) of them were looking for better employment, 9 (5%) were continuing their studies and others didn't give any reason for not being employed. The employment percentages over the previous two years were 81% and 87% respectively. However with the release of results of the next batch a record number of 225 qualified for the BIT degree.

Table 7: Those Graduated at the Convocation held in 2014

Intake	First	Upper	Lower	Pass	TOTAL
BIT	-	7	11	176	194

Awards

Prof. VK Samaranayake Medal for the Best Performance at the Bachelor of Information Technology (External) Degree was awarded Mr. WTD Perera. The best individual project was awarded to Ms. TWTT Wimalasiri. Mr. MJPU Samanthilake Memorial Award was awarded to Mr. KHM Irshad. Best e-Learner awards for the 4 semesters were awarded to Mr. SACS Muthukumarana, Mr. BRR Gunasena, Mr. HLSE Samarasinghe & Ms. BMDN Basnayake respectively.

Institutes

Many training institutes have offered face to face classes and learning support for the BIT candidates. Over 200 institutes have participated in this process with around 50 institutions in some academic years. UCSC do not accredit any of these institutions but have recognised their contributions for the success of the programme. Each year UCSC publish the summary of examination results for each course by institute so that the candidates can identify the available institutions and plan their learning mode. More than half the candidates study on their own with the help of the VLE and online/recommended material. In 2013/14, 36 institutions from 13 districts conducted training for five or more candidates. Among them 12 institutions were involved in all three years (marked * in the Table 8).

Table 8: Institutes involved in the BIT Programme

District	Institute
Ampara	(1) ESOFTE Computer Studies, Kalmunai
Batticaloa	(1) ESOFTE Computer Studies
Colombo	(1) Aurora Computer Studies, Maharagama (2) *E-Academy Computer Education Centre, Colombo 06 (3) *Earth International, Colombo 08 (4) East J Lanka Computer Training Institute, Colombo 08 (5) *ESOFTE Computer Studies, Colombo 04 (6) ESOFTE Computer Studies, Nugegoda (7) *Foundation Of It Professionals, Pannipitiya (8) *IDM Computer Studies, Colombo (9) *Matrix Institute of IT, Colombo 04 (10) *Openarc School of Business and Technology, Colombo 06 (11) Tec Sri Lanka (12) *Wideawake Solutions, Pepiliyana
Galle	(1) ESOFTE Computer Studies
Gampaha	(1) *Earth International (2) ESOFTE Computer Studies, Gampaha (3) ESOFTE Computer Studies, Negombo (4) ESOFTE Computer Studies, Kiribathgoda

Jaffna	(1) ESOFTE Computer Studies (2) Jaffna College Institute of Technology (3) *MIS BIT Campus (4) *Mobile@Net Computer Services
Kandy	(1) *ESOFTE Computer Studies (2) Matrix Institute of IT (3) National Institute of Co-operative Development
Kegalle	(1) Institute of Computer Studies (2) Solarize Computer Studies
Kurunegala	(1) *ESOFTE Computer Studies
Matara	(1) Dbase School of Computing (2) ESOFTE Computer Studies (3) IDM Computer Studies
Nuwara Eliya	(1) iWAVE- Ginigathena
Ratnapura	(1) Foundation of IT Professionalssensip (2) ITsoft Computer Studies, Balangoda
Trincomalee	(1) ESOFTE Computer Studies

UCSC offered nine extension certificate courses and attracted nearly 400 students. Although there had been a drop in the numbers over the past few years 2014 recorded a slight improvement. Table 9 identifies the details of the CSC courses (programmes) conducted by the UCSC (D – Duration in days; B – No of Batches; P – Total Participants).

Table 9: CSC Training Programmes

Course	2013	D	B	P
Java Application Development using JavaSE	35	8	4	89
Advanced Java Application Development using JavaEE	51	8	3	67
Unix/Linux Network & System Administration	78	5	3	71
Advanced Multimedia Web Design & Development Techniques	28	8	2	39
Computer Aided Drafting Using AutoCAD 2010	36	8	1	18
Project Management Software	-	2	1	24
Web Designing using Joomla	-	2	1	7
Free and Open Source Software	-	2	2	64
Securing Mobile Applications	-	4	1	10
Others	81	-	-	-
TOTAL	309	47	18	389

Foreign Students

To be accepted as a centre of excellence in the region it is important to attract foreign students. Although foreign student category to enrol students had been there for a while only students who have done their A/L elsewhere but with local connections have applied so far. During 2011 first student enrolled under the foreign student category for the CS degree programme. 2013 we had the first foreign student from Bhutan for the Master of Information Technology programme and subsequently from Pakistan for Master of Science in Information Security but dropped out after the first semester. This year a student from Nigeria joined the programme. Details of foreign student enrolment are given in table 10.

Table 10: Foreign Students

Course	Medium	Intake	1st Year Students	2nd Year Students	3rd Year Students	4th Year Students	No of Graduated
Computer Science	English	-	-	-	01	-	-
MIT	English	01	01	01	-	-	-

New Courses Started

Due to the curriculum revision and change of degree programme the BICT programme was renamed to BIS. However it cannot be considered as a new course as an equivalent one was there before. However the new BSc in CS intake will have the opportunity to opt for new Software Engineering Degree during their 3rd year in 2015. To commence a new certificate programme leading to a degree an MOU was signed between FITIS, NODES and the UCSC to conduct the International Competency in IT (ICIT) programme. Programme is expected to commence in 2015.

Table 11: New Courses

Course	Medium	Certificate	Degree	Postgraduate Diploma	Master	M.Phil	Ph.D
Software Engineering	English	-	1	-	-	-	-
ICIT	English	1	-	-	-	-	-

RESEARCH

Research, Innovation and Publications

Research is carried out under different research groups and through research students (Table 13). UCSC admits graduates with good first degree results in Computer Science/Engineering for its full/part time (FT/PT) MPhil programme mainly centred on research projects in progress. 7 new students registered for MPhil during the year and while 7 were upgraded from MPhil to PhD. Currently 40 students are working on 20 disciplines under 19 senior academics of the UCSC and 9 external researchers. 18 research projects leading to MPhil/PhD have been completed so far. 21 MPhil/PhD students had publications during the year.

Prof. Ginige from University of Western Sydney visited UCSC to spend few days in Dec on the Social Life Network research Project. Prof. Saman Halgamuge from University of Melbourne delivered a guest lecture on "An Opportunity to increase Sri Lanka's Published and Index Research Profile".

Table 12: Staff Research Areas

Research Area	FT	PT	Total	New	Complete
Artificial Intelligence	1	2	3	0	0
Computer Graphics	1	2	3	0	0
Data Semantics	2	0	2	1	0
Digital Forensic	1	0	1	0	0
e-Learning	2	4	6	0	0
Game-based Learning	0	1	1	0	0
Geographical IS	0	1	1	0	0
Green IT	1	0	1	0	0
Heuristics Optimization	0	1	1	0	0
Image Processing	0	1	1	0	0
Information Systems	3	0	3	1	0

Intelligent Systems	0	1	1	0	0
Knowledge Engineering	1	0	1	0	0
Machine Learning	1	0	1	0	0
Mobile Learning	1	0	1	0	0
Multimedia	3	0	3	3	0
Natural Language Processing	3	0	3	0	0
Sensor Networks	0	1	1	0	0
Social Science and IT	0	3	3	2	0
Software Engineering	0	3	3	0	0
TOTAL	20	20	40	07	04

To promote research at the UCSC a research fund was established with utilisation guidelines in 2009. Since the initial contribution of 4 million from the masters and BIT this fund has continued to grow through generated funds and it now stands at 95 million. Senior and junior staff respectively could annually utilise up to 350,000 and 200,000 rupees to participate at research meetings and publish research in international conferences and journals. Additional quota of 100,000 was also introduced to encourage research achievement. This increased annual UCSC publications from 30s to 60s. Among the years publications 56 were conference papers held in 12 countries. 24 (60%) academic staff published research papers. Table 13 gives the details of the publications.

Publications included 86 co-authored papers by the following staff: GN Wikramanayake (10), AT Dharmaratne (8), GKA Dias (8), ND Kodikara (7), KL Jayaratne (6), DN Ranasinghe (5), Y Ekanayake (4), JS Goonathilake (4), KP Hewagamage (4), AR Weerasinghe (4), LNC de Silva (3), KTN de Zoysa (3), CI Keppetiyagama (3), WMKG Weerasinghe (3), SMKD Arunatilake (2), MGNAS Fernando (2), DD Karunaratna (2), GDSP Wimalaratne (2), DAS Athukorala (1), HA Caldera (1), RS Madanayake (1), SP Mataraarachchi (1), HL Premaratne (1), RMPN Somaratne (1).

Table 13: Research Summary

Subject	Published	Commercialized	Presented
No of Researches	107	-	56
No of Innovations	-	-	-
No of Journals	11	-	-
No of Books	-	-	-
No of Articles	56	-	-
Other	-	-	-
Total	67	-	56

Conferences, Seminars & Workshops

Setting up mechanisms for identifying & carrying out relevant research is another strategy of the UCSC. Sixth UCSC Research Symposium was successfully held on 28th March with the involvement of the final year students UCSC continued to publish three issues of the ICTer Journal. UCSC Organized International IT Conference for Emerging Regions was held successfully from 11-12 December 2014 which included pre and post conference workshops held on 10th and 13th Dec. UCSC also revised mechanism for utilizing Research Fund by all academics to encourage further involvement in research. 2nd Asian Conference on Information Systems for Crisis Response and Management (ISCRAM) was hosted at UCSC from 20-21 June while ISSALE summer school was successfully held from 1-26 Sept.

UCSC successfully held the annual Prof. V.K. Samaranayake oration on 23rd July 2014 at the UCSC. Orator Prof. Abhaya Induruwa spoke on "The Intelligent Future". Prof. Abhaya Induruwa was also selected as the first endowment chair under the Prof. V.K. Samaranayake endowment fund. He spent his first visit from 24th

July until end of August 2014 spanning six weeks. Details of the conferences, seminars and workshops are given in table 14 with staff presentations.

Table 14: Conferences, Seminars and Workshops

Subject	Participated	Published	Presented
Senior Academics local conferences	20	5	1
Senior Academics International conferences	15	31	17
Organized International Conference (ICTer)	199	21	-
ICTer Journal	5	3	-
Total	239	60	18

Awards Received

UCSC continued to encourage students participate in national and international competitions. Details of winners of those were listed under student achievements. UCSC also encourage staff research products too to compete locally and internationally. UCSC staff won Bronze and Merit at NBQSA Research & Development category. 'Siyara' Harbour Vessel Traffic Management System produced by Staff; e-Government and institutions category for the Automated Fingerprint Identification System (AFIS) produced by Theekshana together with the Criminal Record Division of Sri Lanka were among the winners. e-Government and institutions category for Title Registration System produced by Software Development Unit of the UCSC on the special merit. Sadaruwan won the TOYP 2014 - Ten Outstanding Young Persons award in recognition of his accomplishment in the field of technology development on 11th November. Beside some staff got NSF and NRC grants to carry out their research. Details of the awards received are given in table 15.

<http://www.slrail.info> website was launched on 27th June. This was an outcome of a research supervised by Dr Kasun de Zoysa. This allows public to monitor train travel in the southern line with arrival time and speed of the train. World Bank team visited to review the progress of Q4 grant on 20th and 24th February. They were very pleased of the progress and said ours were the only project with satisfactory progress. World Bank published an article on "My Wish Came True: Innovation in Sri Lankan Universities" quoting a UCSC project under HETC funding.

Table 15: Awards Received

Subject	No of Awards	No of Academics	No of Students
Local Awards	-	-	-
National Awards	16	6	43
International Awards	5	2	4
Other	-	-	-
Total	20	8	47

Academic Staff

Two academics who went on sabbatical resigned. During the year appointments were made for the recruitment of five Lecturers (Probationary) and three Senior Lecturers based on the interview held in the previous year. One of the Lecturer later resigned subsequently. A Lecturer (Probationary) was also terminated after failing to obtain postgraduate qualifications. Due to remuneration attractions in the industry UCSC have not been able to fill all the academic positions. Only 40 of the 82 Academic & Academic

support carder positions are filled. Retaining trained technical personal and attracting good young academics were extremely difficult due to better prospects in the private sector. Beside the permanent staff to carry out daily activities UCSC rely on visiting staff for the information systems degree programme to deliver some of the courses.

In order to attract international human resources short term visiting researchers from Australia, Sweden and UK was hosted during the year. Particularly Prof. Induruwa through the endowment fund set up recently. UCSC also continued the staff exchange programme under Linnaeus Palme Project with Umea University, Sweden and UCSC staff member successfully conducted a course in Umea.

Details of the UCSC academic staff is given in table 16.

Table 16: Staff Research Areas

Subjects	Medium	Senior Professor	Professor	Senior Lecturer	Lecturer	Asst Lecturer	Instructor
Computing (P)	English	-	03	20	15*	-	02
Computing (C)	English	-	-	-	-	06	18

*04 on leave

Non-Academic Staff: Permanent (P) Contract/Assignment (C/A)

Online payment facility for external and extension programmes and postgraduate programmes was continued. Financial system at the UCSC was upgraded and a project to implement surveillance and barcode based asserts monitoring system was initiated.

Details of the UCSC non-academic staff is given in table 17. Although carder for 78 Non-Academic staff were approved UCSC only 40 permanent position have been fill and the most of the work is carry out by contract and assignment staff. 22 contract employees became eligible for permanent status based on UGC circular.

Table 17: Non-Academic Staff

Type	Most Senior(Admin)	Senior Staff	Junior Staff	Minor Employees	Project Staff
P	8	4	22	6	-
C	-	6	11	8	17
A	-	1	10	9	7

Staff Training and Overseas Leave

Training leave: One academic staff participated at training programmes held overseas, namely Mr. SCMB Attanayake (Singapore).

Twelve academic staff participated at conference overseas involving 13 visits, namely: Mr. MGNAS Fernando (China & Thailand), Prof. ND Kodikara (Singapore), Mr. KKK Dharmathilaka (Thailand), Ms. WMKG Weerasinghe (Singapore), Dr. HA Caldera (Malaysia), Dr. KL Jayarathne (Singapore), Dr. (Mrs.) Yamaya Ekanayake (UK), Dr. AR Weerasinghe (Qatar), Dr. (Mrs) MDJS Goonetillake (New Zealand), Mr. WV Welgama (India), Dr. TMHA Usoof (Hong Kong), Dr. DAS Atukorale (China).

Two academics were invited as keynote speakers, namely: Dr. AR Weerasinghe (Imphal, India) and Dr. MDNR Dayarathna (New Delhi, India).

Dr. (Mrs) M D J S Goonetillake visited Umea University in Sweden on staff exchange programme for six weeks. Dr. MDRN Dayarathna visited Stockholm University, Sweden to discuss joint Masters programme. Prof. G.N. Wikramanayake attended IOI competition in Taiwan as the team leader of the national team. He

also visited Jakarta Indonesia as a judge at APICTA 2014. Dr. KL Jayaratne visited India to receive Manthan Award.

Dr. Mrs. A T Dharmarathna, Senior Lecturer Gr. I went on sabbatical to Monash University, Malaysia in January. She subsequently resigned in December. Two who went on sabbatical returned during the year while Dr. MC Jayewardena who went to Australia also resigned.

Mr. V B Wijesuriya went on study leave from 10-09-2014 to 01-11-2015 to pursue an MSc in Computer Science at the University of Oxford in the United Kingdom. Three others namely, Mr. HM Siriwardana (Japan), Ms. LNC De Silva (Sri Lanka), Mr. MIE Wickramasinghe (Malaysia) continued to be on study leave. Ms. FHAM Premachandra (Australia) returned after successfully completing her PhD.

Four staff members went on 06 personnel visits, namely: Mr. A M D H Aththenayake (Thailand), Mr. KS Goonathillake (Thailand & Myanmar), Dr. KL Jayarathna (Australia & India), Mr. HKTC Halloluwa (Thailand). Mr. G M Sirisena, Book Keeper went on no-pay leave for two years for employment in Qatar.

Staff Welfare

Insurance Scheme

An Insurance Scheme was introduced for the benefit of UCSC employees in the year 2013 with the Union Assurance end in mid-year with only around 51 employees had subscribed to this Insurance Scheme. This scheme was replaced by a claim system together with the Medical Centre of the University of Colombo as premium paid was much less than the claims.

Annual Trip

UCSC staff went on a welfare Trip to Trincomale from Oct 10-12. Welfare Society also organized a one day get together at Ambalama on 21st Dec. Welfare Society introduce facilities for staff with Fridge, Microwave, Exercise equipment for use from 1st Jan 2015. UCSC through its generated funds contributed nearly 5 million for the welfare society activities.

UCSC welfare meeting was held on 17th February and an election was held on 21st to remove department of Statistics from the constitution as they had not been able to contribute towards the fund raising of the society.

FINANCE

Recurrent Expenditure

UCSC contributes towards the day to day operations using generated income as treasury funds are inadequate to carry out the undergraduate activities. Cost per undergraduate student is 190,000. UCSC contributed 67 million for the internal undergraduate programme which was 42% of its undergraduate recurrent expenditure. Despite increase in personal emoluments the government allocation was lower than the previous year. Breakdown of recurrent expenditure is given in table 18.

Table 18: Recurrent Expenditure Rs. 000'

Subject	2013	2014
Personal emoluments	92,840	124,691
Travelling	528	645
Supplies	4,579	8,969
Maintenance	3,057	5,303
Contractual Services	29,701	37,614
Other	57,357	108,306
Total	188,062	285,528
Government Allocation	91,802	93,716

Capital Expenditure

UCSC invested in physical resources to improve its computing facilities. Several computer laboratories was replaced with state of the art equipment with generated funds. UCSC set up a barcode system to keep track of their assets. Equipment of the network operating centre was upgraded to meet increased throughput. Details of capital expenditure are given in table 19.

Table 19: Capital Expenditure Rs. 000'

Subject	2013	2014
Acquisition of furniture & Office Equipment	14,604	37,328
Acquisition of Machineries	-	-
Acquisition of Building & Structures	22,327	71,702
Other	4,076	6,506
Total	41,007	115,536
Government Allocation	19,150	15,000

Projects (Local/Foreign Funded)

UCSC has a strong research group in several disciplines. Modelling & Simulation (FASS-2, SLN), e-Learning (NSF), Sustainable Computing (K-Sim, ASSERT, Tikiri DB), Food Security (NTRP) and Language Technology (LTRL) are among those that have reached the user community. UCSC has created a collaborative inter-disciplinary research culture as well as strengthen industry university collaboration.

Beside research based projects UCSC carry out consultancy services to public and private sector. UCSC is well known for some of its work in the past. UCSC has assisted with the National Elections since 1981. Birth Marriage certificates are now issued over the counter using UCSC software. Sinhala language is supported in modern computers due to the efforts of UCSC through the design and development of Sinhala Unicode.

Through the e-learning centre several e-testing based recruitment test were conducted for many organizations. UCSC also continued to carrying out Digital Forensic activities to assist court cases. Team from Digital Forensics and Council of Europe visited to study the activities of the Centre for Digital Forensics on 11th November.

While maintaining strategic partnerships with key stakeholders the UCSC continued implementation of e-Government projects in the country and commenced new projects with HETC and Government Ministries. Theekshana, a UCSC owned company which started with zero balance has now around Rs. 9 million reserves. Details of the UCSC projects carried out and their expenditure are listed tables 20 and 21.

Meeting was held with Queensland University of Technology team to hold join degree programmes on 15th Dec at postgraduate level.

Theekshana

Theekshana was able to attract local community interest and recover within a year to end the 2013/14 financial year with profit. Theekshana received a lot of attention and due publicity for the Automated Fingerprint Identification System (AFIS) developed for Sri Lanka Police. It was officially launched on 27th February by the Secretary Ministry of Defence at Deyata Kirula exhibition. Due to this success INTERPOL AFIS Expert working group met in Colombo on 18-19 November and they appreciated the software solution developed by the UCSC.

The Student Selection system of UGC developed by Theekshana continued to be used by UGC successfully in 2012/13 academic year. In addition, Birth Marriage and Death Certificate Issuance System was successfully used and expanded to other districts in the island in 2013/14. Baseline Survey for Higher Education was successfully conducted as in the previous year in collaboration with the Department of Statistics of University of Colombo. Another major project which began in the 2014 is the e-filing system for Supreme Court of Sri Lanka where lawyers will be able to file fundamental right cases on-line. This project was completed and launched on 30th Oct. Theekshana continued support the maintenance of Management Information System of BIT as well as the development an on-line application for admissions of Postgraduate students for University of Colombo School of Computing (UCSC). Theekshana staff also assisted the Software Development Unit of the UCSC to achieve several project deadlines by providing their services free of charge. Discussions were made with the vice chancellor of the University of Colombo to formalize the formation of Theekshana. A council memo was also submitted. Theekshana operations were made more aware among the UCSC board and staff by including a company review in the UCSC annual report of 2013 as well as providing its information to the UCSC auditors. Interest for Theekshana grew during the year with record number of 62 UCSC staff taking membership and showing interest of its operations. Theekshana members continued to be involved in implementing projects, however there is opportunity for more to be involved. Participation of directors at meetings was encouraging with over 70% attendance at each meeting. Theekshana also achieved one of its original goals of taking its reserves above the 10 million mark of which 9 million is invested. Theekshana held its 2013 AGM on 31st January and 2014 on 26th September.

Exhibitions

UCSC participated at the Infotel exhibition was held from 24-26 October promoting several programme and some student projects.

Table 20: Recurrent Expenditure

Rs. 000'

Name & Detail	Grant	Funding Agency	TCE	RFA	DF
Tikiri DB	1,558	Swedish Inst. of Computer Science			
Summer School Project	2,777	University of Stockholm			
ASSERT	2,087	Uppsala University			
Foreign Funds	6,422				
Field Artillery Simulation System	2,428	Ministry of Defence			
Three Dimensional Costal Surveillance System	2,655	National Science Foundation			
Monitoring & Management of Crop Production	6,008	National Science Foundation			
mLearning in different learning communities	1,020	National Science Foundation			
Face ID-computer based forensic facial reconstruction for SL using 3D graphics	1,569	National Science Foundation			
Aircraft Training Simulation Project	1,008	Ministry of Defence			
Automated Content Based Auto Monitoring System	800	National Centre for Advanced Studies			
Local Funds	20,226				

TCE – Total Cost Estimated; RFA – Request for Applications; DF – Discount Factor

Project Expenditure (Local/Foreign Funded)

Rs. 000'

Table 21: Project Expenditure

Name	TCE B/F Accu. Cost	Exp in 2013	Exp in 2014	Cumulative Exp as at 31.12.2014	% of Physical Progress
Tikiri DB		120	465	585	99%
Summer School Project			2345	2345	100%
ASSERT			656	656	25%
Foreign Project Exp		120	3,466	3,586	
Field Artillery Simulation System	1010	458	515	1983	95%
Three Dimensional Costal Surveillance System	1709	607	273	2589	100%
Monitoring & Management of Crop Production		1666	1786	3452	50%
mLearning in different learning communities			309	309	100%
Face ID-computer based forensic facial reconstruction for SL using 3D graphics			426	426	50%
Aircraft Training Simulation Project			836	836	90%
Automated Content Based Auto Monitoring System			335	335	100%
Local Project Exp	2,719	4,515	6,220	13,454	

Financial Progress (Expenditure)

Table 22: Financial Progress (Expenditure) Rs. 000'

Subject	Provision	Exp	Savings/Excess
Recurrent except Project	269,025	285,528	(16,503)
Capital except Project	199,450	132,206	67,244
Project - Local funded	13,454	13,454	0
Project – Foreign funded	8,920	8,920	0
Total	490,8490	440,108	50,741

Financial Progress (Generated Income)

Table 23: Financial Progress (Generated Income) Rs. 000'

Source of Revenue	Provision	Collection	Deficit / Surplus
Undergraduate Studies	2,775	4,366	1,591
Postgraduate Studies	63,103	66,469	(3,366)
Consultancies	11,500	18,589	7,089
External Degree	88,915	72,620	(16,295)
Other	53,254	75,426	22,172
Total	272,801	237,470	11,191

Excluding the Undergraduate income UCSC earned 2728015. Generated income of the UCSC was much higher than most universities and higher education institutes.

Financial Performance Analysis

Table 24: Financial Performance Analysis Rs. 000'

Subject	Formula	Exp. per Student
Recurrent Expenditure per Student (RE)	RE / No of Student strength	189
Capital Expenditure per Student (CE)	CE / No of Student strength	156
Total		345

Infrastructure Facilities Received in 2014

UCSC operate with limited space with inadequate space to conduct lectures. Students do not have adequate space in the canteen, common and study rooms. As the university was unable to provide land UCSC commenced Build West wing and fourth floor extensions to meet shortage in undergraduate classrooms and to accommodate fulltime research students all of which were completed by 2013.

While meeting the short term infrastructure needs expansion plans were designed to meet medium and long term goals. Construction of a canteen and administrative building at the current canteen location was identified along with replacing the existing auditorium with lecture halls/study rooms cum auditorium were among the medium term goals. Requirement to set up buildings outside the University of Colombo was also identified as long term goals. This resulted in a paper advertisement and identifying several suitable locations. However the Ministry of higher Education did not approve any of them and hence the attempt to purchase land was a failure. Details of the building work are given in table 25.

UGC initially approved the 2nd phase of the canteen and administrative building subject to UCSC taking an intake of 350 from 2015. However after explaining the current space limitations, the UGC granted approval for the construction of the phase II of the canteen and administrative building of the UCSC. East Wing Roof Top was handed over on 12th September while UCSC canteen phase 1 and roof top opened on 30 Oct along with laying of the foundation of the UCSC auditorium foundation on the same day with the participation of the Vice-Chancellor and other invitees.

Table 25: Infrastructure Rs. 000'

Infrastructure Details	Expenditure (Rs)	Physical Progress
Canteen & Admin Building Block Phase I	49,318	100%
UCSC auditorium and Lecture Halls	26,500	30%

Any Other Details / Performance Relevant to this Report

To enhance visibility locally and internationally UCSC activities was disseminated through the UCSC web site and Social Networks.

UCSC considers taking IT education and products to the periphery is one of their social responsibilities. UCSC continued community interface through SLBC Radio programme conducted every Wednesday morning from 9 to 10. UCSC also assist Ministry of Education and Schools in conducting Software Competitions including the International Olympiad in Informatics (IOI). Four member IOI team along with leader and deputy was selected to participate at the IOI'14 to be held from 13-20 July in Taiwan was supported by the UCSC together with NSF and 7StepsGlobe. Team also competed at the Asia Pacific Informatics Olympiad (APIO) competition held on 11th May.

Meeting was held with the UCSC Alumni to reactivate the Alumni Association. UCSC became the first-ever

governmental institute and first-ever academic institution to own a Software Defined Data Centre powered by VMware vCloud suite. Ministry of Higher Education reviewed actions taken for 2012 COPE meeting and the 2012 UCSC annual report.