

University of Colombo School of  
Computing

*Undergraduate Handbook*

2014

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**Disclaimer**

*This handbook is compiled with information received up to January 2014.*

*It is hereby informed that this handbook is only for general information and is not for official purposes.*

*Any information contained herein should be confirmed by reference to the relevant authority.*

*For the latest version of the handbook please visit our website*

**<http://www.ucsc.cmb.ac.lk/ug>**

## ***Vision***

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

## **Mission**

*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*

# ***Message from the Director***

The University of Colombo School of Computing (UCSC) is a Centre of Higher Learning setup under the University of Colombo for achieving excellence in Research and the dissemination of knowledge in Computing in Sri Lanka. At the UCSC we believe in student centred learning and developing higher levels of thinking skills. This data arranged in context becomes useful information, however it has to be interpreted correctly becomes knowledge. This knowledge when used appropriately becomes wisdom. It is towards helping our students realize this that we strive at the UCSC in keeping with the motto of the University of Colombo, Wisdom Enlightens.

It is also the case that such enlightening, brings with it to us the freedom to be humble, as were the truly great minds of the scientific revolution. In the words of Isaac Newton, “If I have seen further than others, it is by standing upon the shoulders of giants”. It is this same humility that enabled Albert Einstein to pay possibly the greatest of tributes ever paid to a fellow human when he said of Mahatma Gandhi, “Generations to come will scarce believe that such a one as this walked the earth in flesh and blood”.

In striving for excellence in education, the UCSC has always attempted to foresee the needs of the country as a whole. Introducing Computer Science as a field of specialization as early as in 1985, we produced Software Engineers for the IT industry in Sri Lanka in addition to making fit the best of these for research and higher education. We also responded to the ever increasing demand for IT professionals by the ICT industry at the end of the millennium by introducing the first external IT degree in the form of the BIT in 2000. Beginning in 2005, we are also taking the bold initiative of introducing a ICT degree programme to fill a widely felt gap in the industry for Information System Engineers – in recognition of the maturing of the field of Computer Science and Information and Communication Technology. Computing degrees are classified into five main streams as defined by ACM/IEEE. To align with this UCSC has revised all their curriculum and renamed ICT degree as Information Systems and also commenced a new degree programme in Software Engineering. Thus offering four of the five main computing degrees.

The UCSC has been able to secure high donor confidence having successfully completed many foreign funded projects. It also has gained

the recognition from the local IT industry with many partners willing to take part in student placement, collaborative research and job placement activities. Holding down the most qualified set of academics and researchers in the field, the UCSC is currently engaged in mobilizing its vast research potential in order to clearly distinguish itself from the rest of the ICT education industry in Sri Lanka and the region as a whole.

At the end of the day however, we need to remind ourselves of those very wise words of Mahatma Gandhi: “The things that will destroy us are: politics without principle; pleasure without conscience; wealth without work; knowledge without character; business without morality; science without humanity; and worship without sacrifice”.

To this end, I wish that each student walking into our corridors, would at the end of their 3 or 4 year stay at the UCSC be able to say, that this indeed was the most constructive investment of time they have ever made in their life. I have no doubt then, that they would go onto become a valuable asset to the IT industry in this country, and to Sri Lankan society at large.

***Prof. G N Wikramanayake***

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# ***Introduction to University of Colombo School of Computing (UCSC)***

The University of Colombo has a history over 80 years as a leading higher education provider in Sri Lanka. The University of Ceylon was established by the state council on April 1942. By 1950, the University of Ceylon had a reputation as an important centre of excellence in the Commonwealth. The Higher Education Act of 1966 established a National Council of Higher Education (NCHE) and later in 1972 under the University of Sri Lanka Act No. 1 of 1972 all universities were brought under one umbrella and made campuses of a single university, established as the University of Sri Lanka. The University of Ceylon, Colombo was named the Colombo Campus of the University of Sri Lanka. This system prevailed until 1977. University autonomy was weakened and as a result, a new Act was introduced in 1978. Under the Universities Act No. 16 of 1978, all campuses of the then single university became independent universities. Accordingly, the University of Colombo, Sri Lanka regained its autonomy in 1978. The University of Colombo now consists of five faculties, one school (University of Colombo School of Computing), four institutes and several centers in addition to the Sri Palee Campus.

Computer education at University of Colombo was established way back in 1967 by the historic affiliation of the Statistical Unit to the Department of Mathematics. The Statistical Unit was enhanced as the Statistical Consultancy and Data Processing Service Centre (DSCS) by the salient guidance and efforts of late Professor V.K. Samaranayake, who pioneered computing and IT development and usage in Sri Lanka and thus considered as the "Father of Information Technology" in Sri Lanka. He was a Professor of computer science and a former dean of the Faculty of Science, University of Colombo. Professor Samaranayake was at the time of his death, the chairman of the Information and Communication Technology Agency (ICTA) of Sri Lanka.

By the dawn of 1985, Statistical Consultancy and Data Processing Service Centre (DSCS) had emerged as the Department of Statistics and Computer Science (DSCS). The lead role of DSCS was to offer special degree programmes in both statistics and computer science. DSCS launched the first post-graduate programme in computing offered by a Sri Lankan university in 1986 and later in 1990 instantiated a special

programme in computer science which subsequently produced a scant forty graduates per batch which was desperately insufficient to meet the increasing demand for professionals to various disciplines in the field of computer science.

A batch of fifty students were offered to study computer science directly, through the University Grants Commission in 1997 and by this time the aforesaid ineludible demand for professionals raised concerns over the expansion of computer science subdivision of DSCS to emerge as a separate entity to aid and formulate strategies and policies to meet such a growing demand. Consequently in 2001, DSCS was reformed to function as two separate entities: Department of Computer Science and Department of Statistics.

Consolidating with the restrictive framework as a faculty, the Department of Computer Science identified potential limitations of its operations and concerned for meticulous autonomy. Moreover, the faculty highly envisioned of having a strong industry relationship for exploiting the future growth potential. The Institute of Computer Technology (ICT) which was already conducting the Bachelor of Information Technology (BIT) and the Post-graduate Diploma in Computer Technology programmes had a strong relationship with industry and simultaneously was maintaining a high institutional profile among foreign donor agencies. The ICT was also enjoying a higher autonomy in their business operations than a typical faculty, making it effective to receiving large amounts of funding and resources from JICA, SIDA and other donors.

Considering the domain ICT was reigning and the golden opportunities which the institute already posed, it became the right counterpart for the Department of Computer Science to achieve the goals, the latter envisioned for. Thus, happened the historic merge between the industry focused Institute of Computer Technology and the more theoretically oriented Department of Computer Science and gave birth to University of Colombo School of Computing (UCSC) on the 01st of September, 2002. The catalyst who helped attain this crucial merge is none other than late Professor V.K. Samaranayake who also became the founding director of UCSC and whose proactive thinking and visionary leadership forged a path conducive to achieve success in every endeavour undertaken by the UCSC. Dr. Ruvan Weerasinghe succeeded Professor Samaranayake as the director in 2004. Today under the leadership and guidance of Professor Gihan Wikramanayake as the director, UCSC has vigorously positioned itself as a centre of excellence in computing and IT in the university system of Sri Lanka and outshines as a dependable and virtuous computer and IT education provider to the world.



Chancellor Dr. P. R. Anthonis lighting the Traditional Oil Lamp to mark the establishment of the University of Colombo School of Computing UCSC on 1st September 2002.



With the Japanese Parliamentary delegation that visited the UCSC in 2002. Also in the picture Vice Chancellor Tilak Hettiarachchi and Ambassador H.E.Seichiro Otsuka.



# ***Administrational and Operational Units of UCSC***

The primary activity of the University of Colombo School of Computing is to deliver quality undergraduate/postgraduate degree programmes in computing. The syllabus and the course contents are regularly reviewed and updated in order to maintain the quality of the programmes.

The undergraduate academic programmes are mainly funded by the government with substantial contribution by the UCSC generated funds. The UCSC has three academic departments, four administration and finance divisions and six centers. The academic staff is allocated to the three academic departments based on their specialization and teaching expertise. Main administrative and operational units of UCSC are shown in the Figure 1

## **Academic Departments**

There are three academic departments based on the research interest and teaching areas. Heads of these departments are responsible for three different study programmes at UCSC. They have to report the progress of these departments to the relevant Board of study, namely IUD (Internal Undergraduate Degrees), RHD (Research and Higher Degrees), and EEP (External and Extension Programmes).

### **Department of Information Systems Engineering (ISE)**

*Head, Dr. K. P. Hewagamage*

Responsible for Internal Undergraduate Study programmes

### **Department of Computation and Intelligent Systems (CIS)**

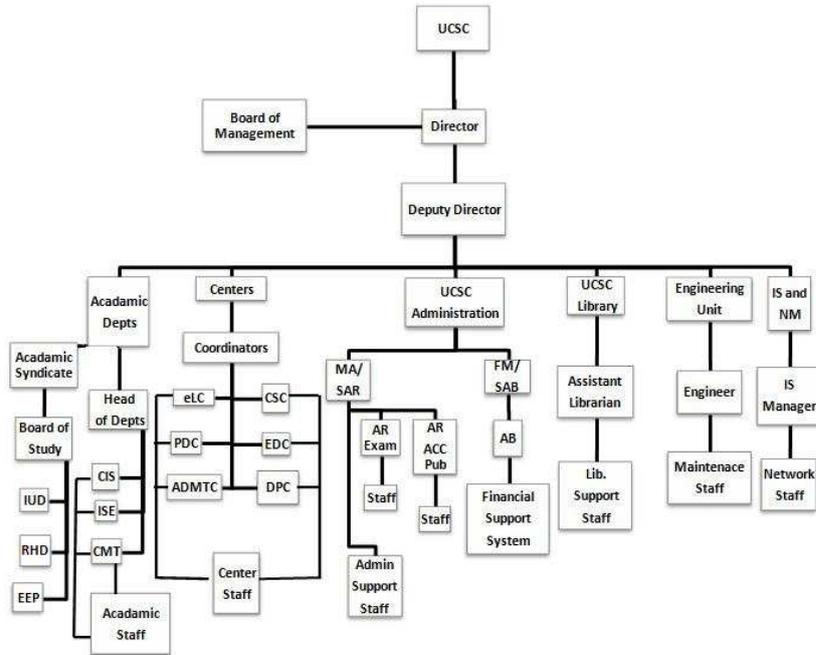
*Head, Mr. G. P. Seneviratne,*

Responsible for External and Extension study programmes

### **Department of Communication and Media Technologies (CMT)**

*Head, Mr. G. K. A. Dias*

Responsible for Postgraduate Study Programmes



**Figure 1: Administrative and Operational Units**

**BoS : Board of Studies, which consists of IUD, RHD, EEP**

**IUD:** Internal Undergraduate Degrees

**RHD:** Research and Higher Degrees

**EEP:** External and Extension Programmes

**Academic Departments:**

**ISE:** Information Systems Engineering

**CIS:** Computation and Intelligent Systems

**CMT:** Communication and Media Technologies

**Centers:**

**eLC:** e-Learning Centre

**PDC:** Professional Development Centre

**ADMTC:** Advanced Digital Media Technology Centre

**CSC:** Computing Service Center

**EDC:** External Degree Center

**DFC:** Digital Forensic Centre

**SAR:** Senior Assistant Register  
**SAB:** Senior Assistant Bursar  
**AR:** Assistant Register

### **Computing Services Centre (CSC)**

The Computing Services Centre (CSC) of UCSC is the main consultancy arm of the UCSC. It conducts system design and development, system recommendation, software project consulting, recruitment testing, tender evaluation, feasibility study and acceptance tests for computer hardware and software. It also conducts tailor-made training programmes for the organizations in the private and public sector. The Software Development Unit (SDU) (<http://www.ucsc.cmb.ac.lk/sdu>) is a part of CSC and SDU carries out the software development activities of UCSC. Third year students of undergraduate programme will be given a chance of placement at SDU during their internship. In order to further expand, consultancy and special projects, UCSC has established a company called Theekshana at <http://theekshana.lk/>

*For more details visit the website: <http://www.ucsc.cmb.ac.lk/csc>*

### **External Degrees Centre (EDC)**

The main purpose of establishing the External Degrees Centre and the three year external degree programme, Bachelor of Information Technology (BIT) is to widen the higher educational opportunities of the students who have been unsuccessful in meeting the competitive eligibility criteria for admission to the state university system. Another reason has been the massive demand from the ICT industry for high quality human resources far exceeding the number provided by the state universities. The BIT degree programme commenced in the year 2000 and has so far produced 1242 graduates and almost all have been absorbed by the ICT industry. Internal students of university of colombo have the right to follow BIT degree programme since it is a part time programme.

*For more details visit the website: <http://www.bit.lk>*

### **Advanced Digital Media Technology Centre (ADMTC)**

Advanced Digital Media Technologies Centre (ADMTC) was established under the UCSC in order to implement the “Project for Human Resource Development in Information Technology through capacity building of the UCSC” that was supported by JICA. The centre is equipped

with a state of the art digital studio and multimedia laboratories. Centre also conducts several training programmes in Multimedia, e-Learning and Digital Media Production. ADMTC produces many UCSC videos including BIT TV programmes.

*For more details visit the website: <http://www.admtc.lk>*

### **Professional Development Centre (PDC)**

The Professional Development Centre (PDC) of the University of Colombo School of Computing (UCSC) was set up for keeping a close liaison with IT industry and for improvement of the academic programmes through industry partnership. The PDC primarily concentrate on improving professional skills of the staff and the internal students, industrial placements and visits for internal undergraduates and promoting inter-cultural harmony. The mission of the Professional Development Centre (PDC) of the UCSC is to produce Computing graduates' having extra-curricular skills such as professional skills, business skills, communication skills, community service skills, innovative capacity and entrepreneurship to pursue successful careers thereby contributing to the socio-economic development of Sri Lanka.

*For more details visit the website: <http://www.ucsc.cmb.ac.lk/pdc>*

### **E -Learning Centre (e-LC)**

The UCSC was identified by donor agencies such as Swedish International Development Agency (Sida) and European Union Asia Link Programme as an ideal location for a centre of excellence in e-learning. In 2006, e-Learning Centre (e-LC) has established an online learning environment at UCSC, known as Vidupiyasa, (UCSC Virtual Campus). It consists of Virtual Learning Environment (VLE) for internal undergraduate degrees (<http://ugvle.ucsc.cmb.ac.lk>), postgraduate degrees (<http://pgvle.ucsc.cmb.ac.lk>) and BIT external degree (<http://vle.bit.lk>). eLC has become the national center for e-learning based on its activities (<http://www.e-learning.lk>) and it also maintains the open learning environment for free online courses at <http://www.e-learning.lk/vle>.

*For more details visit the website: <http://www.ucsc.cmb.ac.lk/elc>*

### **Digital Forensic Centre (DFC)**

Digital Forensic Centre of the UCSC was established in 2011. One UCSC and two international academics are advisors of the centre. Centre facilities have been strengthened using a generous donation of US\$ 25,000 by UOC alumni. Centre has taken over the role of assisting the Sri Lanka

Police and the Criminal Investigation Department which the UCSC undertook since 2003. The center was requested to support in finding evidence for digital crime cases have been consistently increased during last few years with over 50 court cases in the form of forgery frauds, illegal, pornography and terrorist handled annually at cost.

*For more details visit the website: <http://www.ucsc.cmb.ac.lk/dfc>*

### **Academic and Publications Division**

Academic and Publication division of UCSC was formed mainly focusing on undergraduate student welfare activities such as processing bursary applications and hostel applications. It supervises two hostel premises. It also handles administration work related to postgraduate programmes, staff medical insurance scheme and overall admin work related to academic activities. At the same time, this division provides the secretariat assistance all three of boards of studies.

### **Establishments and Administration Division**

The Establishment and Administration division of UCSC was formed to handle all establishments and administrative matters such as general administration functions, human resource management and development and contractual services. The Deputy Registrar of UCSC is responsible for this division.

### **Examinations and Registration Division**

Examination and Registration division of UCSC was established in mainly focusing on the examination and registration purposes of the UCSC for both internal and external students. Senior Assistant Registrar and staff of division are constantly engaged in offering services. Services that are offered by here are issuing identity cards for every student of the UCSC, admission of students who are selected by the University Grant Commission (UGC) for undergraduate courses of study in Computer Science and Information Systems, conduct internal/external undergraduate examinations and postgraduate examinations, conduct award ceremonies for award of certificates for BIT (external) degree programme, attend to activities of the external degree convocation and issue of academic transcripts required by the all registered students of UCSC.

## **Finance Division**

UCSC Finance division functions with the Deputy Bursar and supporting staff. All student payments, Collection of Receipts are handled by the division. In addition, students also can obtain finance related assistance from the division. Students are requested to obtain official receipt for all payments to the UCSC from the Shroff and no such payments will be refunded without producing original receipt. All payments to students can be collected from the Shroff counter.

All students who are eligible to obtain Mahapola and Bursary have to open a bank account (either savings or current) in a Commercial Bank and submit account details to the Academic & Publications branch since those payments are made directly to their accounts. Once the Mahapola and Bursary payment dates are announced students have to sign payment sheets kept at the Shroff counter in the first floor. within five working days. Thereafter funds will be remitted to their accounts for those who have signed the payment sheets and balance funds will be returned to the Mahapola fund and UGC.

## **Engineering Division**

Engineering Division of UCSC was set up to handle all the engineering, technical, electrical, air-condition and computer repairing and troubleshooting inside the UCSC building complex. This will help to function UCSC activities such as technical support and preventive maintenance of computer systems, electrical, air-condition and PABX telephone system maintenance, technical support for lectures, special events, event handling at the auditorium and computing service center training programs.

## **Network Operating Centre (NOC)**

The Network Operating Center (NOC) provides vital infrastructure support to UCSC by maintaining network connectivity and other ICT infrastructure. The NOC maintains and administers server room which housed general servers and specialized hardware to support high performance computational requirements. The UCSC NOC provides critical services such as e-Mail, DNS, Proxy services to the University of Colombo. The NOC monitors and maintains the university external network connectivity. University of Colombo and UCSC are connected through 100Mbps dedicated connectivity to Lanka Education and Research Network (LEARN). The UCSC also links to Trans Eurasia Information

Network [TEIN] through LEARN connecting more than 1000 research and education centers throughout Asia and Europe.

The UCSC building and the vicinity is covered by UCSC WiFi system. The students are provided with free connectivity to facilitate their academic activities. the laboratory facilities at UCSC is maintain and managed by NOC staff. A central user authentication system is in operational and students must obtain an active user account in order to login to laboratory computers. The computer laboratory and common areas are closely monitored through CCTV system.

The NOC provides limited disk space and a virtual server instance for final year research students to facilitate their research activities. Some students will receive the opportunity to work at the NOC during their industrial training.

### **UCSC Library**

The UCSC library provides its service to the staff and students of the UCSC. There are more than 1,400 registered library members. The library hosts more than 10,000 books and has a comprehensive collection of computer science books supported by the latest editions and books related to statistics. There is a high demand for the theses and dissertation collection in the library as many users are doing research. The library has a reference area with a seating capacity of 137 and it also provides an electronic category.



# ***Academic Programmes***

## **Internal undergraduate studies**

The students who are admitted to the UCSC may read for a degree programmes in Computer Science (CS) or Information Systems (IS). The UCSC offers a three year degree programme and a four year degree programme in each of these disciplines. Initially all students are enrolled for a three year degree programme. Students who achieve a minimum overall GPA of 2.75 in the first two years and satisfy all the relevant requirements as stipulated in the By-Laws and regulations are given the opportunity to enroll for a 4 year Degree Programme, subject to a limited intake.

The academic programmes of the UCSC are based on a semester system with two semesters per academic year and operate on a course module basis. The UCSC offers two types of courses namely Academic Courses and Enhancement Courses. Academic courses provide subject knowledge and enhancement courses provide knowledge on a wide range of disciplines that are required for a holistic education. Each year the UCSC offers a number of mandatory and optional courses. Each course is assigned a credit value. A credit is equal to 15 hours of lectures or 30 hours of practical or an equivalent combination of lectures and practical.

A student is required to register for a minimum of 30 academic credits and possibly a prescribed number of enhancement credits per year. A student who obtains at least a “C” grade in each course totaling a minimum of 10 credits in an academic year with at least a GPA of 1.5 is eligible to be registered for the next academic year.

## **External Undergraduate studies**

### **Bachelor of Information Technology (BIT)**

A person with three passes in the G.C.E. (A/L) examination in one sitting, FIT (Foundation In Information Technology) conducted by UCSC or any other academic/professional qualifications deemed equivalent to above could apply for the BIT programme (<http://www.bit.lk>). BIT is a degree programme of three years duration. Each year consists of two semesters. Evaluation is through continuous assessments through the BIT Virtual Learning Environment

(<http://vle.bit.lk>) and semester examinations.

A Diploma in Information Technology (DIT) will be awarded on successful completion of course examinations of the first year. A Higher Diploma in Information Technology (HDIT) will be awarded to holders of the IT Diploma on successful completion of course examinations of the second year and Bachelor of Information Technology degree (BIT) will be awarded on successful completion of year 1, year 2 and year 3 examinations and fulfilment of other necessary requirements.

*For more details visit the web site [www.bit.lk](http://www.bit.lk)*

## **Postgraduate Studies**

### **Masters Degrees**

The UCSC conducts Masters Degrees in Computer Science (MCS), Information Technology (MIT) and Information Security (MIS). MCS is a specialization course for Computer Science and IT degree holders whereas MIT is a postgraduate degree for graduates in non-computing disciplines. MIT has two subprogrammes allowing candidates to specialize in multimedia or e-learning streams. MIS offers mid-career opportunities for those working in the areas of Information Technology, Information System Audit and Information Security.

### **Research Degrees – MPhil / PhD Programme**

The UCSC has several active research groups in the fields of wireless networks, distributed systems, natural languages, cryptographic systems, graphics and image processing, GIS databases and e-learning and others, open to capable researchers and working on appropriate and cutting edge technology. Most of the research groups is funded by foreign agencies, industry, National Science Foundation(NSF) and National Research Council (NRC). Those who have hours degree or masters degree could apply for research degrees at any time.

*For more details visit the web site <http://www.ucsc.cmb.ac.lk/pg>*

# ***Bachelor of Science in Computer Science stream***

Students admitted to this stream will follow a full computer science programme of three years leading to the degree in Bachelor of Science in Computer Science (BSc in Computer Science). Based on their performance and preference, a selected number of students will be able to follow a four year degree course leading to either the degree in Bachelor of Science Honours in Computer Science [BSc.(Hons) in Computer Science] or the degree in Bachelor of Science Honours in Software Engineering [B.Sc. (Hons) in Software Engineering].

In order to be entitled to the three year (BSc in CS) degree a student has to complete a minimum of 60 Academic Credits in the first two years and at least 26 Academic Credits in the third year, along with the completion of the third year Industrial Placement and a minimum GPA of 2.00. In addition to that the student has to complete a number of Enhancement Credit Value Equivalents prescribed in respect of each year. A student shall not be entitled to the award of the degree unless he has completed the above mentioned requirements within six Academic Years.

To follow a Four year Honours degree program, 20 students will be selected at the end of the second academic year, based on the students' performance and the preference. A student should have a minimum GPA of 2.75 in each of the first and the second academic years in order to be eligible to apply for a four year degree program.

For a student to be entitled to a Four year Honours degree a student has to complete a minimum of 30 Academic Credits in each of the first two academic years, a minimum of 26 Academic Credits in the third academic year and a minimum of 30 Academic Credits in the fourth academic year and the third year Industrial Placement/Industrial Project with a minimum GPA of 2.5. In addition to that the student has to complete the number of Enhancement Credit Value Equivalents prescribed in respect of each year and should have a grade not inferior to a C for the fourth year Individual/Group Project. A student shall not be entitled to the award of the degree unless he has completed the above mentioned requirements within six Academic Years.

For both three year and four year degree programs, course modules in the first two year are compulsory. For third and fourth year

there are a number of Compulsory subjects and Optional subjects which are represented by “X”s and “O”s respectively in the tables given below.

Medium of instruction: Lectures, Tutorials, Practical and Examinations will be conducted in the English medium.

**Courses offered**

**Year 1  
Semester – I**

Course Code	Course Name	Mode	Credits	
			Lecture	Practical
SCS1101	Data Structures and Algorithms I	Compulsory	2L	1P
SCS1102	Programming I	Compulsory	2L	1P
SCS1103	Database I	Compulsory	2L	1P
SCS1104	Mathematical Methods I	Compulsory	2L	
SCS1105	Computer Systems	Compulsory	2L	
SCS1106	Laboratory I	Compulsory	2L	
ENH 1101	Communication Skills	Compulsory	1L	

**Year 1  
Semester – II**

Course Code	Course Name	Mode	Credits	
			Lecture	Practical
SCS 1107	Software Engineering I	Compulsory	2L	
SCS 1108	Data Structures and Algorithms II	Compulsory	2L	
SCS 1109	Programming II	Compulsory	2L	1P
SCS 1110	Discrete Mathematics	Compulsory	2L	
SCS 1111	Mathematical Methods II	Compulsory	2L	
SCS 1112	Foundations of Computer Science	Compulsory	2L	
SCS 1113	Statistics	Compulsory	2L	
ENH 1102	Selected Topics in Humanities	Compulsory	1L	

**Year 2  
Semester – I**

Course Code	Course Name	Mode	Credits	
			Lecture	Practical
SCS2101	Data Structures and Algorithms III	Compulsory	2L	
SCS2102	Group project I	Compulsory	2L	
SCS2103	Software Engineering II	Compulsory	3L	
SCS2104	Programming III	Compulsory	2L	1P
SCS2105	Computer Networks I	Compulsory	2L	1P

**Year 2**  
**Semester – II**

Course Code	Course Name	Mode	Credits	
			Lecture	Practical
SCS2106	Operating Systems I	Compulsory	2L	1P
SCS2107	Mathematical Methods III	Compulsory	2L	
SCS2108	Programming IV	Compulsory	2L	1P
SCS2109	Database II	Compulsory	2L	1P
SCS2110	Programming Language Concepts	Compulsory	2L	
SCS2111	Laboratory II	Compulsory		1P
SCS2112	Automata Theory	Compulsory	2L	
ENH2101	Career Guidance	Compulsory	1L	

**Year 3**  
**Semester – I**

Subject Code	Subject Name	BSc (CS)	BSc (SE)	BSc	No: of Credits
SCS3101	Electronics	O	O	O	2L+1P
SCS3102	Computer Architecture	X	O	O	1L
SCS3103	Middleware Architecture	O	X	X	2L+1P
SCS3104	Concurrent Programming	X	X	O	1L+1P
SCS3105	Computer Graphics I	O	O	O	2L
SCS3106	Information Security	X	X	X	2L+1P

SCS3107	Software Quality Assurance	O	X	O	2L
SCS3108	Software Project Management	O	X	X	2L
SCS3109	HC Interface design	O	X	O	1L+1P
SCS3110	Systems and Network Administration	O	O	O	2L+1P
SCS3111	Compiler Theory	X	O	O	2L
SCS3112	Web Technologies	O	O	O	2L+1P
SCS3113	Game and Mobile Programming	O	O	O	1L+1P
SCS3114	Management	X	X	X	2L
SCS3115	Professional Practice	X	X	X	1L
SCS3116	Research Methods	X	O	-	2L
SCS3117	Group project II	-	-	O	3P
SCS3118	Graph Theory	X	O	O	1L
SCS3119	Enterprise Resource Planning Systems	O	O	O	2L
ENH3101	Industry Placement/Industry Project	X	X	X	8P

**Year 3  
Semester II**

Subject Code	Subject Name	BSc (CS)	BSc (SE)	BCSc	No: of Credits
ENH3101	Industry Placement /Industry Project	X	X	X	8P

**Year 4  
Semester I**

<b>Subject Code</b>	<b>Subject Name</b>	<b>BSc (CS)</b>	<b>BSc (SE)</b>	<b>No: of Credits</b>
SCS4101	Society, Cyber Security and Legal Aspects of IT	O	O	1L
SCS4104	Data Analytics	O	O	2L
SCS4105	Computer Networks II	O	O	2L+1P
SCS4106	Computer Graphics II	O	O	2L+1P
SCS4107	Operating Systems II	O	X	1L+1P
SCS4110	Parallel Computing	O	O	2L+1P
SCS4111	Machine Learning	O	O	2L+1P
SCS4116	Image Processing	O	O	1L
SCS4119	Formal Methods and Software Verification	X	X	2L
SCS4120	Advanced Concepts in Software Design and Development	O	X	2L+1P
SCS4121	Data Structures and Algorithms IV	X	O	2L
*SCS4122	Research Seminar	X	O	2P
*SCS4123	Group Project	-	X	8P
*SCS4124	Individual Project	X	-	8P

**Note:**

2L – Two hour lecturer

X – Compulsory

O – Optional

\* Throughout the year

**Year 4**  
**Semester II**

<b>Subject Code</b>	<b>Subject Name</b>	<b>BSc (CS)</b>	<b>BSc (SE)</b>	<b>No: of Credits</b>
SCS4102	Enterprise Architectures	O	O	2L
SCS4103	Database III	O	X	2L+1P
SCS4108	Theory of Computation	X	O	2L
SCS4109	Distributed Systems	O	O	2L
SCS4112	Intelligent Systems	O	O	2L
SCS4113	Natural Language Processing	O	O	1L
SCS4114	Swarm Intelligence	O	O	1L
SCS4115	Bioinformatics	O	-	2L
SCS4117	Wireless and Sensor Networks	O	O	2L+1P
SCS4118	Robotics and Embedded Systems	O	O	1L+1P
*SCS4122	Research Seminar	X	O	
*SCS4123	Group Project	-	X	
*SCS4124	Individual Project	X	-	
SCS4125	Logic Programming	O	O	1L+1P
SCS4126	Advanced Topics in Mathematics	O	O	1L
SCS4127	Topics in Theoretical Computing	X	O	1L
ENH4101	Philosophy of Science	X	X	1L

**Note:**

X - Compulsory

O - Optional

\* Throughout the year



# ***Information Systems Degree Programmes***

The IS degree programme is designed to prepare students to be IT professionals who possess the skills and knowledge necessary to analyze and understand business problems and apply information technology to help solve these problems. Students will learn how to analyze client needs, define systems to meet these needs, develop applications, manage operations and act as technical intermediaries between management and other technical staff.

The high level learning outcomes of the IS degree programme are;

- Improving organizational processes
- Exploiting opportunities created by technology innovations
- Understanding and addressing information requirements
- Designing and managing enterprise architecture
- Identifying and evaluating solution and sourcing alternatives
- Securing data and infrastructure
- Understanding, managing and controlling IT risks

Under Information Systems Degree programmes, UCSC offers a 3 year Degree and a 4 Year Honours Degree. All students initially register for the 3 year degree programme. The medium of instruction of Lectures, Tutorials, Practical and Examinations is English.

The 3 year degree program of Information Systems (IS) is named as the Degree in Bachelor of Science in Information Systems [BSc (IS)]. Apart from achieving the above stated learning outcomes, in the 4th year more emphasis will be placed on learning the process of doing research. The 4 year degree program is named as, the Degree in Bachelor of Science Honours in Information Systems [BSc (Honours) in IS].

The selection for the 4 year degree shall take place at the end of the second year and the selections are based on the student performance and preferences. A student should have a minimum GPA of 2.75 at the end of the first and second academic years in order to be eligible to apply for the 4 year Honours degree programme. Maximum of 20 students will be

selected to read the 4 year degree, while others are subject to finish the degree in 3 years.

In order to be entitled for the 3 year Degree, a student should complete minimum of 90 credits and obtain a minimum GPA of 2.00. For a student to be entitled for the 4 year degree, he/she should complete a minimum of 120 credits and obtain a minimum GPA of 2.5, along with a grade not inferior to 'C' for the Fourth Year Individual/Group Project. In addition, a student should complete the number of Enhancement Credit Value Equivalents prescribed in respect of each year to be awarded with above mentioned degrees.

***Courses offered***

**Year 1  
Semester – I**

Course Code	Course Name	Mode	Credits	
			Lecture	Practical
IS1001	Programming and Problem Solving	Compulsory	2	1
IS1002	Computer Systems	Compulsory	2	1
IS1003	Information Systems Concepts	Compulsory	2	
IS1004	Applications Laboratory	Compulsory	1	1
IS1005	Introduction to Management	Compulsory	2	
IS1006	Discrete Mathematics I	Compulsory	1	
IS1007	Fundamentals of Economics	Compulsory	2	
EN1001	Communication & Life Skills	Compulsory	1	

**Year 1**  
**Semester – II**

Course Code	Course Name	Mode	Credits	
			Lecture	Practical
IS1008	Financial Accounting	Compulsory	2	1
IS1009	Business Communication	Compulsory	2	
IS1010	Database Management	Compulsory	2	1
IS1011	Systems Analysis and Design	Compulsory	2	1
IS1012	Discrete Mathematics II	Compulsory	1	
IS1013	Organizational Behaviour	Compulsory	2	
IS1014	Computing and Society	Compulsory	1	
EN1002	Selected Topics in Humanities	Compulsory	1	

**Year 2**  
**Semester – I**

Course Code	Course Name	Mode	Credits	
			Lecture	Practical
IS 2001	Software Engineering	Compulsory	3	
IS 2002	System Design Group Project	Compulsory	1	1
IS 2010	IT Procurement Management	Compulsory	2	

IS 2004	Web Application Development	Compulsory	2	1
IS 2005	Business Statistics	Compulsory	2	1
IS 2006	Business Process Management	Compulsory	2	
EN 2001	Industrial Practices	Compulsory		2

**Year 2  
Semester – II**

Course Code	Course Name	Mode	Credits	
			Lecture	Practical
IS 2007	IT Project Management	Compulsory	2	
IS 2008	Information Systems Management	Compulsory	2	
IS 2009	Information Systems Security	Compulsory	2	1
IS 2003	eBusiness Strategy	Compulsory	2	
IS 2011	Software Development Project	Compulsory		3
IS 2012	Computer Networks	Compulsory	2	1
EN 2002	Career Guidance	Compulsory	1	

**Year 3**  
**Semester – I**

Course Code	Course Name	Mode	Credits		
		BSc (IS)	BSc (Honours in IS)	Lecture	Practical
IS 3001	Enterprise Resource Planning Systems	X	X	2	1
IS 3002	Human Computer Interaction	X	X	2	1
IS 3003	Software Quality Assurance	X	X	2	
IS 3004	Strategic Management	O	X	2	
IS 3005	Professional Practice	X	X	1	
IS 3006	Interactive Media Design	O	O	2	1
IS 3007	Contingency Planning and Risk Management	X	X	2	
IS 3008	Middleware Architectures	O	O	2	1
IS 3009	Systems & Network Administration	O	O	2	1
IS 3010	IS Research Methodology (Prerequisite)	-	X	2	
IS 3011	Operations Research	O	O	2	1
IS 3012	Game and Mobile and Programming	O	O	1	1
IS 3013	Decision Support Systems	O	O	2	1

**Year 3**  
**Semester – II**

<b>Course Code</b>	<b>Course Name</b>	<b>Mode</b>	<b>Credits</b>		
		<b>BSc (IS)</b>	<b>BSc (Honours in IS)</b>	<b>Lecture</b>	<b>Practical</b>
EN 3001	Industrial Placement	X	X		8

**Year 4**  
**Semester – I**

<b>Course Code</b>	<b>Course Name</b>	<b>Mode</b>	<b>Credits</b>		
				<b>Lecture</b>	<b>Practical</b>
IS 4001	Individual Project/Group Project	X			8
IS 4002	Community Informatics	O	2		
IS 4003	Business Intelligence Systems	X	2		1
IS 4004	Research Seminar	X	2		
IS 4005	Advanced Concepts in Software Design and Development	O	2		1
IS 4006	Advanced Database Management	O	2		1
IS 4007	Society, Cyber security and Legal aspects of IT	O			1

**Year 4**  
**Semester – II**

<b>Course Code</b>	<b>Course Name</b>	<b>Mode</b>	<b>Credits</b>	
			<b>Lecture</b>	<b>Practical</b>
IS 4008	Enterprise Architecture	X	2	
IS 4009	Enterprise Applications	O	2	
IS 4010	Intelligent Systems	O	2	
IS 4011	Bioinformatics	O	2	
IS 4012	Selected topics in Informatics (GIS, Computer Forensics)	O	2	
IS 4013	IS Innovations	O	2	
EN 4001	Philosophy of Science	X	1	

NB: 'X' – Compulsory Subjects, 'O' – Optional Subjects, Subject codes with 'EN' – Enhancement Courses



# ***Undergraduate Student Registration***

## ***Registration Procedure and Fees***

The University Grants Commission determines the eligibility of the students to be admitted to the respective undergraduate courses. Thereafter the UCSC informs students to register for respective courses by filling in the necessary forms and paying the relevant fees at the registration.

### **Fee Structure**

<b>Type of Fee</b>	<b>Amount</b>	<b>When to Pay</b>
Registration Fee	Rs. 350.00	At the beginning of each Academic Year
Medical Fee	Rs. 200.00	At the beginning of each Academic Year
Student Union Fee	Rs. 125.00	At the beginning of each Academic Year
Student ID Fee	Rs. 200.00	During the 1 <sup>st</sup> year Registration only
Amalgamated Club Fee	Rs. 125.00	At the beginning of each Academic Year
Lab and Library Deposit	Rs. 1,500.00	At the 1 <sup>st</sup> year Registration only
Student Charter Fee	Rs. 100.00	At the Registration only

It is important to note that students are required to re-register at the beginning of each academic year by paying the Registration fee, Medical fee and Amalgamated club fee prevailing at that time on or before

the date specified. Failure to do so may result in the cancellation of the studentship and the rights to claiming Bursary or Mahapola payments and right to vote at the election of the student union.

### ***Orientation Programme***

The main objective of orientation programme is to prepare students for the university life and guide them to improve their English and ICT literacy required for the respective study programmes. Generally, it will be two weeks prior to the beginning of academic year. It starts with an inauguration ceremony where academic staff welcome new students and their parents. Vice chancellor, Director, UCSC, Student Councilor and head of academic study programmes will address the audience introducing university of Colombo school of computing. Students will also be able to talk to their advisors after this ceremony.

There is a separate coordinator for the orientation programme and he/she will be supported by the academic programme coordinators and head of undergraduate studies. All senior and junior academic staff including some selected senior students in the final year will collaborate to conduct the orientation programme. All students will have to participate English and ICT laboratory sessions in the morning or afternoon depending on their group which may contains around 40 students. Syllabus of these courses and learning materials are published in the Virtual Learning Environment (VLE) of undergraduate students at <http://ugvle.ucsc.cmb.ac.lk>

All registered students will receive a username and password to access this online system as a part of learning process. During the orientation programme, there will be two exams to evaluate their knowledge and skill of English and ICT literacy required to commence higher education at UCSC.

# **Facilities and Support for Undergraduates**

## **Library Facilities**

Opening Hours

Regular academic period:

9.00 A.M. – 6.00 P.M. Monday to Friday

9.00 A.M. – 6.00 P.M. Saturday

During the study leave and examination periods,

9.00 A.M. – 8.00 P.M. Monday to Friday

9.00 A.M. – 6.00 P.M. Weekends (Sat & Sundays)

The UCSC Library provides its service to the staff and students of the UCSC. The library hosts more than 10,000 books and has a comprehensive collection of computer science books supported by the latest editions and books related to Statistics. At the library, members can refer to books, journals, theses, dissertations and other resources such as magazines, newspapers and CDs, while accessing the internet in order to gather and update knowledge. The library has a reference area with a seating capacity of 137. The online catalogue system of library known as “Pushaka” for students could be accessed at <http://ucsc.pusthaka.org>. A user account could be obtained for all registered students from the library.

The right of using the Library is granted to the member readers under some rules and procedures and violation of these rules will caused following disciplinary actions;

1st time - one week suspension of library membership

2nd time - one month suspension of library membership

3rd time - One semester suspension of library membership

4th time - Suspension of Library membership

## **Access to computing resources (Labs, WiFi)**

There are over 240 computers in 6 undergraduate laboratories, both standalone and server based thin clients, made into clusters of 40 or 20 machines in each Lab. There is also a postgraduate computer laboratory of 20 computers. Linux and Microsoft Windows operating environments are available with software development environments such as Open source IDE's, Eclipse for Java, Netbeans and .Net for Rapid Applications Development. Most of the Laboratories are open during the semester from 08.00 to 17.00. However based on the need some laboratories may continue to operate until 19.00. Laboratory facilities are usually not

provided during study leave and vacation.

Most of the facilities are provided through generated funds of the UCSC as the governments do not provide sufficient funds to keep the equipment up to date. As a result these laboratories are used for income generating activities mostly during weekends. With more students now using laptops, the laboratory setups are likely to change in the future.

UCSC is also a Wi-Fi zone for both staff and students, which is available throughout the premises.

### **Obtaining Wi-Fi connectivity to Laptop**

The students must submit a filled Wi-Fi connection request form to NOC room during office hours. The request forms can be collected from academic and publication branch. Only one device per student is allowed and service will be bind to physical address of the device.

The UCSC will monitor all user activities according to UGC policy and guidelines. Violation and misuse will be dealt accordingly. The students are strictly advised to adhere to policies and guidelines. Individual users will be held accountable to all activities done through respective user account, therefore students are strongly advised to maintain proper discipline when using computing resources.

### **Obtaining user credential to access laboratory facilities at UCSC**

The technical officer in charge of laboratory will provide you with appropriate user accounts individually. Students must personally obtain their login details and must change the password immediately.

### **Virtual Learning Environment of Undergraduate Studies (ugvle)**

<http://ugvle.ucsc.cmb.ac.lk> is the virtual learning environment established for the undergraduate students. It assists students with learning management by providing access to lecture materials, assignments, notices and collaboration with teachers and also among students. Around 1000 undergraduate students access the system during an academic year. Ugvle is maintained by the e-Learning centre of UCSC. The Username will be based on the student registration number. All matters related to access of ugvle, should be referred to VLE administrator at the e-Learning Centre of UCSC.

## **Financial Assistance: Bursary and Mahapola, other scholarships, and participation of national and international events**

The University Grants Commission and the Ministry of Trade and Consumer Affairs select the eligible students for the Mahapola Scholarships. The UCSC notifies the students who are qualified to receive Mahapola Scholarships thereafter.

The UCSC selects the eligible students for the bursary payments according to the UGC Commission Circular No: 856 & 900. Selected students are notified through a public notice.

### ***Mahapola Scholarships***

Merit Scholarship	Rs 2550/-
Ordinary Scholarship	Rs 2500/-

### ***Bursary Assistance***

Full Bursary	Rs 2000/-
Half Bursary	Rs 1900/-

The Mahapola Scholarship will be revoked by the Mahapola Trust Fund if three consecutive installments are not collected by the students.

### ***4th Year Scholarship***

This scholarship is offered to encourage the students who are unable to read through the fourth year due to financial difficulties. One scholarship for the value of Rs 2000.00 per month is offered for 10 months. Students who register for the fourth year Computer Science Programme can apply at the beginning of the academic year for this scholarship.

### ***Other Scholarships***

Time to time industries come forward to offer assistance to our students. During the course we will publish notices to notify such opportunities.

### ***Hostel Facilities***

It is extremely difficult to provide hostel accommodation to all students of the UCSC within close proximity to the University premises due to difficulty of paying very high commercial rates for rented apartments. Presently the men's hostel is situated at Kirulapone Road, Colombo 05. The Women's hostel is situated at Sunethradevi Mawatha, Kohuwala, providing accommodation to the First year students.

Students are required to abide by the rules and the regulations set by the UCSC when accepting accommodation. Failure to abide by the rules will result in the student being subjected to disciplinary action. All matters of inadequacy or failure in relation to hostel facilities should be brought to the notice of the Sub Warden / Academic and Publications Branch.

### ***Student Counseling***

Every student has the opportunity of seeking advice and assistance from the student counsellors in relation to academic matters as well as personal matters. Additionally, the service of a professional counsellor is also available to the students, under the direction of student counsellors.

### ***Student Counsellors***

***Dr. (Mrs) S.M.K.D. Arunathilake***

Contact No: 011215-8969

Contact email: sda@ucsc.lk

***Dr. A.R. Weerasinghe***

Contact No: 011215-8953

Contact email: arw@ucsc.lk

***Dr. T.M.H.A. Usoof***

Contact No: 011215-8984

Contact email: hau@ucsc.lk

***Mrs. T.A. Weerasinghe***

Contact No: 011215-8982

Contact email: taw@ucsc.lk

### ***Professional Counsellor***

***Mrs. A. H. T. N. Thusanthika***

### ***Services for Student Life***

#### ***Canteen Facilities***

The UCSC Canteen is open for students during the Academic Semesters from 7.00 a.m. to 6.00 p.m and can be found near the main gate of the UCSC. The services of the Faculty of Science Canteen are also available for the use of the UCSC Students.

### ***Photocopy Facility***

The Photocopy facility is available in the Photocopy unit located at the Ground floor of the West Wing near the entrance to the UCSC building.

### ***Career Guidance***

All 3rd year students of the CS and ICT programmes will be placed in the industry during their 2nd semester, based on competitive open interviews. For those who are unable to obtain such placements, the UCSC will make every effort to place them within the UCSC.

The Professional Development Centre through its numerous links with the IT industry is in a position to provide guidance on job opportunities for passing out graduates. The Career Guidance Unit offers workshops, seminars and short courses on Career Skills Enhancement. Career counseling and job placements are among the other services offered by the Unit. The services of the Career Guidance Unit of University of Colombo ([http://www.cmb.ac.lk/academic/other\\_centers/cgu/index.htm](http://www.cmb.ac.lk/academic/other_centers/cgu/index.htm)) are also open to the students of all the faculties including the UCSC.

***Dr. (Mrs.) S M K D Arunatilake***

Coordinator, Professional Development Centre

Contact No. 011-2158912 / 011-2158988

### ***Physical Education & Sports***

Sports facilities, such as, the Gymnasium and Tennis Courts are made available by the Department of Physical Education of the University of Colombo. The Physical Education Department is on the first floor of the gymnasium which is situated on the other side of Reid Avenue from the UCSC and near the Faculty of Education. Those facilities can be accessed by the UCSC students. Furthermore students can participate in the events organized by the University. UCSC students have excelled in sports and have represented the university at the international level.

***Mr. Ajantha Dahanayaka***

(Acting) Director Physical Education, University of Colombo

Contact No: 0112-502405.

### ***Health facilities***

The Health Centre is located in close proximity to the UCSC and facilities are available for students. It has all facilities available as a modern health centre for outpatient treatment. A Dental Unit is also

attached to this health centre. The dental unit is open on Monday, Wednesday and Friday in the mornings.

The health service is organized to assist students to lead an active and healthy life.

***Dr. C.R. Rabel, M.B.B.S (Ceylon)***

Acting Chief Medical Officer

Contact No: 011-2584985

***Season Tickets***

Students are eligible to obtain the Government Railway Season tickets at the concessionary rates. The applications forms for Railway season tickets can be collected from the Academic & Publications Branch of UCSC.

***Student Distress Fund***

Provisions are available for the students to request funds from the Student Welfare Fund. Request are to be forwarded through the student counselor/s of UCSC and should certified by the student union of UCSC to evaluate on case-by-case basis. Basically a sum of Rs. 10,000/- is granted on Death of the student's own family member. Some other categories are also available for requesting funds. More details are available at the Academic and Publication Branch.

***Student Union***

The Student Union is the representative body of all registered internal undergraduate students of University of Colombo School of Computing (UCSC). The Student Union consists of the following office bearers.

- |                       |                            |
|-----------------------|----------------------------|
| 1. The President      | 4. The Editor              |
| 2. The Vice-President | 5. The Junior Treasurer    |
| 3. The Secretary      | 6. Eight Committee Members |

The Senior Treasurer for the Union shall be a senior teacher of the School and nominated by the Principal Executive Officer of the School. The Student Union Election will be notified at the beginning of the semester.

### **Activities**

- To foster the spirit of corporate life among students of the UCSC
- To organise and supervise, in consultation with the Board of management, student welfare activity, recreational facilities, spiritual and religious activities, the counseling of students
- To afford a recognised means of communication with the authorities of the UCSC on matters relating to or connected with living and working conditions of the students
- To be represented on any other body which may, in accordance with rules made by the Board of Management for the purpose, be appointed to undertake student welfare activities in the UCSC
- To foster, cultural, literary and aesthetic awareness and activities among students and to organize cultural events and publish magazines and periodicals
- To safeguard and protect the property of the UCSC
- To take steps to encourage and further the academic interest
- To undertake any activities that may be determined by the Board of Management from time to time.

### ***Student Societies***

#### **Computer Science Society of University of Colombo**

The Computer Science Society of University of Colombo (CompSoc) is one of the most prestigious societies in Sri Lanka. It has been an active society in the University of Colombo for the past three decades thus it is regarded as one of the oldest University Societies in Sri Lanka. CompSoc is run by the students of the university with the involvement and the guidance of the staff. It was established to provide mainly computer science related services to the university and its students. However, at present CompSoc is also involved in social activities like conducting workshops to enhance the computer literacy of school students and teachers. Apart from this, it also carries lectures in the fields of science and mathematics to school children. Another great community service provided by the CompSoc is the live radio program carried out each week. The program, termed as “Internet Sampath Bhavithaya” is broadcasted every week on Wednesdays from 9am – 10am and is conducted in collaboration with the Sri Lanka Broadcasting Corporation. This program is intended for the general public and discusses many aspects of computing needed by a general user. CompSoc does believe that it is its responsibility

to the society to impart knowledge to the general public for the betterment of the society.

*More details at <http://www.compsoc.lk>*

### **IEEE Student Branch of UCSC**

IEEE is the world's largest professional environment for enhancement of technology. Not only professionals, but also the students occupied in technological studies are able to be benefited through IEEE. Student members are encouraged by IEEE in order to polish their skills and guide them for innovation of technological advancements in the future.

The IEEE Student Branch of University of Colombo School of Computing was established in 2011 and has achieved great success during past few years. Student branch has been formed with the participation and contribution of all four batches (years) of University of Colombo School of Computing and it has been organizing many activities to enhance professional development of the students. The core purpose of the IEEE Student Branch of UCSC is to serve the humanity through technological innovations. The IEEE Student Branch of UCSC annually facilitates the prestigious IEEEExtreme competition. IEEEExtreme is a global challenge in which teams of IEEE student members supported by an IEEE Student Branch, advised and proctored by an IEEE member compete in a 24-hour time span against each other to solve a set of programming problems. UCSC students first took part in this competition in 2011 (IEEEExtreme 5.0.). More details at <http://www.compsoc.lk/services/iee>

### **Other Student Societies of University of Colombo**

There are a number of diverse societies from diverse educational backgrounds at University of Colombo. These societies have been established to enhance the welfare activities for students and to develop student leadership skills.

These societies can be divided into subject specific societies and general societies. However, any student can become a member of any subject specific society. Following is a list of such societies.

<ul style="list-style-type: none"><li>• Arts Society in the Faculty of Medicine</li><li>• Chemical Society</li><li>• Computer Science Society</li><li>• Economics Students' Union</li></ul>	<ul style="list-style-type: none"><li>• Buddhist Brotherhood</li><li>• Catholic Medical Students' Society</li><li>• Catholic Students' Society</li><li>• Gaveshakayo (Explorers)</li><li>• Hindu Society</li></ul>
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<ul style="list-style-type: none"> <li>• Geography Students' Union</li> <li>• Sinhala Society</li> <li>• Journalism Student Society</li> <li>• Law Society</li> <li>• Mathematical and Astronomical Society</li> <li>• Medical Faculty Welfare Association</li> <li>• Science Society</li> <li>• History Society</li> <li>• Law Faculty Human Rights Society</li> <li>• Eksath Bhikku Society</li> <li>• Accounting and MIS Society</li> <li>• The Sports Club of the Faculty of Law</li> <li>• Botanical Society</li> <li>• Sociology Student Society</li>   <li>• Epsilon-Delta Society</li> </ul>	<ul style="list-style-type: none"> <li>• Muslim Majlis</li> <li>• Oriental Music Society</li> <li>• Parisarikayo</li> <li>• Student Involved in Rational Health Action</li> <li>• Tamil Society</li> <li>• University of Colombo Christian Fellowship</li> <li>• Vicharakayo</li> <li>• Sarasavi Diyaniyo Society</li> <li>• Buddhist Literature Society</li> <li>• Stat Circle</li> <li>• Media and Arts Circle of University of Colombo</li> <li>• Sarasavi Sevana</li> <li>• Physics Society</li> <li>• The Moor Court &amp; Debating Society</li> </ul>
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### ***Establishment of Student Societies***

All Student Societies are governed in accordance with their respective Constitutions. When new office bearers are elected at the Annual General Meeting or subsequent meeting, their names have to be notified to the Senior Student Counsellor's Office and the Senior Assistant Registrar, Welfare within one week of the meeting. It is hoped that these societies will work according to an annual activity plan. These societies have the power to raise funds for their activities. It is hoped that all money raised will be put in the bank accounts set aside for that society. All financial dealings must be presented at the AGM and these must be ratified. A copy of this document then has to be sent to the Senior Student Counsellor's Office and the Senior Assistant Registrar, Welfare. To ensure honesty and transparency in financial dealings, these account/s will from time to time be audited by the Accounts Branch.

Based on the recommendations of the student members, an academic staff member will be nominated by the Vice Chancellor as the Senior Treasurer. This individual will take the responsibility for the Society in question.



# ***Rules, Regulations and Ethics***

## **Student Discipline**

The UCSC expects its student community to be well disciplined. Resources and facilities provided are liable to be withdrawn, if they are found to be misused. Storing of unauthorized material, hacking, email spamming or software piracy is strictly prohibited in the Labs. Disciplinary action will be taken according to the UCSC regulations on such matters. Where necessary, such instances will be reported to law enforcement agencies. Students violating examination rules will be punished separately. These punishments include cancellation of exam results and suspend from academic work for specified period.

Unethical and Illegal Actions within the University Premises:

- Plagiarism, copyright infringement and cheating
- Aggressive behavior, dissent and remonstrance
- Not being respectful (discourteous) and disobedient
- Illegal use of property, services and information
- Collecting funds without permission
- Solicitation
- Keeping and consuming alcohol, narcotic and tobacco within the university premises
- Gambling
- Harassment / violence
- Mental torture and ragging
- Sexual harassments
- Theft
- Damaging or destroying the property wilfully or maliciously
- Entering visitors without permission into the university, hostels, other restricted places

## ***Ragging***

Ragging and other forms of violence such as insult and cruel acts are totally prohibited according to “Prohibition of Ragging and Other Forms of Violence in Educational Institutions Act. No 20 of 1998” which has been approved by the parliament. Any act which causes or is likely to cause physical or psychological injury, fear or mental pain or fear to a student or a member of the staff of an educational institution is called ragging. The law makes ragging, a distinct and punishable offence. (See appendix C for more information)

### ***Disciplinary Actions***

If any student breaks the rules in the disciplinary actions or ragging, those will be punished according to the procedures. All punishments and any disciplinary action taken shall be recorded in the students' personal file and may be reflected in the testimonial and the student record book. The punishments for ragging within or outside of the university might be caused to rigorous imprisonment according to the based on their offense. Last academic year several students were warned for violating university regulations and they were warned in front of their parents.

# ***Examinations***

All examinations are conducted and completed within the given semester except for courses having practical or research projects. Duration of the theory examinations, practical and oral examinations are determined by the board of study of internal degree programmes. The duration of each examination and the rubric of the examination (i.e. final marks calculations with respect to assignments and final course exam/evaluation) are informed during the respective semester.

## ***Maximum Duration of the Degree***

All students should complete their degrees within a specified time period. The maximum period allowed for the 3-year degrees and the 4-year degrees will be 12 semesters (6 years) from the first registration. Students will be allowed to repeat courses subject to the above constraint.

## ***Registration for the Optional Courses***

If optional courses are offered in a particular year, students should register for such courses. Registration will commence one week prior to the start of the academic year. Optional courses having less than a specified number of students may not be offered, and students who have registered for such courses should opt for other available courses based on their preferences. No changes in courses will be permitted after 2 weeks of the commencement of the semester. Admission cards to sit for semester examinations will be issued using the registration list. Repeat student has to pay the examination fee at the time of reregistration. Most of the registration activities are now done through online application forms.

## ***Attendance***

Students are strongly advised to attend all lectures and practical classes of all courses that they select to follow.

If a student is unable to sit for a theory or a practical examination on medical reasons, the student should provide a valid medical certificate issued or certified by the Chief Medical Officer of the University of Colombo (Details given below). If such a medical certificate produced by a student for an evaluation is approved by the UCSC, then such student shall not be assigned any grade for the examination concerned but will be considered as appearing for an evaluation for the first time in the next instance provided that he/she appears for an evaluation at the immediately following opportunity provided by the school. **“Students are strictly advised to maintain 80% attendance at the lectures”**.

### **Repeat Examinations**

A student obtaining a grade below C may re-sit the course examination (if available) for the purpose of improving the grade. In the event of a student obtaining a lower grade while repeating, he/she is entitled to the previous grade. However, in calculating the award of a class in the final degree, maximum contribution from a repeated course is considered to be a grade of "C". Repeat candidates must register for courses they wish to be repeat at the beginning of the academic year or soon after the results are released.

### **Examination Procedure**

#### **PART I: Rules to be followed in Examination**

1. Students have to be **present** at the Examination Hall at least 15 minutes before starting the paper, but can't enter the hall until Supervisor gives permission.
2. Students won't be **admitted** to the Examination Hall after the first half-an-hour of the examination. Those who finish answering early, can leave only after the first half-an-hour and before last 15 minutes.
3. After entering the hall, students should go to the **seat** assigned to them and cannot change it without Supervisor permission.
4. Students must have their **Student Identity Card (SIDC)** and **Admission Card** for each paper. If students fail to bring their SIDC, they have to sign a declaration and produce the SIDC to the Senior Assistant Registrar/Examinations & Registration next day. If a student loses their SIDC, they can obtain a duplicate Identity Card from Senior Assistant Registrar for Examination.
5. **Admission Cards** are signed in front of the Supervisor/Invigilator when a student sits for a paper.
6. Students have to bring their own pens, ink or any other approved equipment and **stationery**.
7. **Examination stationery** (ie. Writing paper, graph paper, etc...) will be supplied and only these papers can be used at the Examination. Answer books supplied to the students can't be torn or mutilated. All materials supplied, whether used or unused, have to be left behind and cannot be removed from the examination halls.
8. Students are prohibited to have any notes, formulae or any other **unauthorized material** with them during the examination. Books, handbags etc. which students have brought with him/her should be kept at a place shown by the Supervisor/Invigilator.
9. Every student has to enter their **Index Number** on the answer book and on every extra sheet. A student who writes another students index

number on their answer sheet, can be considered as having attempted to cheat. The Supervisor/Invigilator has the authority to check the answer scripts of the student. An answer script that bears no Index Number or an Index Number which cannot be identified, might be rejected. Students can't write their names on the answer book.

10. Students are under the **authority** of the Supervisor and have to carry out their and invigilators instructions throughout the exam.
11. Absolute **silence** has to be maintained in the Examination hall and around it. A student cannot talk or to have any dealings with anyone other than the Supervisor/Invigilator. If a student needs to draw the attention of Supervisor/Invigilator they can raise their hand. A student can be excluded from the examination hall for causing disturbance.
12. After starting the exam, students cannot **leave** Examination hall even temporarily. In case of an emergency, the Supervisor/ Invigilator will grant them permission under constant surveillance.
13. Students have to **stop writing** immediately when Supervisor/Invigilator orders. If this instruction is not followed the Supervisor/Invigilator has the authority to make a statement on the answer book.
14. All calculations and **rough work** will be done only on given paper. Such work should not be done on admission cards, timetables, question papers or on any other paper. Any student who disregards these instructions can be considered as having written notes with the intention of copying.
15. Any answer or part of the answer which is not to be considered for the purpose of assessment, will have to be neatly crossed out. If the same question has been attempted in more than one place the answers that are to be disregarded has to be neatly crossed out.
16. Every student has to hand over the **answer scripts** personally to the Supervisor/Invigilator or remain in their seat until it is collected. They cannot hand over their answer scripts to an attendant, a minor employee or another student.
17. After **handing** over the paper, students cannot have it back.
18. Students cannot **remove** answer scripts from the Examination hall.
19. Students cannot **copy** from any material or from the answer scripts of another student. Nor can they help another student or get help from another student.
20. Impersonating students at the examination is not allowed.
21. The Supervisor/Invigilator can request a student to make a statement in writing due to an incident during the examination, and such statement will have to be signed by the student. Students cannot refuse to make such a statement or to sign it.
22. Every student who registers for an examination will be considered to

have sat the examination unless:

(a) They are permitted by the Senate for valid reason to withdraw from examination on a ground acceptable to the Senate within the given period

OR

(b) They submit medical certificate prior to the start of the examination or within 7 working days after the exam.

23. If a student can't present themselves for any section of an exam, they will have to notify it to the Director/UCSC immediately. This should be confirmed in writing with support document within 48 hours by registered post.
24. A student who withdraws or absent himself/herself from the examination will not be eligible for Honors at the next examination unless the senate decides otherwise.
25. Students can't sit examination, if they have exhausted the number for that examination, unless they are granted special permission to do so by the senate.

### ***Examination Offences***

Students are strongly advised against committing plagiarism in the submission of assignments and thesis reports. In the case of other written examinations, the possession of unauthorized material is considered as an offence punishable under the University of Colombo rules on conduct of examinations. Last academic year several students whose exams were cancelled as they committed examination offences. One of the third year student's entire degree was also cancelled. We strongly advise you to study and follow the examination rules and safe guard your career.

Some Examples of past punishments:

- Plagiarized content in an assignment worth less than 20% of course work - zero marks for the assignment
- Plagiarized content in an assignment worth more than 20% of course work - zero marks for entire assignment component
- Keeping unauthorised material during an examination - paper cancelled if content not relevant to the subject matter of the examination
- Keeping unauthorised material during an examination - all papers of that semester examination cancelled if content relevant to the subject matter of the examination
- Keeping unauthorised material using university property (including writing on admission card) - all papers of that semester examination cancelled and cannot sit for any examinations for one further year

### ***Examination Offences and Punishments***

1. Examination offences can be classified as follows:
  - (a) Possession of unauthorized documents or removal of examination stationery.
  - (b) Disorderly conduct.
  - (c) Obtaining or attempting to obtain improper assistance or cheating or attempting to cheat.
  - (d) Impersonation.
  - (e) Aiding and abetting the commission of any of these offences.
  - (f) Violation of any of the requirements or conditions stipulated in Part I.
2. There shall be an Examination Disciplinary Committee to inquire into and make recommendations (including punishments) regarding examination offences.
3. In all cases of examination offences, the Supervisor will take action and forward his report to the Director/UCSC.
4. Having a prior knowledge of question paper is an examination offence.
5. If students possess unauthorized material at an examination hall, it will be presumed that they have used it until the contrary is proved by them.
6. In cases of disorderly conduct the Supervisor will in the first instance warn the student, and if the student persists in disorderly conduct, the Supervisor may exclude the student from the examination hall and issue him/her a letter canceling their candidature from the examination.
7. In all other cases of examination offences, the Supervisor will take over the unauthorized documents and will obtain a statement from the student and write his report on the matter.
8. A student who is guilty of an examination offence is liable to following punishments.
  - (a) Removal of their name from the pass list.
  - (b) Cancellation of their candidature from whole or part of the examination
  - (c) Suspension from any University examination
  - (d) Suspension from the University for a period
9. Any student found helping to commit an examination offence will receive the same punishment as the offender.

### ***Medical Certificates, Attendance Rule***

All students who are unable to appear for a theory and/or practical component of an examination due to medical reasons should submit a

Medical Certificate issued by the Chief Medical Officer(CMO)/University Medical Officer (UMO) of the University of Colombo or a valid Medical Certificate recommended by the CMO/UMO if they seek relief.

Such students should make a request in writing (by telegram to the Director, UCSC or e mail to: [medical@ucsc.cmb.ac.lk](mailto:medical@ucsc.cmb.ac.lk)) for relief indicating the reasons for such absence within **7 (seven) working days** from the date of absence for such examination.

Students are advised to strictly adhere to the following guidelines in this regard:

- (1) (a) A student who falls ill during a period of examination of the UCSC should report to the Chief Medical Officer (CMO)/University Medical Officer (UMO) of the University of Colombo. The CMO/UMO will examine the student and issue a Medical Certificate, if necessary.  
  
(b) The Medical Certificate issued by the CMO/UMO with the proof of informing the Director/ UCSC should be forwarded to the Registrar/Examinations of the UCSC along with the attached application form within 7 (seven) days from the last date of recommended leave.
- (2) (a) If a student who resides outside Colombo city limits finds it difficult to report to the CMO/ UMO due to seriousness of the illness, he/she should get treatment from the nearest Government Medical Institution.  
  
(b) In such instances, he/she should follow the procedure given below with regard to submission of Medical certificates:
  - i. All Medical Certificates other than those issued by the CMO/UMO with the proof of informing the Director UCSC should be forwarded to the CMO/UMO along with the attached application form. These should then be submitted to the Deputy Registrar/ Examinations of the UCSC with the recommendation/ observation of the CMO/UMO within 7 (seven) days.
- (3) (a) Medical Certificates submitted after the above deadline and/ or without the recommendation/ observation of the CMO/ UMO will not be accepted.  
(b) The following categories of Medical certificates will only be

- accepted by the CMO/ UMO for consideration.
- ii. Medical Certificates issued by a Government Hospital/ District Medical Officer
    - (a) Medical Certificate issued by a private Medical Practitioner only in the case of leave for less than five days;
  - iii. The CMO/ UMO may request the following documents as further proof of illness
    - Receipt of payment for the Medical Certificate from the Government Hospital;
    - Prescriptions of the Medicines taken;
    - Reports of the blood tests etc.
 (If the required documents are not submitted the application may be rejected)

**Course Evaluation, Course Types, Evaluations Methods**

Each academic course is evaluated by written examinations (mid-semester and end of semester), continuous assessments, assignments, reports, presentations, oral examinations or a combination of such methods of evaluation (Usually a 60%-70% from final exam mark and 30%-40% from assignment marks) In the evaluation each course is assigned a percentage score. This percentage score is then converted to a Grade according to the scheme given below. Also, each grade is associated with a Grade Point Value (GPV) as shown in the table. These GPV values are used to compute the Grade Point Average of a student as described in the following sections.

<b>Rank of Percentage Score</b>	<b>Grade</b>	<b>Grade Point Value</b>	<b>Attainment</b>
90 – 100	A+	4.00*	<b>Superior</b>
80 – 89	A	4.00	
75 – 79	A-	3.75	
70 – 74	B+	3.25	<b>Meritorious</b>
65 – 69	B	3.00	
60 – 64	B-	2.75	

55 - 59	C+	2.25	<b>Adequate</b>
50 – 54	C	2.00	
45 – 49	C-	1.75	
40 – 44	D+	1.25	<b>Minimal</b>
30 – 39	D	1.00	
20 – 29	D-	0.75	
00 - 19	E	0.00	<b>Failure</b>

When calculating classes, A + will be given a Grade Point value of 4.25.

#### In Case of Absence

If a student is absent for an evaluation, a grade of E and zero marks is given unless the student provides valid evidence accepted by the UCSC within a prescribed period of time.

#### Criteria for Completion of Course

- A student is considered to have ‘completed’ an academic course if he/she has received a Grade in respect of the evaluation of such course. If an academic course has several components, e.g. a theory component and a practical component, then, he/she is considered to have ‘completed’ such course if he/she has received a Grade in respect of each such component.
- A student is considered to have ‘completed’ an Enhancement Course if his/her attendance at such Enhancement Course and the prescribed course activities if any, is not less than a prescribed minimum.
- All courses completed by a student are considered for the award of the degree.

#### ***Calculation of GPV and GPA***

The Grade Point Value obtained by a student in respect of each course for which he/she has registered is multiplied (weighted) by its Credit Value to obtain the Grade Point Value of each such Course. The Grade Point Average (GPA) of a student is then computed as the weighted

average, rounded to the second decimal place, of all the Grade Point Values of the contributing academic courses 'completed' by the student. It should be noted that some courses do not contribute to the GPA. However, the completion of such courses not less than a prescribed minimum is required to obtain the Degree.

$$\text{GPA} = \frac{\text{SUM (Grade Point Value obtained for the course X Credit Value of the course)}}{\text{Total Number of Credit Values of GPA contributing courses completed by the student}}$$

**Total Number of Credit Values of GPA contributing courses completed by the student**

### ***Selection Procedure for 4 Year Degree***

The number of places available in the third year for the four year programmes shall be filled from among the eligible applicants according to the merit order of the GPA of the first two years taken together. If a selection has to be made from among applicants who have the same GPA, then the merit order of the aggregates of the percentage scores obtained by each such applicant during the first two years shall be considered. If a student repeats an evaluation to improve a Grade, his/her marks obtained at the first attempt shall be used for the selection for the four year degree programmes.

### ***Conditions to award of the degree***

To be eligible for the 3 year Degree, a student must

- (a) Complete a minimum of 90 Academic Credits with at least 30 Academic Credits from each of the three years.
- (b) Complete the number of Enhancement Credit Value Equivalent prescribed in respect of each year.
- (c) Obtain a minimum GPA of 2.00.
- (d) Obtain a grade not inferior to a C for the third year Industry Project / Industry Placement.
- (e) Complete the relevant requirements within six academic Years.

### ***Awards and Prizes***

These are several awarded at the Annual Convocation for graduates with respect to degree programmes.

		<b>CS Degree Programme</b>	<b>IS Degree Programme</b>
Best performance (Highest GPA)	3rd Year Graduates	Virtusa Academic Excellence Award	Motorola Academic Excellence Award
	4th Year Graduates	Prof. Mohan Munasinghe Award	IFS Academic Excellence Award
Best Industrial Training (Awarded for Best Result at Industrial Training in 3rd Year)	4th Year Graduates	David Peiris Group Gold Medal	David Peiris Group Gold Medal
Best Final year Project/Research	4th Year Graduates	CINTEC Award	Sampath Bank Award
Most Outstanding Graduate of the UCSC	4th Year Graduates	Prof. V K Samaranayake Award	

## Contact Details and Other Information

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### **Director**



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## **Appendix A: Academic Staff of UCSC**

### **Professors**

**Prof. G N Wikramanayake**

B.Sc. (Col), M.Sc., Ph.D. (Cardiff), MCSSL, MACS, FBCS, SMIEEE, CITP

**Research Interests:** Database Management, e-learning, Social Networks and Applications, Mobile Computing, Green IT, Web 2.0 and beyond, Cloud Data

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### **Senior Lecturers**

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**Dr. D N Ranasinghe**

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**Mr. G P Seneviratne**

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## ***Appendix B: Appreciation of Prof. V. K. Samaranayake***

### **An appreciation of the founder Director of the UCSC Vidya Jyothi Professor V. K. SAMARANAYAKE (1939 – 2007)**

Vanniarachchige Kithsiri Samaranayake was born on the 22nd of May 1939 and had his early education in Hewavitharana Vidyalaya, Rajagiriya where his father was the principal and his mother was a teacher. He entered Ananda College in 1948 and then Royal College through a competitive examination in 1950.

Prof. V.K.Samaranayake entered the University of Ceylon to read for a degree in Science in 1956 having completed his secondary education at Ananda and Royal Colleges. He was selected to do a Special degree in Mathematics and obtained a First Class Honours degree in 1961.

Prof. Samaranayake entered the Imperial College, London in 1963 on a state scholarship for his postgraduate studies and then moved on to University College, London to complete his PhD in record time before returning home in 1966. At the age of just 35, in recognition of his great scholarship, the University of Colombo appointed him to its highest Academic position of Professor of Mathematics in 1974. He was subsequently appointed Senior Professor of Mathematics in 1984, invited to be the first Senior Professor of the newly created Chair in Computer Science in 1996 and appointed Emeritus Professor of the University of Colombo after his retirement in 2004. In recognition of which the University honoured him with the title Professor Emeritus of Computer Science, and conferred on him the Degree of Doctor of Science, Honoris Causa at its subsequent Convocation.

As it is not possible to confine the appreciation of his enormous service to the nation and his illustrious career as an academic and an administrator to a few pages, some of the significant milestones of his illustrious career are outlined below.

- 1987- He was appointed as Chairman of the Computer and Information Technology Council of Sri Lanka (CINTEC), which he served for 12 years. During this period he was also tasked with chairing the Presidential Task Force on Integrated R & D in Science & Technology 1997-2000 and the National Y2K Task Force in Sri Lanka 1998-2000.

- 1992 - He initiated the participation of Sri Lankan school children in Computer Programming, by committing CINTEC funds for sending teams of 4 to the International Olympiad in Informatics (IOI). Through his great foresight, to date, Sri Lanka has been able to secure 3 Gold, 5 Silver and 13 Bronze medals at successive IOI's with a record of never returning without a medal since 1994
- In 1995 he was instrumental in setting up intensive discussions with Sri Lanka Telecom, to commence Internet services in Sri Lanka. These discussions eventually brought LEARN and Internet connectivity to Sri Lanka in 1996.
- He was instrumental in organizing the IT industry at large by forming associations for Computer Training Organizations (ACTOS), for the Software Industry (SLASI), and for the Computer Vendors (SLCVA). With foresight he also created the umbrella organization for these associations in the form of the Federation of IT Industry Associations (FITIA) which recently hosted the largest ICT event in Sri Lanka – the ASOCIO ICT Summit. He has also been involved with the well known ICT Trade Exhibition organization, INFOTEL whose Chairmanship he has held from 1997. INFOTEL has in turn been the major funding organization for many industry and human resource development efforts in the field of ICT.
- In 1984 he had his first major breakthrough with the full backing of the then Chancellor, Dr. P. R. Anthonis and Vice Chancellor Prof. Stanley Wijesundera in the form of a substantial JICA grant from the Government of Japan. Almost simultaneously, the UNDP provided some much needed research funding to build up Academic Faculty in Computer Science at the University of Colombo. Starting with the Statistical Unit and the Statistical Computing and Data Processing Centre within the Mathematics Department, Prof. Samaranayake first convinced the University to set up a Department of Statistics and Computer Science in 1985, the first of its kind in Sri Lanka, and then went onto create the first School in the university system in the form of the University of Colombo School of Computing (UCSC) in 2002.
- Commencing in the year 2000, Prof. Samaranayake initiated another major milestone in ICT HRD in Sri Lanka with the launch of the innovative Bachelor of Information Technology (BIT) External Degree programme which provides an ultimately

scalable mechanism for affordable ICT education in a way that incorporates the private sector – a feat no other degree programme has been designed to do. Apart from the prestige of a University of Colombo degree to students, the BIT programme also has the indirect but most desirable effect of standardizing ICT education in an era where commercialism is threatening the quality of education.

- Prof. Samaranayake's involvement in the scientific community has been no less impressive with the Sri Lanka Association for the Advancement of Science (SLAAS) electing him to the office of General President in 1994 and the National Academy of Sciences of Sri Lanka electing him as a Fellow of the Academy, its Vice President and finally its President for 1998-99.
- His quest for capacity building in ICT human resources can most clearly be seen in his single handed contribution in this area at the University of Colombo – making it the showcase among the entire university system in Sri Lanka and beyond. Investing in human resource development in ICT also involves huge risks – that of aiding in the brain drain. This is where Prof. Samaranayake's broadness of vision and almost unreasonable trust, especially in the case of training Faculty in the University, is most clearly seen. Commencing with the meager funding resources extended by donors in the 1970's in an era when the developed countries themselves were just getting into the area of serious ICT human resource development, Prof. Samaranayake commenced his quest of directing all local and foreign funding to develop ICT Human Resource development at the University of Colombo.''
- In recognition of his towering contribution in the field of ICT in the country, he has been bestowed with several national awards in the form of the Lions' Club Gold Medal for the Most Outstanding Citizen of Sri Lanka in 1986, the Vishva Prasadini Award in 1996 on the occasion of the 80th birthday of the then Prime Minister Sirimavo Bandaranaike and the Vidya Jyothi Presidential Award in 1998.
- Prof. Samaranayake's characteristic skill at excelling in multiple tasks simultaneously is also demonstrated by his continuing involvement in research, being named a Fellow of the Kennedy School of Government at Harvard University, USA in 2001, Research Fellow at the National Centre for Digital Government at

Harvard University, USA in 2003 and the impending appointment as Visiting Fellow in the Digital Vision Programme at Stanford University, USA in 2005. A particularly high point of this role was when he simultaneously chaired two International Conferences while playing a key role in the whole of the Government declared Information Technology Week in December 2004. He also continued as Chairman of the International Information Technology Conference till his untimely demise.

## ***Appendix C: Forms of Ragging and the Punishments***

### **Forms of ragging:**

- Any person who whilst committing ragging causes sexual harassment or grievous hurt to any student or a member of staff.
- Any person who within or outside an educational institution threatens verbally or in writing to cause injury to any person, reputation or property of any student or a member of a staff of any higher education institution or to a person, reputation or property some other person in whom the victim is interested with the intention of causing fear in the victim or of compelling the victim to do any other act which the victim is legally not required to do or to omit to do any act which the victim is entitled to do.
- Any person who does any act by which the personal liberty and the freedom of movement of any student or a member of staff of an education institution; or other person within such educational institution or any premises under the management and control of such educational institution, is restrained without lawful justification and for the purpose forcing such student, member of the staff or person to take particular course of action.
- Any person who unlawfully obstructs any student or a member of the staff of an educational institution, in such a manner as to prevent such students or member of staff from proceeding in any direction in which such student or member of staff has right to proceed.
- Any person who unlawfully restrains any student or a member of staff of an education institution in such a manner as to prevent such student or a member of the staff from proceeding beyond certain circumscribing limits.
- Any person who without lawful excuse, occupies by force, any premises of or under the management or control of, an education institution.
- Any person who causes mischief in respect of any property of or under the management or control of an education institution.

**The summarized punishments for ragging described under the Act include:**

- After the individual is found guilty, the punishment for ragging within or outside of the university premises is two years' rigorous imprisonment.
- In addition, the court can award compensation to the victim.
- Where ragging leads to sexual harassment or grievous hurt, the punishment is increased to ten years' imprisonment and an award of compensation. The latter offence is generally non-bailable.
- The punishment for anyone who acts with the intention threatens to cause injury to the person, reputation or property of any student or threatens to cause injury to a person known to the student is rigorous imprisonment for no more than five years.
- Acts of criminal intimidation, wrongful restraint and unlawful confinement committed by any person against any student carry a maximum imprisonment period of seven years.
- Anyone forcefully confining an individual would face the same punishment.
- If any person forcibly occupies any premises of an educational institution, that person is guilty of an offence. Such person could be imprisoned for no less than ten years and no more than twenty years of imprisonment. In accordance with the Act, a fine can also be imposed.
- In addition, the court can, depending on the gravity of the offence, the order the expulsion of a student from an educational institution if that person is found guilty of any of the offences contained in the Act.
- If anyone is charged or is under suspicion of sexual harassment or grievous injuries due to ragging as stated in Section 2(2) in the Act or, if it leads to confinement or restraint of another's freedom of movement, as noted in Section 4, this is a non-bailable offence.
- Other than the punishment codes within this act, those of 1994 No.22 on harassment, extreme and torture or insults add to this.