Student Handbook

FACULTY OF COMPUTING AND TECHNOLOGY

ACADEMIC YEAR 2022/2023

University of Kelaniya
Sri Lanka

Faculty of Computing and Technology

University of Kelaniya established its 7th Faculty, the Faculty of Computing and Technology (FCT), on the 30th December 2015 and commenced its operations on the 18th January 2016. The mission of the faculty is to become a centre of excellence in creation and dissemination of knowledge in the domains of Computing and Technology for sustainable development of Sri Lanka.

At present, FCT offers three, four year degree programmes, namely, Bachelor of Information and Communication Technology Honours [BICT (Hons)], Bachelor of Engineering Technology Honours [BET (Hons)] and Bachelor of Science Honours in Computer Science [BSc Hons (CS)].

The new faculty was established also to cater to unique computing needs of other faculties of the university while offering its own academic programmes in Computing and Technology. Through the collaborative model practiced by the new faculty, the graduates of University of Kelaniya can excel in their studies in diverse areas of their own interest with the aid of new technologies of Computing and Technology provided through the degree programmes offered by the FCT.

FCT also offers Postgraduate Degree Programmes in the areas of Computer Science, Software Engineering, Information Technology and Materials & Technology, Industrial Automation & Sustainable Technology leading to Master of Science (M.Sc), Master of Philosophy (M.Phil) and Doctor of Philosophy (Ph.D) degrees. The Master of Science in Information Technology in Education degree programme has been developed for the Ministry of Education to train ICT teachers for the national education system and programme commenced in January 2021.

FCT conducts research in diverse fields of significant importance. Research at the FCT will expand from fundamental Computer Science research to the development of new technologies with applications to the industry and society as a whole.

The following Research and Development (R & D) Centres are established in the FCT:
- Centre for Advanced Materials and Smart Manufacturing (CAMSM)
- Centre of Excellence for Technology Education (CETE)
- Centre for Data Science and Artificial Intelligence (CDS-AI)
- Tutoring and Supporting Centre (TSC)
- FCT – Research Centre (FRC)

The following Research and Development (R & D) Centres will be established in the FCT:
- Centre for Cyber Security and Digital Forensics

FCT has an Industry Interaction Cell for Computing and Technology (IICfCT) which will function as its commercial arm to provide services related to Computing and Technology   issues of the entire country.

Faculty of Computing and Technology

Initially, the Faculty of Computing and Technology was established with three Departments: Department of Applied Computing, Department of Computer Systems Engineering and Department of Software Engineering that encompass all the subject areas of the Computing and Technology domains. In addition to the above academic departments: Department of Human Centered Computing, Department of Data Science and Engineering, Department of Computational Mathematics and Intelligent Systems, Department of Network and Security Engineering are to be established for computing domain. In the technology domain, Department of Manufacturing Process and Material Technology, Department of Industrial Automation and Robotics, Department of Bio System - Technology, Department of Sustainable and Environmental Resource Technology, Department of Food Process Technology are to be established.

The Faculty of Computing and Technology is the first Faculty in Sri Lanka that has adopted the Learning-Centered education pedagogy for its programme design and delivery. This new approach will empower student learning both inside and outside the class enabling active learning. Students will develop life-long learning skills and attitudes that are required by the industry thus transforming them to highly marketable graduates.

The Faculty of Computing and Technology warmly welcomes the sixth (7th) batch of Computer Science students and the seventh (8th) batch of students from the Technology stream who qualified to enter the faculty, and wishes them success in their academic and other endeavours, with the hope that they will make their contribution to the society as proud graduates of the Faculty of Computing and Technology of the University of Kelaniya.

Vision

To become a centre of excellence in creation and dissemination of knowledge
in Computing and Technology for
sustainable development.

Mission

The Faculty of Computing and Technology strives for excellence in Computing and Technology
through innovation and dissemination of knowledge and
capacity building for socio-economic development of the nation.

Faculty Administration - Faculty of Computing and Technology

Dr. Chamli Pushpakumara
B.Sc. (Special) (Kelaniya), Ph.D. (UK)
Senior Lecturer (Grade I)
Dean/Faculty of Computing and Technology
chamli@kln.ac.lk

Prof. Hesiri Dhammika Weerasinghe
B.Sc. (Special) (Kelaniya), M.Sc. (USA), Ph.D. (USA)
Professor
Head/Department of Computer Systems Engineering
hesiri@kln.ac.lk

Dr. Sidath Liyanage
B.Sc. (Special) (Kelaniya), M.Phil (Peradeniya), Ph.D. (Singapore), MIEEE
Senior Lecturer (Grade I)
Head/Department of Software Engineering
sidath@kln.ac.lk

Dr. Laalitha Liyanage
B.Sc. (Special) (Peradeniya), M.Sc. (USA), Ph.D. (USA)
Senior Lecturer (Grade I)
Head/Department of Applied Computing
laalitha@kln.ac.lk

Mrs. Chandrika Godage
Deputy Registrar
rfct@kln.ac.lk

Student Councellors
Faculty of Computing and Technology

Senior Student Counsellor

Dr. W.D. Chanaka Udayanga
Senior Lecturer (Grade II)
chanakau@kln.ac lk

Student Counsellors

Dr. Kasun Fernando
Senior Lecturer (Grade II)
kasunf@kln.ac.lk

Dr. Rasika Rajapaksha
Senior Lecturer (Grade II)
rasikar@kln.ac.lk

Dr. Amila Jeewandara
Senior Lecturer (Grade II)
amilaj@kln.ac.lk

Dr. Madusha Chandrasena
Senior Lecturer (Grade II)
madushac@kln.ac.lk

Dr. Induni W. Siriwardene
Senior Lecturer (Grade II)
induni@kln.ac.lk

Dr. Tharaga Sharmilan
Senior Lecturer (Grade II)
tharagas@kln.ac.lk

Mr. U.K. Pathum Mihiranga
Lecturer (Probationary)
pathum@kln.ac.lk

Dr. Navodi Mekhala Hakmanage
Lecturer (Unconfirmed) in Statistics
navodim@kln.ac.lk

Mr. Liyanage Akash Tharuka
Lecturer (Probationary)
akasht@kln.ac.lk

Academic Advisors
Faculty of Computing and Technology

Academic Adivsors

Bachelor of Science Honours in Computer Science Degree

Dr. Madusha Chandrasena
BSc (Special)(Kelaniya), MCS (UCSC, Colombo), MSc (Texas Tech, USA),
PhD (Texas Tech, USA),
Senior Lecturer (Grade II)
madushac@kln.ac.lk

Bachelor of Engineering Technology (BET) Honours Degree

Dr. Shakila Pathirana
B.Sc. (Eng) (Moratuwa), M.Sc. (Moratuwa), Master of Sustainability Science (Japan),
Ph.D. (Moratuwa), AMIE(SL), A.Eng (ECSL)
Senior Lecturer (Grade II)
shakilap@kln.ac.lk

Bachelor of Information and Communication Technology (BICT) Honours Degree

Dr. Mohamed Ishan Sabar
B.Sc. (Hons) Computer Science, University of Colombo
MS (Hons) in Computer Science, USA.
Ph.D. in Computer Science, University of Sri Jayawardanapura.
Senior Lecturer (Grade II)
ishans@kln.ac.lk

Academic Staff
Faculty of Computing and Technology

Prof. Naomal G. J. Dias
B.Sc. (Special) (Colombo), M.Sc. (UK), Ph.D. (UK),
MBCS, MIEEE
Senior Professor
ngjdias@kln.ac.lk

Dr. (Mrs.) Carmel Wijegunasekera
(On sabbatical Leave)
B.Sc. (Special) (Kelaniya), M.Sc. (UK), Ph.D. (UK)
Senior Lecturer (Grade I)
carmel@kln.ac.lk

Dr. Chamli Pushpakumara
B.Sc. (Special) (Kelaniya), Ph.D. (UK)
Senior Lecturer (Grade I)
Dean/Faculty of Computing and Technology
chamli@kln.ac.lk

Dr. Gamini Wijayarathna
(On sabbatical Leave)
B.Sc. (Kelaniya), M.Eng. (Japan), Dr.Eng. (Japan)
Senior Lecturer (Grade I)
gamini@kln.ac.lk

Prof. Hesiri Dhammika Weerasinghe
B.Sc. (Special) (Kelaniya), M.Sc. (USA), Ph.D. (USA)
Professor
Head/Department of Computer Systems Engineering
hesiri@kln.ac.lk

Dr. Sidath Liyanage
B.Sc. (Special) (Kelaniya), M.Phil (Peradeniya), Ph.D. (Singapore), MIEEE
Senior Lecturer (Grade I)
Head/Department of Software Engineering
sidath@kln.ac.lk

Dr. Laalitha Liyanage
B.Sc. (Special) (Peradeniya), M.Sc. (USA), Ph.D. (USA)
Senior Lecturer (Grade II)
Head/Department of Applied Computing
laalitha@kln.ac.lk

Dr. Pradeep Samarasekere
B.Sc. (Special) (Colombo), Ph.D. (USA)
Senior Lecturer (Grade II)
Director of IICfCT, Director of University Bussines Linkage Cell (UBLC)
pradeeps@kln.ac.lk

Dr. Kasun Fernando
B.Sc.(Special) (J'pura), M.Sc (USA), Ph.D (USA)
Senior Lecturer (Grade II)
kasunf@kln.ac.lk

Dr. W.D. Chanaka Udayanga
B.Sc. (Eng)(Moratuwa), PhD (Singapore),
AMIE(SL), A.Eng (ECSL)
Senior Lecturer (Grade II)
chanakau@kln.ac lk

Dr. Shakila Pathirana
B.Sc. (Eng) (Moratuwa), M.Sc. (Moratuwa), Master of Sustainability Science (Japan),
Ph.D. (Moratuwa), AMIE(SL), A.Eng (ECSL)
Senior Lecturer (Grade II)
shakilap@kln.ac.lk

Dr. Sandeli Priyanwada Kasthuri Arachchi
B.Sc. (Hons.) (Rajarata), M.Sc. (Peradeniya), Ph.D. (Taiwan)
Senior Lecturer (Grade II)
sandelik@kln.ac.lk

Dr. Rasika Rajapaksha
B.Sc. (Special) (Colombo), P.G.D (UK), MSc (UCF, USA),
M.Sc. (UNF, USA), Ph.D. (USA)
Senior Lecturer (Grade II)
rasikar@kln.ac.lk

Dr. Amila Jeewandara
B.Sc. (Special)(Colombo), Ph.D (USA), MBA (USA)
GREENSL® AccP
Senior Lecturer (Grade II)
amilaj@kln.ac.lk

Academic Staff
Faculty of Computing and Technology

Dr. Induni W. Siriwardene
B.Sc. (Special) (Colombo), M.Sc. (USA), MBA (PIM), Ph.D. (Colombo)
Senior Lecturer (Grade II)
induni@kln.ac.lk

Dr. Muditha Tissera
B.Sc. (Hons.) (UCD/NUI), M.Sc. (Colombo), PhD (Colombo)
Senior Lecturer (Grade II)
mudithat@kln.ac.lk

Dr. Mohamed Ishan Sabar
B.Sc. (Hons) Computer Science, University of Colombo
MS (Hons) in Computer Science, USA.
Ph.D. in Computer Science, University of Sri Jayawardanapura.
Senior Lecturer (Grade II)
ishans@kln.ac.lk

Dr. Madusha Chandrasena
BSc (Special)(Kelaniya), MCS (UCSC, Colombo), MSc (Texas Tech, USA),
PhD (Texas Tech, USA),
Senior Lecturer (Grade II) in Mathematics
madushac@kln.ac.lk

Dr. Navodi Mekhala Hakmanage
BSc (Special) (Kelaniya), PhD (Kelaniya),
Lecturer (Unconfirmed) in Statistics
navodim@kln.ac.lk

Dr. Tharaga Sharmilan
B.Tech(UWU), Ph.D. (USJ)
Senior Lecturer (Grade II)
tharagas@kln.ac.lk

Ms. Hiroshika Nadeeshani Premarathne
(On study leave)
B.Sc. (Special) (SLIIT), M.Sc. (SLIIT)
Lecturer (Probationary)
hiroshika@kln.ac.lk

Academic Staff
Faculty of Computing and Technology

Mr. A. V. V. S. Bandara
(On study leave)
B.TEC. (Eng) (OUSL)
Lecturer (Probationary)
shakya@kln.ac.lk

Mr. U. K. D. Nisal Manisha
(On study leave)
B.Sc. (Special) (Kelaniya)
Lecturer (Probationary)
nisal@kln.ac.lk

Ms. U. B. Hansi Udapola
(On study leave)
B.Sc. (Special) (Kelaniya)
Lecturer (Probationary)
hansi@kln.ac.lk

Ms. Darsha Jayamini
(On study leave)
B.Sc. (Special) (Kelaniya)
Lecturer (Probationary)
darshaj@kln.ac.lk

Mr. U.K. Pathum Mihiranga
B.Sc. (Eng) (Moratuwa), MBA (Moratuwa)
AMIE(SL), PMP-PMI (USA)
Lecturer (Probationary)
pathum@kln.ac.lk

Mr. A.P.T.D. Pathirana
(On study leave)
B.Tech. (Eng) (OUSL)
A.Eng. (ECSL), AMIE(SL), MIEEE
Lecturer (Probationary)
tpath@kln.ac.lk

Ms. P.H.A.H.K. Yashodhara
(On study leave)
B.TEC. (Eng) (OUSL)
Lecturer (Probationary)
yashodharah@kln.ac.lk

Academic Staff
Faculty of Computing and Technology

Mr. Rajitha Peiris
(on study leave)
B.Sc (Hons) Eng (Ruhuna), Mphil Eng (Peradeniya)
AMIE (SL), A.Eng.(ECSL)
Lecturer (Probationary)
rajithal@kln.ac.lk

Mr. Liyanage Akash Tharuka
BICT (Hons) Kelaniya
Lecturer (Probationary)
akasht@kln.ac.lk

Ms. P.H. Hirushi Nawanjana
B.Sc. (Hons) Kelaniya
Lecturer (Probationary)
hirushin@kln.ac.lk

Mr. M.V. Vihan Perera
B.Sc. (Hons) Kelaniya
Lecturer (Probationary)
vihanm@kln.ac.lk

Mr. K. Madhushka Piyumal
B.Sc. (Hons) Kelaniya
Lecturer (Probationary)
madhushkak@kln.ac.lk

Academic Support Staff
Faculty of Computing and Technology

Mr. Ananda B Jayasooriya
(On study leave)
LLB.(UK)
Assistant Student Counsellor
Grade III
bjayasooriya@kln.ac.lk

Mr. Priyanke S Kahandasumithra
BSc, PGD(Ed), PGD(EM),
PGD(Com Tech), DETE
Assistant Student Counsellor Grade III
priyankeslk@gmail.com

Non Academic Staff
Faculty of Computing and Technology

Mr. Gayan Prasanna Gamage
Technical Officer
pgamage@kln.ac.lk

Mrs. Wathsala Thilakarathne
Management Assistant
(Grade III)
shalini@kln.ac.lk

Ms. Niruththara P. Senanayaka
Management Assistant
(Grade III)
niruthara2674@kln.ac.lk

Ms. Sewwandi Somarathna
Management Assistant
(Grade III)
thakshila2879@kln.ac.lk

Mr. J. K. A. S. P. Jayasinghe
Supevisor Maintainance
(Grade III)
samanth@kln.ac.lk

Mrs. Kumudu Thilakarathne
Laboratory Attendant
(Grade III)
kthilakarathne@kln.ac.lk

Mrs. Lalani Ekanayake
Laboratory Attendant
(Grade III)
lalanee@kln.ac.lk

Non Academic Staff
Faculty of Computing and Technology

Mr. W A A Kalana Hiran
Laboratory Attendant
(Grade III)
kalanah@kln.ac.lk

Mr. Aloka Bandara
Library Attendant
(Grade II)
abandara@kln.ac.lk

Ms. H.P.I. Ishanthi Pathirana
Works Aid (III)
ipatirana@kln.ac.lk

Mrs. M.C. Madhushani
Works Aid (III)
cmadhushani@kln.ac.lk

Mr. B.J.D. Bamunusinghe
Health Services Labourer (Lower Grade)
jeewanthadilan@kln.ac.lk

Non Academic Staff assigned to the Faculty

Mr A.T.R. Peris
Deputy Chief Securit Officer
ranjithp@kln.ac.lk

Mr DGPI Arachchchi
Marshal (Grade II)
gpradeepa@kln.ac.lk

Degree Programmes at the Faculty of Computing and Technology

Bachelor of Information and Communication Technology Honours [BICT(Hons)] Degree

The Bachelor of Information and Communication Technology Honours Degree is a four-year degree programme with an annual intake of 89 students. This degree programme will enable students to build the necessary skills, knowledge and attitudes required to function as ICT professionals. Strong fundamental knowledge in areas such as electronics, mathematics, data communication, Software engineering, multimedia etc. complemented with hands-on laboratory sessions, will provide the necessary skills and knowledge required to design, build, and maintain industry standard software and computer networks. The pathways currently on offer are:
- Computer Network Technology
- Games and Animation
- Software Systems Technology

The main benefit of the proposed Networking pathway is to produce highly eligible graduates that can successfully be employed in the computer networking segment of any industry that uses ICT. The Games and Animation pathway aims to prepare graduates who are able to design, manage, prototype, and research in the game designing and production industry. The Software Systems Technology pathway targets to produce graduates who are able to design, develop and maintain complex software systems, environments and applications. Students will get an opportunity to work in the industry for six months through the internship module in the 4th year. The medium of instructions and examinations is English. Accreditation for this degree programme will be sought from the Computer Society of Sri Lanka (CSSL).

Bachelor of Engineering Technology Honours [BET(Hons)] Degree

The Bachelor of Engineering Technology Honours Degree is a four-year degree programme. The student intake for this degree programme is 97. This Engineering Technology degree programme has a strong focus on practical applications of science and technology with the view of preparing the graduates for a wide variety of industry applications. The first two years of the curriculum aims at developing the common competencies expected of an engineering technologist while the final two years are devoted for developing specific competencies in chosen areas of specialization.

The pathways currently on offer are:
- Materials and Process Technology
- Industrial Automation and Robotics
- Sustainable Technology

Students will get an opportunity to work in the industry for six months through the internship module in the 4th year. The medium of instructions and examinations is English.

Accreditation for this degree programme will be sought from the Institution of Engineers Sri Lanka (IESL).

Bachelor of Science Honours in Computer Science [BSc Hons(CS)] Degree

This is a four-year degree programme leading to the Bachelor of Science Honours in Computer Science offered by the Faculty of Computing and Technology of the University of Kelaniya. The intake for this degree programme is 68. The course structure of the B.Sc. Honours in Computer Science Degree is designed to align with the recommendations of the Standing Committee on Computing of the UGC, and the guidelines of the Association for Computing Machinery (ACM) and the Institute of Electrical and Electronics Engineers (IEEE).

Degree Programmes at the Faculty of Computing and Technology

This degree programme will help students to build necessary skills, knowledge and attitudes required to function in the software industry, conduct research and disseminate knowledge in Computer Science. Deep fundamental knowledge in theoretical computer science with supporting hands-on laboratory sessions will provide the necessary skills and tacit knowledge required to analyse, design, implement and maintain industry standard software. Knowledge on Database Systems, Machine Learning, Data Security, Theory of Compilers, Parallel Computing, High Performance Computing, Data Science, Natural Language Processing, Digital Forensics, Semantic Web and e-business technologies, Computer Games and Animation, Image Processing, Virtual Reality to the curriculum provides ample flexibility for   students to specialize in their own areas of interest.

Students can choose the standard pathway in computer science or a pathway to give more emphases on one of the following areas :

- Data Science
- Artificial Intelligence
- Cyber Security
- Scientific Computing

Students will get an opportunity to work in the industry for six months through internship module in the 4th year. The medium of instructions and examinations is strictly in English. In the final year all students should carry out a research project relevant to their area of interest.

Accreditation for this degree programme will be sought from the Computer Society of Sri Lanka (CSSL).

Key to Understanding the Structure of Degree Programmes Offered by FCT

Introduction to Organization of the Degree Programmes

Academic programmes of the Faculty of Computing and Technology are organized as a collection of compulsory and optional course modules to be completed within a two-semester academic year with end of semester examinations. It offers a variety of course module combinations that are designed to provide maximum possible flexibility in the choice of course module.

The duration of a semester is 15 weeks. After 15 weeks of teaching, a study leave period of 2 weeks is given followed by end of course written examinations that are conducted within a period of 3 to 4 weeks. Examinations of laboratory course units are usually conducted either during the last week of the semester or during the study leave period.

A course unit is a subject module which has a credit value. A credit is a time based quantitative measure used in calculating the Grade Point Average (GPA). The course modules are organized at four levels namely level 1, level 2, level 3 and level 4. Credit rating of a course unit is defined as follows:

For course units with lectures only
15 contact hours = 1 credit
30 contact hours = 2 credits
45 contact hours = 3 credits

For course units with laboratory work only
30-45 hours laboratory work = 1 credit
60-75 hours laboratory work = 2 credits

For course units with both lectures and laboratory work
10 contact hours + 15 hours of laboratory work = 1 credit

Notations of Course Units and Abbreviations Used

There are two types of course units, namely Compulsory (C) and Optional (O).

All compalsory course units of a degree programme are the course modules that are compulsory to follow by a student in that discipline.

The optional course units of a degree programme are the course modules that can be selected by a student based on his/her wish.

It is important to note that, there are some course units with a credit value that are compulsory to follow but are not considered in calculating the GPA (Non-GPA Course Units).

An alpha numeric code is used to identify a unit. The code consists of five digits prefixed by a set of four letters which refers to the principal discipline of the course content of the unit.

The first digit denotes the level (year) of the course unit whereas the fifth digit signifies its credit value. The second digit indicates the semester in which the course unit is offered (1 - first semester, 2 - second semester, 3 - both first & second semesters, 4 - either the first or the second semester) the third and fourth digits together form a number assigned by the Department or the Faculty.

The academic disciplines designated by the 4 letters in the code are as follows:

CTEC	- Computer Technology
ETEC	- Engineering Technology
GTEC	- General Technology
GCPR	- Generic Competencies for Professionals
LNPR	- Languages for Professionals
DELT	- English for Professionals
ENPR	- Entrepreneurship for Professionals
ETMP	- Engineering Technology for Material and Process Engineering
ETIA	- Engineering Technology for Industrial Automtion and Robotics
ETST	- Engineering Technology for Sustainable Technology
CTNT	- Computer Network Technology
SWST	- Software Systems Technology
GANI	- Games and Animation
CSCI	- Computer Science
CSEC	- Cyber Security
DSCI	- Data Science
AINT	- Artificial Intelligence
SCOM	- Scientific Computing
MGMT	- Management

How to Select the Course Units?

Each year a student has to follow a combination of compulsory and optional course units aggregating to a minimum of 30 credits in addition to the non-GPA course units. At the end of the 4 year degree programme, a student must accumulate a minimum of 120 credits to claim for a degree.

Evaluation Procedure of the Faculty of Computing and Technology

Grade Calculation Procedure of Course Units

All three degree programmes offered by the FCT follow procedures which is approved by the senate of the University of Kelaniya to calculate and assign grades that represent the performance of student learning. These procedures are called "course evaluation procedure". Each course unit has two major components in the course evaluation method.

1. Continuous Assessments (CA)
2. End of Semester Examination (ESE)

1. Continuous Assessment (CA)

CAs are activities that promote learning as well as communicate student performance while the course is being taught. The purpose of assigning CA activities is to promote learning as well as to measure the progress of student learning according to the learning goals (learning outcomes) of each course. CA activities may include,
- Assignments
- Group projects and reports
- Presentations
- Quizzes (short tests)
- Class tests (monitored tests given in a lecture)
- Mid-Semester exam
  (monitored examination given in a comprehensive format similar to the end semester exam)
- Field visits

CA activities will give information on student performance on the learning outcomes. The lecturer will be able to find gaps in student learning as well as incorrect understandings when grading CA activities. The learning outcomes, available teaching as well as self-study time are different for each course. Therefore, the types of CA activities used as well as the number of CA activities used will change from course to course.

The list of CA components and the percentage mark contributions of the CA components to the overall grade of the courses will be made known to the students at the beginning of the semester in the course outline document. Based on the CA marks a CA grade for each course unit will be calculated and assigned to reflect student performance of continuous learning of that course unit.

2. End of Semester Examination

End of Semester Examination (ESE) is the final examination for a course unit. The ESE is conducted at the end of the semester after a study leave period. It is a monitored (proctored) examination. The ESE can be a combination of any of the following types of assessments
- Written examination
- Practical examination held in a laboratory
- Oral examination : a face-to-face exam where the student will have to present and answer questions directly to an examiner panel.
- Project report – Normally given in project based courses

Evaluation Procedure of the Faculty of Computing and Technology

In practical / laboratory based courses 80% attendance is a mandatory requirement to be allowed to sit for the ESE. For ESE theory component and ESE practical component of each course unit will be given a separate grade.

Course Outline Document

At the beginning of the semester, a course outline document will be circulated by the lecturer in-charge of the course unit. The course outline document will specify the following.

- The learning outcomes
- Course content
- Course policies
- Course evaluation procedure
- A tentative schedule outlining the dates of lectures, content covered and the tentative dates for CA activities

A "Project Guideline" will be circulated at the beginning of the research / capstone project course (CTEC 43018 / ETEC 43018 / CSCI 43018) in fourth year which will outline CA components and the format of the ESE for the research / capstone project course. A similar guideline will be circulated for the (CTEC 41016/ ETEC 41016/ CSCI 41016) Industrial Training course as well.

Grading System

Marks obtained in respect of a course unit will be graded according to the following grading system (*subject to change with prior notice)

Range of Marks	Grade	Grade Point Value
85-100	A+	4.0
70-84	A	4.0
65-69	A –	3.7
60-64	B+	3.3
55-59	B	3.0
50-54	B –	2.7
45-49	C+	2.3
40-44	C	2.0*
35-39	C –	1.7
30-34	D+	1.3
25-29	D	1.0
00-24	E	0.0

Evaluation Procedure of the Faculty of Computing and Technology

Overall Grade

Overall grade will be decided by the final mark calculated as follows:

Final mark = CA mark x CA% + ESE (Theory) mark x ESE (Theory)% + ESE (Practical) mark x ESE (Practical)%

Here CA% , ESE (Theory)% and ESE (Practical)% are given in the detail course outline.

Example: Assessment Plan

Assessment Component	Contribution to Final Grade	
Continuous Assessment Components	35 %	
Assignment		10 %
Quiz		5 %
Mid – Semester Examination		20 %
End Semester Examination	65 %	
Written Examination		45 %
Practical Examination		20 %
Total		100 %

Example: Student Final Mark Calculation

Assessment Component	% to Final Grade	Example Student Scores	Weighted Scores	Example Grades
CA Components	35 %			
Assignment	10 %	60 %	6 (60*.1)	
Quiz	5 %	70 %	3.5 (70*.05)	
Mid – Semester Examination	20 %	50 %	10 (50*.2)	
Marks for CA Grade			19.5/35 = 65 %	CA grade = A-
ESE Components	65 %			
Written Examination	45 %	58 %	26.1 (58*.45)	ESE- Theory Grade = B
Practical Examination	20 %	45 %	9 (45*.2)	ESE- Practical Grade = C+
Total Marks for Overall Grade			19.5+26.1+9=54.6% ≅ 55 %	B

Evaluation Procedure of the Faculty of Computing and Technology

Grade Point Average

Grade Point Average (GPA) is the credit-weighted arithmetic mean of the Grade Point Values, which is determined by dividing the total credit-weighted Grade Point Value by the total number of credits. GPA shall be computed to the second decimal place.

Example: A student who has completed one course unit with two credits, three course units each of three credits and two course units each of one credit with grades A, C, B, D, C+ and A+ respectively would have the GPA of 2.48 as calculated below.

$$\frac{(2\times4.0)+(3\times2.0)+(3\times3.0)+(3\times1.0)+(1\times2.3)+(1\times4.0)}{2+3+3+3+1+1} = \frac{32.3}{13} = 2.4846$$

$$\text{Grade Point Average} = 2.48$$

Grade point values and credit values of all registered course units in a study programme of a student shall be taken into account in calculating the final GPA, unless stated otherwise.

Completion of a Course Unit

A course unit will be considered as completed for the continuation of the programme if a student
1. Obtains a D+ or better grade for Continuous Assessment (CA) component, and
2. Obtains a D or better grade for End of Semester Assessment (Theory) component, and
3. Obtains a D or better grade for End of Semester Assessment (Practical), if any

If one or more of the above conditions are not satisfied for a particular course unit then the course unit will be considered as an incomplete course unit. An INC grade will be assigned to indicate that the course unit is not complete. All INC grades are assinged a grade point value of 0.0 for the calculation of the GPA. The status of each assesment component will be given using the following references.

Reference	Grade Point Value	Component Condition
Inc[CA]	0.0	CA mark < D+ (30)
Inc[ESE-Theory]	0.0	ESE-Theory mark < D (25)
Inc[ESE-Practical]	0.0	ESE- Practical mark < D (25)

Students should repeat one or more of the assesment component of course unit with INC grades in the following academic year to complete those course units.

Evaluation Procedure of the Faculty of Computing and Technology

Passing of a Course Unit

Students can obtain a pass grade (A+, A, A-, B+, B, B-, C+, C) for a course unit if and only if

1. The course unit is completed, and
2. The final marks obtained for the course unit is within the range of above grades.
3. Satisfy the conditions 1 and 2 above within maximum of 4 attempts.

If the attendance of a student at a laboratory or laboratory component of a theory course unit (i.e theory cum practical) is less than 80 %, he/she will not be allowed to sit for the practical examination of the relevant course unit and will be considered as a referred candidate for the relevant course unit at subsequent sittings.

Students should complete all course units that they have registered for. If a student fails to complete a particular course unit by being absent for ESE-Theory component, it will be indicated in the transcript as "absent" with the status of the other components and a zero (0.0) grade point value will be assigned to it.

Completion of a Semester

A student is considered to have completed a semester successfully, if and only if the student:

1. Has successfully completed all registered course units considered in the calculation of the GPA for the semester and
2. Has achieved a semester GPA of 2.00 or above and
3. Has no E or INC grade for a course unit considered to calculate the GPA

Progression to the Third Year for the Bachelor of Information and Communication Technology Honours Degree and Bachelor of Engineering Technology Honours Degree

To register for the third year of study, the student should:
- Successfully complete the first three semesters. (i.e. both semesters of Level 1 and first semester of Level 2)

Special Repeat examination will be given ONLY for the course units of the third (3rd) Semester at the end of the fourth (4th) semester.

Repeating a Course Unit Examination

Repeating a Course Unit Examination

The assessment components of a course unit maybe retaken to improve the overall grade of the course unit in the cases outlined below. Students may retake one or more assessment components (CA, ESE-theory, ESE-practical) of a particular course unit in the following academic year.
Repeating of a course unit is only allowed in the following instances
      1. The overall course grade is below "C"
      2. The overall course grade is "Incomplete"
      3. The overall course grade is "Absent"
The maximum number of repeat attempts allowed per course is three (03). The best overall grade out of all attempts will be retained for final component grades and overall grade.

1. Repeating a course unit with an overall grade below "C"

A student who obtains an overall grade below 'C' on a particular course unit can repeat one or more assessment components of that course unit (CA, ESE-theory, ESE-practical). The maximum overall grade achievable in any repeat attempt is 'C'.

2. Repeating a course unit with an overall grade of "Incomplete"

If a student receives an Incomplete Grade for the overall course grade then it means that one or more of the three (03) assessment components (CA, ESE-theory, ESE-practical) of a course unit has an "Incomplete" grade. Therefore, such assessment components has to be repeated in the following academic year. The student should apply to repeat the relevant assessment components to improve the Incomplete grade to a grade equal or greater than 'D'.

After receiving an Inc[ESE-Theory] reference for the INC grade, the maximum overall grade in the repeat attempt is a 'C'.

3. Repeating a course unit with an overall grade of absent

a. Absent without medical excuse

If a student is absent without a medical excuse for one or more of the three (03) assessment components (CA, ESE-theory, ESE-practical) the attempt on the component will be counted. The student can repeat the absent assessment components and they will be counted as repeat and not as his/her first-time attempt.
When a student repeats an assessment component after being absent without a medical excuse, the maximum grade achievable for the component grade in the repeat attempt is a 'C'.

b. Absent with medical excuse

If a student is absent with a medical excuse for one or more of the three (03) assessment components (CA, ESE-theory, ESE-practical) he/she will receive an Absent grade for the absent assessment components and the attempt on the component will not be counted. The medical excuse is valid for only one (01) academic year. Therefore, repeat attempts made in the following academic year (after the medical excuse) are considered as first attempts. If the student does not repeat the assessment in the following academic year after the medical excuse, the student will receive an "Absent" grade and the medical excuse will not be considered for future repeat attempts. There is no limit on the maximum overall grade achievable for the repeat assessment when it is considered as a first attempt.

Course Structure for the BICT Honours Degree Programme

Credit Distribution of the Course Structure - BICT Honours Degree Programme

Level		Credits for Compulsory Courses	Credits for Optional Courses	Minimum Required Credits
Level 1		30	03	30
Level 2		30	04	30
Level 3	Pathway 1	30	00	30
	Pathway 2	30	00	30
	Pathway 3	30	00	30
Level 4	Pathway 1	30	00	30
	Pathway 2	30	00	30
	Pathway 3	30	00	30

Pathway 1 – Computer Network Technology

Pathway 2 – Games and Animation

Pathway 3 – Software Systems

Course Structure for the BICT Honours Degree Programme

Common Course Units Offered for the Bachelor of Information and Communication Technology Honours Degree Programme (SLQF Level 3 and Level 4)

Sem		Course Code	Course Title	Type	Credits	Pre-requisite	Counted for GPA
Year 1	Semester 1	GTEC 11013	Mathematics for Technology – 1	C	3	GCE (A/L)	
		CTEC 11203	Design Ideation and Creative Development	C	3	GCE (A/L)	
		GTEC 13032	Projects in Technology I	C	2	GCE (A/L)	
		CTEC 11053	Structured Programming I	C	3	GCE (A/L)	
		CTEC 11063	Computer Systems Organization	C	3	GCE (A/L)	
		LNPR 13082*	Communication for Technology	C*	2	GCE (A/L)	
	Semester 2	GTEC 12013	Mathematics for Technology – II	C	3	GTEC 11013	
		CTEC 12212	Fundamentals of Electricity	C	2	GCE (A/L)	
		GTEC 12033	Fundamental Practices in Technology	C	3	GCE (A/L)	
		CTEC 12223	Statistics for Computing	C	3	GTEC 11013	
		CTEC 12052	Data Communication and Networking	C	2	GCE (A/L)	
		CTEC 12073	Structured Programming II	C	3	CTEC 11053	
Year 2	Semester 1	GTEC 21023	Fundamentals of Electronics	C	3	GTEC 12023	Yes
		GTEC 23032	Projects in Technology II	C	2	GTEC 13032	Yes
		GTEC 21043	Mathematics for Technology III	C	3	GTEC 12013	Yes
		CTEC 21042	Web Programming I	C	2	CTEC 12052, CTEC 12073	Yes
		CTEC 21052	Introduction to Cyber Security	C	2	CTEC 12052	Yes
		CTEC 21063	Database Systems	C	3	CTEC 12073	Yes
		LNPR 21072	Japanese Language – I	O	2	GCE (A/L)	No*
	Semester 2	DELT 21512	English for the World	C	2	DELT 13522	No*
		GTEC 22033	Mathematics for Technology – IV	C	3	GTEC 21043	Yes
		CTEC 22023	Data Structures & Algorithms	C	3	CTEC 12073	Yes
		CTEC 22032	Software Engineering	C	2	CTEC 12073	Yes
		CTEC 22043	Object Oriented Programming	C	3	CTEC 12073	Yes
		CTEC 22053	Computer Architecture & Operating Systems	C	3	CTEC 11063	Yes
		CTEC 22061	Systems and Network Laboratory	C	1	CTEC 12052	Yes
		DELT 22552	English for Technology	C	2	DELT 13522	No*
		LNPR 22072	Japanese Language – II	O	2	LNPR 21072	No*

* Minimum grade D required for graduation

Course Structure for the BICT Honours Degree Programme

Course Units Offered for the Computer Network Technology Pathway (SQLF Level 05 and Level 06)

Sem	Course Code	Course Title	Type	Credits	Pre-requisite	Counted for GPA
Year 3 Semester 1	CTEC 31013	Web Programming II	C	3	CTEC 21042	YES
	CTEC 31023	Mobile Application Development	C	3	CTEC 21042	YES
	CTEC 31032	ICT for Business	C	2	GTEC 23032	YES
	CTEC 31042	Python Programming	C	2	CTEC 22023	YES
	CTNT 31012	Introduction to Telecommunication	C	2	CTEC 12052	YES
	CTNT 31022	Wireless and Mobile Communication	C	2	CTEC 12052	YES
	ENPR 31042	Principles and Practices of Management and Technology Management	C	2	GTEC 23032	YES
Semester 2	GTEC 32012	Project Management	C	2	GTEC 23032	YES
	CTEC 32023	Internet of Things	C	3	CTEC 22053 CTEC 31022	YES
	CTNT 32012	Optical Fibre Communications and Satellite Communications	C	2	CTNT 31022	YES
	CTNT 32032	Virtualization and Cloud Computing	C	2	CTEC 21052 CTEC 22053	YES
	CTNT 32042	Advanced Communication Networks	C	2	CTNT 31022	YES
	CTNT 32051	Cyber Security Laboratory	C	1	CTEC 21052	YES
	CTNT 32062	Mobile Computing	C	2	CTNT 31022	YES
Year 4	CTEC 41016	Industrial Training	C	6	All compulsory units up to Level 4 Sem I	YES
	CTEC 43018	Project	C	8	All compulsory units up to Level 3	YES
	CTNT 44021	Advanced Networking Laboratory	C	1	CTNT 32042	YES
	CTNT 44032	Network and System Administration	C	2	CTNT 32042	YES
	CTNT 44042	Advanced Wireless and Mobile Communication	C	2	CTNT 31022	YES
	CTNT 44053	Network and Information Security	C	3	CTNT 32042	YES
	CTNT 44062	Security Management	C	2	CTNT 21052	YES
	CTNT 44073	Distributed Computing	C	3	CTNT 22053 CTNT 32062	YES
	ENPR 44043	Entrepreneurship and Small Business Management	C	3	ENPR 31042	YES

Course Structure for the
BICT Honours Degree Programme

Course Units offered for the Games and Animation Pathway
(SLQF Level 05 and Level 06)

Sem	Course Code	Course Title	Type	Credits	Pre-requisite	Counted for GPA
Year 3 Semester 1	CTEC 31013	Web Programming II	C	3	CTEC 21042	YES
	CTEC 31023	Mobile Application Development	C	3	CTEC 21042	YES
	CTEC 31032	ICT for Business	C	2	GTEC 23032	YES
	GANI 31012	Data Structures for Game Development	C	2	CTEC 22023	YES
	GANI 31022	Introduction to 3D Modelling	C	2	GTEC 21043, CTEC 22023	YES
	GANI 31032	Game Design and Development	C	2	CTEC 22043	YES
	ENPR 31042	Principles and Practices of Management and Technology Management	C	2	GTEC 23032	YES
Semester 2	GTEC 32012	Project Management	C	2	GTEC 23032	YES
	CTEC 32012	Human Computer Interaction	C	2	CTEC 22043	YES
	GANI 32013	Advanced 3D Modelling Workshop	C	3	GANI 31022	YES
	GANI 32024	Mathematics for Modelling and Rendering	C	4	GTEC 22033	YES
	GANI 32033	Animation for Game Development	C	3	GANI 31022	YES
Year 4	CTEC 41016	Industrial Training	C	6	All compulsory units up to Level 4 Sem I	YES
	CTEC 43018	Project	C	8	All compulsory units up to Level 3	YES
	CTEC 44022	Software and Hardware Optimization Techniques	C	2	CTEC 22053	YES
	GANI 44033	3D Games Prototyping	C	3	GANI 32013	YES
	GANI 44043	Real-Time 3D Techniques for Games	C	3	GANI 32013	YES
	GANI 44053	Fundamentals of Virtual Reality	C	3	GANI 32013	YES
	GANI 44062	Motion Graphics Workshop	C	2	GANI 32024	YES
	ENPR 44043	Entrepreneurship and Small Business Management	C	3	ENPR 31042	YES

Course Structure for the BICT Honours Degree Programme

Course Units offered for the Software Systems Technology Pathway (SQLF Level 05 and Level 06)

Sem	Course Code	Course Title	Type	Credits	Pre-requisite	Counted for GPA
Year 3 Semester 1	CTEC 31013	Web Programming II	C	3	CTEC 21042	YES
	CTEC 31023	Mobile Application Development	C	3	CTEC 21042	YES
	CTEC 31032	ICT for Business	C	2	GTEC 23032	YES
	CTEC 31042	Python Programming	C	2	CTEC 22023	YES
	SWST 31022	Requirements Engineering	C	2	CTEC 22032	YES
	SWST 31032	Applied Information Systems	C	2	CTEC 22032	YES
	ENPR 31042	Principles and Practices of Management and Technology Management	C	2	GTEC 23032	YES
Semester 2	GTEC 32012	Project Management	C	2	GTEC 23032	YES
	CTEC 32012	Human Computer Interaction	C	2	CTEC 22043	YES
	SWST 32012	System Analysis and Design	C	2	CTEC 22032	YES
	SWST 32022	Quality Assurance	C	2	CTEC 22032	YES
	SWST 32033	Advanced Databases	C	3	CTEC 21063	YES
	SWST 32043	Software Architecture and Concepts	C	3	CTEC 22032	YES
Year 4	CTEC 41016	Industrial Training	C	6	All compulsory units up to Level 4 Sem I	YES
	CTEC 43018	Project	C	8	All compulsory units up to Level 3	YES
	CTEC 44022	Software and Hardware Optimization Techniques	C	2	CTEC 22053	YES
	SWST 44022	Applied Internet-of-Things	C	2	CTEC 31013	YES
	SWST 44032	Scientific Communication	C	2	CTEC 22032	YES
	SWST 44042	Speech Interfaces	C	2	CTEC 32012	YES
	SWST 44053	Software Modelling	C	3	SWST 32012	YES
	SWST 44062	Enterprise Application Development	C	2	SWST 31032, SWST 32012	YES
	ENPR 44013	Entrepreneurship and Small Business Management	C	3	ENPR 31042	YES

Reference

C : Compulsory

O : Optional

GTEC : General Technology

CTEC : Computer Technology

GCPR : Generic Competency for Professionals

LNPR : Languages for Professionals

ENPR : Entrepreneurship for Professionals

CTNT : Communication Technology for Networking Technology

SWST : Software Systems Technology

GANI : Games and Animations

Compulsory Course Units for Pathways
BICT Honours Degree Programme

Third (3rd) Year
(SLQF Level 05)

Course Code	Course Title	Pathway 1	Pathway 2	Pathway 3
CTEC 31013	Web Programming II	X	X	X
CTEC 31023	Mobile Application Development	X	X	X
CTEC 31032	ICT for Business	X	X	X
CTEC 31042	Python Programming	X		X
ENPR 31042	Principles and Practices of Management and Technology Management	X	X	X
GTEC 32012	Project Management	X	X	X
CTEC 32023	Internet of Things	X		
CTEC 32012	Human Computer Interaction		X	X
Computer Networks Pathway				
CTNT 31012	Introduction to Telecommunication	X		
CTNT 31022	Wireless and Mobile Communication	X		
CTNT 32012	Optical Fibre Communications and Satellite Communications	X		
CTNT 32032	Virtualization and Cloud Computing	X		
CTNT 32042	Advanced Communication Networks	X		
CTNT 32051	Cyber Security Laboratory	X		
CTNT 32062	Mobile Computing	X		
Games and Animation Pathway				
GANI 31012	Data Structures for Game Development		X	
GANI 31022	Introduction to 3D Modelling		X	
GANI 31032	Game Design and Development		X	
GANI 32013	Advanced 3D Modelling Workshop		X	
GANI 32024	Mathematics for Modelling and Rendering		X	
GANI 32033	Animation for Game Development		X	
Software Systems Pathway				
SWST 31022	Requirements Engineering			X
SWST 31032	Applied Information Systems			X
SWST 32012	System Analysis and Design			X
SWST 32022	Quality Assurance			X
SWST 32033	Advanced Databases			X
SWST 32043	Software Architecture and Concepts			X
SWST 41062	Enterprise Application Development			X

Compulsory Course Units for Pathways
BICT Honours Degree Programme

Fourth (4th) Year

Course Code	Course Title	Pathway 1	Pathway 2	Pathway 3
CTEC 43018	Project	X	X	X
CTEC 41016	Industrial Training	X	X	X
CTEC 44022	Software and Hardware Optimization Techniques		X	X
ENPR 44043	Entrepreneurship and Small Business Management	X	X	X
Computer Networks Pathway				
CTNT 44021	Advanced Networking Laboratory	X		
CTNT 44032	Network and System Administration	X		
CTNT 44042	Advanced Wireless and Mobile Communication	X		
CTNT 44053	Network and Information Security	X		
CTNT 44062	Security Management	X		
CTNT 44073	Distributed Computing	X		
Games and Animation Pathway				
GANI 44033	3D Games Prototyping		X	
GANI 44043	Real-Time 3D Techniques for Games		X	
GANI 44053	Fundamentals of Virtual Reality		X	
GANI 44062	Motion Graphics Workshop		X	
Software Systems Pathway				
SWST 44022	Applied Internet-of-Things			X
SWST 44032	Scientific Communication			X
SWST 44042	Speech Interfaces			X
SWST 44053	Software Modelling			X
SWST 44062	Enterprise Application Development			X

If a student has followed compulsory course units of a given pathway, aggregating to a minimum of 30 credits each in level 3 and 4, the pathway will be specified in the transcript.

Eligibility to Award the BICT honours Degree Programme

Eligibility for the Award of the Bachelor of Information and Communication Technology Honours Degree

To be eligible for the Bachelor of Information and Communication Technology Honours degree, a student must

i. Accumulate grades of D or better, in course units aggregating to at least 30 credits, including all compulsory course units considered for the calculation of the GPA in each academic year, totaling to minimum of 120 credits, and

ii. Obtain grades of C or better aggregating to at least 100 credits of which at least 40 credits should be from level 3 and 4 course units, and at least grades of D for the re maining course units considered in section (i) above, and

iii. Obtain grade C or better for the course unit CTEC 43018, and

iv. Obtain grades of D or better in each generic competency for professionals, course units (GCPR,DELT course units), and

v. Obtain grades of D or better in each language for professionals course units (LNPR course units), and

vi. Obtain a minimum GPA of 2.00 or greater, and

vii. Complete the relevant requirements within a period of six(06) Consecutive academic years.

First Class

A student who is eligible for the Bachelor of Information and Communication Technology Honours Degree may be awarded First Class if he/she

i. Obtains grades of C or better in all course units considered for the calculation of the GPA, and

ii. Obtains a GPA of 3.70 or greater , and

iii. Obtains grades of A or better aggregating to at least half the number of credits in level 3 and 4 course units, and

iv. Obtains grades of A or better aggregating to at least half the number of credits in level 1, level 2, level 3 and level 4 course units, and

v. Completes the relevant requirements within four consecutive academic years.

Second Class (Upper Division)

A student who is eligible for the Bachelor of Information and Communication Technology Honours Degree may be awarded Second Class (Upper Division) provided, if he/she

i. Obtains grades of C or better in all course units aggregating to at least 110 credits, and grades D or better in the remaining course units considered for the GPA calculation, and

ii. Obtains a GPA of 3.30 or greater, and

iii. Obtains grades of B or better aggregating to at least half the number of credits in level 3 and 4 course units, and

iv. Obtains grades of B or better aggregating to at least half the number of credits in level 1, level 2, level 3 and level 4 course units, and

v. Completes the relevant requirements within four consecutive academic years.

Second Class (Lower Division)

A student who is eligible for the Bachelor of Information and Communication Technology Honours Degree may be awarded Second Class (Lower Division) provided,
if he/she

i. Obtains grades of C or better in all course units, aggregating to at least 110 credits, and grades D or better in the remaining course units considered for the GPA calculation, and

ii. Obtains a GPA of 3.00 or greater, and

iii. Obtains grades of B or better in level 3 and 4 course units, aggregating to at least half the number of credits accumulated in such course units, and

iv. Obtains grades of B or better in level 1, level 2, level 3 and level 4 course units, aggregating to at least half the number of credits accumulated in such course units, and

v. Completes the relevant requirements within four consecutive academic years.

Course Structure for the BET Honours Degree Programme

Credit Distribution of the Course Structure - BET Honours Degree

Level		Credits for Compulsory Courses	Credits for Optional Courses	Minimum Required Credits
Level 1		30	00	30
Level 2		30	02	30
Level 3	Pathway 1	15	57	30
	Pathway 2	15	57	30
	Pathway 3	15	57	30
Level 4	Pathway 1	19	30	31
	Pathway 2	19	30	31
	Pathway 3	19	30	31

Pathway 1 - Materials and Process Technology

Pathway 2 - Industrial Automation and Robotics

Pathway 3 - Sustainable Technology

Course Structure for the BET Honours Degree Programme

Common Course Units Offered for the Bachelor of Engineering Technology Honours Degree Programme (SLQF Level 03 and Level 04)

Sem		Course Code	Course Title	Type	Credits	Pre-requisite	Counted for GPA
Year 1	Semester 1	GTEC 11013	Mathematics for Technology – 1	C	3	GCE (A/L)	YES
		GTEC 11023	Physics for Technology I	C	3	GCE (A/L)	YES
		GTEC 11041	Engineering Drawing with CAD I	C	1	GCE (A/L)	YES
		ETEC 11052	Introduction to programming for Technology	C	2	GCE (A/L)	YES
		ETEC 11063	Chemistry for Technology	C	3	GCE (A/L)	YES
		GTEC 11071	Physics for Technology Laboratory I	C	1	GCE (A/L)	YES
		GTEC 13032	Projects in Technology I	C	2	GCE (A/L)	YES
		DELT 13522	English for Computing & Technology	C	2	GCE (A/L)	NO*
	Semester 2	GTEC 12013	Mathematics for Technology – II	C	3	GTEC 11013	YES
		GTEC 12023	Physics for Technology II	C	3	GTEC 11023	YES
		GTEC 12033	Fundamental Practices in Technology	C	3	GCE (A/L)	YES
		GTEC 12041	Engineering Drawing with CAD II	C	1	GTEC 11041	YES
		ETEC 12051	Engineering Workshop	C	1	GCE (A/L)	YES
		GTEC 12062	Statistics for Technology	C	2	GTEC 11013	YES
		ETEC 12071	Chemistry for Technology Laboratory	C	1	GCE(A/L)	YES
		GTEC 12081	Physics for Technology Laboratory II	C	1	GTEC 11071	YES
Year 2	Semester 1	GTEC 21013	Applied Calculus - I	C	3	GTEC 12013	YES
		GTEC 21023	Fundamentals of Electronics	C	3	GTEC 12023	YES
		GTEC 23032	Projects in Technology II	C	2	GTEC 13032	YES
		ETEC 21043	Engineering Materials -I	C	3	ETEC 11063 GTEC 12033	YES
		ETEC 21053	Manufacturing Processes	C	3	ETEC 12051	YES
		ETEC 21062	Object Oriented Programming for Engineering Technology	O	2	ETEC 11052	YES
		LNPR 21072	Japanese Language – I	O	2	GCE (A/L)	NO*
		DELT 21512	English for the World	C	2	DELT 13522	NO*
	Semester 2	GTEC 22013	Applied Calculus- II	C	3	GTEC 21013	YES
		GTEC 22023	Sustainable Technology Systems	C	3	ETEC 11063 GTEC 12033	YES
		ETEC 22033	Applied Thermodynamics	C	3	GTEC 11023 GTEC 12023	YES
		ETEC 22042	Electric Circuits and Electric Machines	C	2	GTEC 21023 GTEC 12081	YES
		ETEC 22053	Industrial Control Systems	C	3	GTEC 11023 GTEC 12023	YES
		ETEC 22063	Mechanics of Materials	C	3	GTEC 11041 GTEC 12041	YES
		DELT 22552	English for Technology	C	2	DELT 13522	NO*
		LNPR 22072	Japanese Language -II	O	2	LNPR 21072	NO*

* Minimum grade D required for graduation

Course Structure for the BET Honours Degree Programme

Course Units Offered for the Materials and Process Technology Pathway (SQLF Level 05 and Level 06)

Sem		Course Code	Course Title	Type	Credits	Pre-requisite	Counted for GPA
Year 3	Semester 1	ETEC 31013	Programming in Python for Engineering Technology	O	3	ETEC 11052	YES
		ETEC 31023	Fluid Mechanics and Fluid Systems	C	3	ETEC 22033	YES
		ETEC 31033	Mechanics of Machines	C	3	ETEC 22063	YES
		ENPR 31042	Principles and Practices of Technology management	C	2	GTEC 23032	YES
		ETMP 31213	Chemical Process Technology	O	3	ETEC 21043 & ETEC 21053	YES
		ETMP 31223	Engineering Materials -II	O	3	ETEC 21043	YES
	Semester 2	ETEC 32012	Machine Design with Computer Aided Design	C	2	GTEC 12041	YES
		ETEC 32022	Manufacturing Systems and Computer Integrated Manufacturing	C	2	ETEC 21043 & ETEC 21053	YES
		ENPR 33033	Innovations to Market	C	3	GTEC 23032	YES
		GCPR 32041	Professional Ethics and Practices	C	1	GTEC 12033	NO*
		ETMP 32213	Science of Engineering Materials	O	3	ETEC 21043 & GTEC 12023	YES
		ETMP 32223	Materials Processes in Industry- I	O	3	ETEC 21043 & ETEC 21053	YES
		ETMP 32233	Nanoscience and Nanomaterials	O	3	ETEC 21043	YES
		ETMP 32243	Integrated Computational Materials Engineering	O	3	ETEC 32012 & ETEC 11063	YES
Year 4		GTEC 41016	Industrial Training	C	6	All compulsory units up to Level 4	YES
		ETEC 43018	Capstone Project	C	8	GTEC 23032 & ENPR 31042	YES
		GCPR 44022	Occupational Health and Safety	C	2	ETEC 12051 & GTEC 12081 & ETEC 12071	NO*
		ENPR 44033	Total Productive Maintenance (TPM)	O	3	ETEC 12051	YES
		ENPR 44043	Entrepreneurship and Small Business Management	C	3	ENPR 31042	YES
		ENPR 44052	Lean/Six Sigma Management	C	2	ENPR 31042	YES
		ETMP 44213	Materials Processes in Industry --II	O	3	ETMP 32223	YES
		ETMP 44223	Novel Engineering Materials and Next Generation Devices	O	3	ETMP 31223 & ETMP 32213	YES
		ETMP 44233	Materials Characterization and Testing Laboratory	O	3	ETEC 21043 & ETEC 22063	YES

* Minimum grade D required for graduation

Course Structure for the BET Honours Degree Programme

Course Units Offered for the Industrial Automation and Robotics Pathway
(SLQF Level 05 and Level 06)

Sem	Course Code	Course Title	Type	Credits	Pre-requisite	Counted for GPA
Year 3 — Semester 1	ETEC 31013	Programming in Python for Engineering Technology	O	3	ETEC 11052	YES
	ETEC 31023	Fluid Mechanics and Fluid Systems	C	3	ETEC 22033	YES
	ETEC 31033	Mechanics of Machines	C	3	ETEC 22063	YES
	ENPR 31042	Principles and Practices of Technology management	C	2	GTEC 23032	YES
	ETIA 31413	Introduction to Industrial Automation	O	3	ETEC 22042 ETEC 22053	YES
	ETIA 31423	Introduction to Microprocessors and Embedded systems	O	3	ETEC 11052	YES
Semester 2	ETEC 32012	Machine Design with Computer Aided Design	C	2	GTEC 12041	YES
	ETEC 32022	Manufacturing Systems and Computer Integrated Manufacturing	C	2	ETEC 21043 ETEC 21053	YES
	ENPR 33033	Innovations to Market	C	3	GTEC 23032	YES
	GCPR 32041	Professional Ethics and Practices	C	1	GTEC 12033	NO*
	ETIA 32413	Introduction to Robotics in Manufacturing	O	3	ETIA 31413	YES
	ETIA 32423	Process Instrumentation and Control	O	3	ETEC 22042 ETEC 22053	YES
	ETIA 32433	Industrial Automation Networks	O	3	ETIA 31413	YES
	ETIA 32443	Embedded systems and Applications	O	3	ETIA 31423	YES
Year 4	GTEC 41016	Industrial Training	C	6	All compulsory units up to Level 4	YES
	ETEC 43018	Capstone Project	C	8	GTEC 23032 ENPR 31042	YES
	GCPR 44022	Occupational Health and Safety	C	2	ETEC 12051 GTEC 12081 ETEC 12071	NO*
	ENPR 44033	Total Productive Maintenance (TPM)	O	3	ETEC 12051	YES
	ENPR 44043	Entrepreneurship and Small Business Management	C	3	ENPR 31042	YES
	ENPR 44052	Lean/Six Sigma Management	C	2	ENPR 31042	YES
	ETIA 44413	Computer Integrated Manufacturing	O	3	ETEC 32012 ETEC 32022	YES
	ETIA 44423	Industrial Motion Control	O	3	ETIA 31423 ETIA 32423	YES
	ETIA 44433	Computer Aided Manufacturing with Lab	O	3	ETEC 32012 ETEC 32022	YES

* Minimum grade D required for graduation

Course Structure for the BET Honours Degree Programme

Course Units offered for the Sustainable Technology Pathway
SQLF Level 05 and Level 06)

Sem	Course Code	Course Title	Type	Credits	Pre-requisite	Counted for GPA
Year 3 Semester 1	ETEC 31013	Programming in Python for Engineering Technology	O	3	ETEC 11052	YES
	ETEC 31023	Fluid Mechanics and Fluid Systems	C	3	ETEC 22033	YES
	ETEC 31033	Mechanics of Machines	C	3	ETEC 22063	YES
	ENPR 31042	Principles and Practices of Technology Management	C	2	GTEC 23032	YES
	ETST 31613	Hydrology and hydrogeology with lab	O	3	GTEC 11023 & ETEC 11063	YES
	ETST 31623	Conventional and Alternative Energy Resources	O	3	GTEC 12023 & GTEC 22023	YES
Semester 2	ETEC 32012	Machine Design with Computer Aided Design	C	2	GTEC 12041	YES
	ETEC 32022	Manufacturing Systems and Computer Integrated Manufacturing	C	2	ETEC 21043 & ETEC 21053	YES
	ENPR 33033	Innovations to Market	C	3	GTEC 23032	YES
	GCPR 32041	Professional Ethics and Practices	C	1	GTEC 12033	NO*
	ETST 32613	Energy Storage Technologies with Lab	O	3	GTEC 12023 & ETEC 11063	YES
	ETST 32623	Water and Wastewater Treatment	O	3	GTEC 22023	YES
	ETST 32633	Soil and Solid Waste Treatment	O	3	GTEC 22023	YES
	ETST 32643	Air and Air Pollution Control	O	3	ETEC 11063	YES
Year 4	GTEC 41016	Industrial Training	C	6	All compulsory units up to Level 4	YES
	ETEC 43018	Capstone Project	C	8	GTEC 23032 & ENPR 31042	YES
	GCPR 44022	Occupational Health and Safety	C	2	ETEC 12051 & GTEC 12081 & ETEC 12071	NO*
	ENPR 44033	Total Productive Maintenance (TPM)	O	3	ETEC 12051	YES
	ENPR 44043	Entrepreneurship and Small Business Management	C	3	ENPR 31042	YES
	ENPR 44052	Lean/Six Sigma Management	C	2	ENPR 31042	YES
	ETST 44613	Monitoring and Assessment of Sustainability	O	3	GTEC 22023	YES
	ETST 44623	Sustainable Facilities and Operations	O	3	ETST 31623 & GTEC 22023	YES
	ETST 44633	Geographical Information Systems for Sustainability with Laboratory	O	3	ETEC 11052	YES

* Minimum grade D required for Graduation

Reference   **C :** Compulsory   **O :** Optional

GTEC : General Technology

GCPR : Generic Competency for Professionals

ENPR : Entrepreneurship for Professionals

ETIA : Industrial Automation and Robotics

ETEC : Engineering Technology

ENPR : Languages for Professionals

ETMP : Materials and Process Technology

ETST : Sustainable Technology

Compulsory Course Units for Pathways : BET Honours Degree Programme

Third (3rd)Year
(SQLF Level 05)

Course Code	Course Title	Pathway 1	Pathway 2	Pathway 3
Materials and Process Technology Pathway				
ETMP 31213	Chemical Process Technology	C	O	O
ETMP 31223	Engineering Materials -II	C	O	O
ETMP 32213	Science of Engineering Materials	C	O	O
ETMP 32223	Materials Processes in Industry- I	C	O	O
ETMP 32233	Nanoscience and Nanomaterials	C	O	O
ETMP 32243	Integrated Computational Materials Engineering	C	O	O
Industrial Automation and Robotics Pathway				
ETIA 31413	Introduction to Industrial Automation	O	C	O
ETIA 31423	Introduction to Microprocessors and Embedded systems	O	C	O
ETIA 32413	Introduction to Robotics in Manufacturing	O	C	O
ETIA 32423	Process Instrumentation and Control	O	C	O
ETIA 32433	Industrial Automation Networks	O	C	O
ETIA 32443	Embedded systems and Applications	O	C	O
Sustainable Technology Pathway				
ETST 31613	Hydrology and hydrogeology with lab	O	O	C
ETST 31623	Conventional and Alternative Energy Resources	O	O	C
ETST 32613	Energy Storage Technologies with Lab	O	O	C
ETST 32623	Water and Wastewater Treatment	O	O	C
ETST 32633	Soil and Solid Waste Treatment	O	O	C
ETST 32643	Air and Air Pollution Control	O	O	C

Reference   C : Compulsory   O : Optional

Compulsory Course Units for Pathways :
BET Honours Degree Programme

Fourth (4th) Year
(SLQF Level 06)

Course Code	Course Title	Pathway 1	Pathway 2	Pathway 3
Materials and Process Technology Pathway				
ETMP 44213	Materials Processes in Industry --II	C	O	O
ETMP 44223	Novel Engineering Materials and Next Generation Devices	C	O	O
ETMP 44233	Materials Characterization and Testing Laboratory	C	O	O
Industrial Automation and Robotics Pathway				
ETIA 44413	Computer Integrated Manufacturing	O	C	O
ETIA 44423	Industrial Motion Control	O	C	O
ETIA 44433	Computer Aided Manufacturing with Lab	O	C	O
Sustainable Technology Pathway				
ETST 44613	Monitoring and Assessment of Sustainability	O	O	C
ETST 44623	Sustainable Facilities and Operations	O	O	C
ETST 44633	Geographical Information Systems for Sustainability with Laboratory	O	O	C

If a student has followed compulsory course units of a given pathway, aggregating to a minimum of 30 credits each in level 3 and 4, the pathway will be specified in the transcript.

Reference   C : Compulsory   O : Optional

Selectin Criteria for Pathways on Engineering Technology (ET)

A Student should satisfy progression criteria to register for courses in a particular pathways.
ETIA pathway is limited to 30 students per batch.

Eligibility to Award the BET honours Degree Programme

Eligibility for the Award of the Bachelor of Engineering Technology (Honours) Degree

To be eligible for the Bachelor of Engineering Technology Honours degree, a student must

i. Accumulate grades of D or better, in course units aggregating to at least 30 credits, including all compulsory course units considered for the calculation of the GPA in each academic year, totaling to minimum of 120 credits, and
ii. Obtain grades of C or better aggregating to at least 100 credits of which at least 40 credits should be from level 3 and 4 course units, and at least grades of D for the remaining   course units considered in section (i) above, and
iii. Obtain grade C or better for the course unit ETEC 43018, and
iv. Obtain grades of D or better in each generic competency for professionals, course units (GCPR, DELT course unis), and
v. Obtain grades of D or better in each language for professionals course units (LNPR course units), and
vi. Obtain a minimum GPA of 2.00 or greater, and
vii. Complete the relevant requirements within a period of Six (06) consecutive academic years.

First Class

A student who is eligible for the Bachelor of Engineering Technology Honours Degree may be awarded First Class if he/she

i. Obtains grades of C or better in all course units considered for the calculation of the GPA, and
ii. Obtains a GPA of 3.70 or greater, and
iii. Obtains grades of A or better aggregating to at least half the number of credits in level 3 and 4 course units, and
iv. Obtains grades of A or better aggregating to at least half the number of credits in level 1, level 2, level 3 and level 4 course units, and
v. Completes the relevant requirements within four (04) consecutive academic years.

Second Class (Upper Division)

A student who is eligible for the Bachelor of Engineering Technology Honours Degree may be awarded Second Class (Upper Division) provided, if he/she

i. Obtains grades of C or better in all course units aggregating to at least 110 credits, and grades D or better in the remaining course units considered for the GPA calculation, and
ii. Obtains a GPA of 3.30 or greater, and
iii. Obtains grades of B or better aggregating to at least half the number of credits in level 3 and 4 course units, and
iv. Obtains grades of B or better aggregating to at least half the number of credits in level 1, level 2, level 3 and level 4 course units, and
v. Completes the relevant requirements within four (04) consecutive academic years.

Second Class (Lower Division)

A student who is eligible for the Bachelor of Engineering Technology Honours Degree may be awarded Second Class (Lower Division) provided, if he/she

i. Obtains grades of C or better in all course units, aggregating to at least 110 credits, and grades D or better in the remaining course units considered for the GPA calculation, and
ii. Obtains a GPA of 3.00 or greater, and
iii. Obtains grades of B or better in level 3 and 4 course units, aggregating to at least half the number of credits accumulated in such course units, and
iv. Obtains grades of B or better in level 1, level 2, level 3 and level 4 course units, aggregating to at least half the number of credits accumulated in such course units, and
v. Completes the relevant requirements within four consecutive academic years.

Course Structure for the B.Sc. Honours in Computer Science Degree Programme

The pathways for the B.Sc. Honours in Computer Science Degree Programme is designed by retaining all the globally accepted core modules of computer science.

The course structure of this B.Sc. Honours in Computer Science Degree programme is designed to align with the recommendations of the Standing Committee on Computing of the UGC, and the guidelines of the Association for Computing Machinery (ACM) and the Institute of Electrical and Electronics Engineers (IEEE).

Course Structure for the B.Sc. Honours in Computer Science Degree Programme

Ccommon course unites offered for all the pathways in year 1 and year 2 (SLQF Level 3 and Level 4) is given below:

Sem		Course Code	Course Title	Type	Credits	Pre-requisite	Counted for GPA
Year 1	Semester 1	CSCI 11014	Mathematics for Computer Science – I	C	4	G.C.E. (A/L)	YES
		CSCI 11023	Fundamentals of Statistics	C	3	G.C.E. (A/L)	YES
		CSCI 11032	Structured Programming – I	C	2	G.C.E. (A/L)	YES
		CSCI 11042	Fundamentals of Digital Electronics	C	2	G.C.E. (A/L)	YES
		CSCI 11052	Web Fundamentals	C	2	G.C.E. (A/L)	YES
		CSCI 11062	Introduction to Database Management Systems	C	2	G.C.E. (A/L)	YES
		CSCI 11072	Foundations in Computer Science	O	2	G.C.E. (A/L)	NO*
		DELT 13302	English for Computing and Technology	C	2	G.C.E. (A/L)	NO*
	Semester 2	CSCI 12013	Mathematics for Computer Science – II	C	3	CSCI 11014	YES
		CSCI 12022	Probability Distribution and Applications	C	2	CSCI 11023	YES
		CSCI 12033	Computer Architecture & Design	C	3	CSCI 11014	YES
		CSCI 12042	Structured Programming – II	C	2	CSCI 11032	YES
		CSCI 12052	Fundamentals of Operating Systems	C	2	CSCI 11014	YES
		CSCI 12063	Web Programming	C	3	CSCI 11052	YES
Year 2	Semester 1	CSCI 21013	Statistical Inference	C	3	CSCI 12022	YES
		CSCI 21023	Data Communication and Networks	C	3	CSCI 11014/ CSCI 11032	YES
		CSCI 21033	Data Structures and Algorithms	C	3	CSCI 12042	YES
		CSCI 21042	Software Engineering	C	2	CSCI 12042	YES
		CSCI 21052	Object-Oriented Programming – I	C	2	CSCI 12042	YES
		CSCI 21062	Advanced Database Management Systems	C	2	CSCI 11062	YES
		CSCI 23072	Group Project	C	2	Compulsory units in Year I	YES
		DELT 21212	English for the World	C	2	DELT 13302	NO*
		MGMT 21012	Principles of Management	C	2	G.C.E. (A/L)	NO*
	Semester 2	CSCI 22012	Statistics for Decision Making	C	2	CSCI 21013	YES
		CSCI 22022	Advanced Operating Systems	C	2	CSCI 12052	YES
		CSCI 22032	Object-Oriented Analysis and Design	C	2	CSCI 21042	YES
		CSCI 22042	Visual Programming	C	2	CSCI 21052	YES
		CSCI 22052	Introduction to Artificial Intelligence	C	2	CSCI 12013	YES
		CSCI 22062	Introduction to Cyber Security	C	2	CSCI 21023	YES
		CSCI 22072	TMobile Application Development	O	2	CSCI 21052/ CSCI 12063	YES
		CSCI 22082	Object-Oriented Programming – II	C	2	CSCI 21052	YES
		MGMT 22012	Human Resource Management	C	2	MGMT 21012	NO*

* Minimum grade D required for Graduation

Reference

C – Compulsory   O – Optional

CSCI – Computer Science   **DELT** – English for Professionals   **MGMT** – Management

Course Structure for the Pathway B.Sc. Honours in Computer Science Degree Programme

Course units for the Year III and IV (SLQF Level 5 and Level 6):
Course units for the Year III (SLQF Level 5)

Year III	Credits for Compulsory Courses	Credits for Optional Courses	Minimum Required Credits
Pathway 1	26	21	30
Pathway 2	25	20	30
Pathway 3	24	28	30
Pathway 4	27	30	30
Pathway 5	22	38	30

Pathway 1 – Cyber Security

Pathway 2 – Data Science

Pathway 3 – Artificial Intelligence

Pathway 4 – Scientific Computing

Pathway 5 - Standard Pathway

Course Structure for the B.Sc. Honours in Computer Science Degree Programme

3rd Year/ Semester 01

Course Code	Course Title		Credits	Pathway 1	Pathway 2	Pathway 3	Pathway 4	Pathway 5	Counted for GPA
CSCI 31014	Mathematics for Computer Science III	CSCI 12013	4	C	C	C	C	C	YES
CSCI 31022	Machine Learning and Pattern Recognition	CSCI 22052	2	O	C	C	C	C	YES
CSCI 31032	Theory of Programming Languages	CSCI 21033	2	O	O	O	O	C	YES
CSCI 31042	Advanced Data Structures and Algorithms	CSCI 21033	2	O	C	O	O	O	YES
CSCI 31052	Project Management	CSCI 21042	2	O	O	O	O	O	YES
CSCI 31062	Semantic Web and Ontological Modeling	CSCI 12063	2	-	O	O	O	O	YES
CSCI 31072	Python Programming	CSCI 12042	2	O	C	O	O	O	YES
CSCI 31082	Systems and Network Administration	CSCI 21023, CSCI 22022	2	C	O	O	O	O	YES
CSEC 31012	Applied Cryptography	CSCI 12013	2	C	-	-	-	O	YES
CSEC 31022	Data and Systems Security	CSCI 22022, CSCI 21062	2	C	-	-	-	O	YES
AINT 31012	Natural Language Processing	CSCI 22052	2	-	O	C	-	O	YES
AINT 31022	Deductive Reasoning and Logic Programming	CSCI 12013	2	-	-	C	O	C	YES
SCOM 31013	Numerical Analysis and Scientific Programming	CSCI 12013, CSCI 12042	3	-	-	-	C	-	YES
SCOM 31022	Scientific Visualization	CSCI 12013, CSCI 12042	2	-	-	-	C	-	YES
SCOM 31032	Mathematical Modeling	CSCI 12013, CSCI 12042	2	-	-	-	C	-	YES
DELT 33212*	English for Professional Purposes	DELT 21212	2	C	C	C	C	C	NO*
MGMT 31012*	Introduction to Entrepreneurship	MGMT 22012	2	C	C	C	C	C	NO*

* Minimum grade D required for graduation

Course Structure for the B.Sc. Honours in Computer Science Degree Programme

3rd Year/ Semester 02

Course Code	Course Title	Pre-requisite	Credits	Pathway 1	Pathway 2	Pathway 3	Pathway 4	Pathway 5	Counted for GPA
CSCI 32012	Theory of Automation	CSCI 12013	2	C	C	C	C	C	YES
CSCI 32022	Human Computer Interaction	CSCI 21042	2	C	C	C	C	C	YES
CSCI 32032	Research Methodology and Scientific Communication	CSCI 22012	2	C	C	C	C	C	YES
CSCI 32042	Social and Professional Issues	SCI 21042	2	C	C	C	C	C	YES
CSCI 32052	Distributed Systems & Cloud Computing	CSCI 12063	2	C	O	O	C	O	YES
CSCI 32062	Computer Graphics	CSCI 12013	2	O	O	C	C	C	YES
CSCI 32073	Introduction to Game Development	CSCI 21033	3	-	-	O	O	O	YES
CSCI 32083	Stochastic Processes	CSCI 21013	3	O	C	O	O	O	YES
CSCI 32092	Data Mining and Warehousing	CSCI 21062	2	O	C	O	O	O	YES
CSEC 32012	Wireless Communications and Networking	CSCI 21023	2	C	O	O	O	O	YES
CSEC 32022	Advanced Computer Communication and Networking	CSCI 21023	2	C	-	-	O	O	YES
CSEC 32032	Network Security	CSEC 31022	2	C				O	YES
DSCI 32012	Advanced Database Applications	CSCI 21062	2	O	C	O	O	C	YES
AINT 32012	Digital Image Processing and Computer Vision	CSCI 12013	2	-	-	C	O	O	YES
AINT 32022	Complex Systems & Agent Technology	CSCI 22052	2	-	O	C	-	O	YES
SCOM 32012	Parallel Computing	CSCI 21023	2	O	O	O	C	O	YES

Reference

C – Compulsory   O – Optional

CSCI	– Computer Science	Pathway 1	– Cyber Security
CSEC	– Cyber Security	Pathway 2	– Data Science
AINT	– Artificial Intelligence	Pathway 3	– Artificial Intelligence
DSCI	– Data Science	Pathway 4	– Scientific Computing
SCOM	– Scientific Computing	Pathway 5	– Standard Pathway
DELT	– English for Professionals		
MGMT	– Management		

Course Structure of the pathways : B.Sc. Honours in Computer Science Degree Programme

Course units for Year IV (SLQF Level 6):

Year 1V	Credits for Compulsory Courses	Credits for Optional Courses	Minimum Required Credits
Pathway 1	26	22	30
Pathway 2	23	28	30
Pathway 3	24	26	30
Pathway 4	18	41	30
Pathway 5	14	49	30

Course Structure for the B.Sc. Honours in Computer Science Degree Programme

Fourth (4th) Year

Course Code	Course Title	Pre-requisite	Credits	Pathway 1	Pathway 2	Pathway 3	Pathway 4	Pathway 5	Counted for GPA
CSCI 43018	Research Project	All compulsory course units	8	C	C	C	C	C	YES
CSCI 44026	Industrial Training	All compulsory course units	6	C	C	C	C	C	YES
CSCI 44032	Mobile Computing	CSEC 32012	2	O	O	O	O	O	YES
CSCI 44042	Theory of Computability and Complexity	CSCI 32012	2	-	-	O	O	O	YES
CSCI 44052	Software Quality and Automation	CSCI 21042	2	-	-	-	-	O	YES
CSCI 44062	Software Architecture and Design	CSCI 21042	2	-	-	-	-	O	YES
CSCI 44072	Computer Modelling and Simulation	CSCI 32062	2	-	-	O	O	O	YES
CSCI 44082	Emerging Technologies in Computing	All compulsory course units	2	O	O	O	O	O	YES
CSCI 44092	Enterprise Application Development	CSCI 21042	2	O	O	O	O	O	YES
CSCI 44103	Advanced Compilers	CSCI 31032	3	-	-	-	O	O	YES
CSCI 44112	Introduction to Quantum Computing	CSCI 22052	2	O	O	O	O	O	YES
CSEC 44012	Internet of Things	CSCI 21023	2	C	O	O	O	O	YES
CSEC 44022	Information Security Management and Auditing	CSCI 22062	2	C	-	-	-	O	YES
CSEC 44032	Cyber Crime and Forensics	CSCI 22062	2	C	O	-	O	O	YES
CSEC 44042	Security Analytics	CSEC 31012	2	C	-	-	-	-	YES
CSEC 44052	Cyber Laws and Standards	CSCI 22062	2	O	O	-	O	O	YES
CSEC 44062	Ethical Hacking and Vulnerability Analysis	CSEC 31022 CSEC 32032	2	C	-	-	-	-	YES
CSEC 44072	Secure Software Engineering	CSEC 31022	2	C	-	-	-	O	YES
CSEC 44082	Information & Coding Theory	CSCI 22062	2	O	-	-	O	-	YES
CSEC 44092	Mobile & IOT Security	CSEC 31012	2	O	-	-	-	-	YES
CSEC 44102	Advanced Cryptography	CSEC 31012	2	O	-	-	-	-	YES
DSCI 44012	Python for Data Science	CSCI 31072	2	-	C	O	-	O	YES
DSCI 44022	Data Visualization	CSCI 32092	2	-	C	-	-	-	YES
DSCI 44033	Big Data Analytics	CSCI 32092	3	-	C	-	-	-	YES
DSCI 44042	NoSQL Databases	DSCI 32012	2	-	O	-	-	O	YES
DSCI 44052	Time Series Analysis for Data Science	CSCI 21013	2	-	C	O	O	O	YES
DSCI 44062	Big data Architecture & Management	CSCI 32052	2	-	O	O	-	O	YES
DSCI 44072	Geographical Information Systems	CSCI 31042	2	-	O	-	-	-	YES
AINT 44012	Artificial Neural Networks	CSCI 31022	2	O	O	C	O	O	YES
AINT 44022	Fuzzy Logic	CSCI 31014	2	O	O	C	O	O	YES
AINT 44032	Deep Learning	CSCI 31022	2	-	O	C	-	O	YES
AINT 44042	Machine Translation	AINT 31012	2	-	-	C	-	-	YES

Course Structure for the B.Sc. Honours in Computer Science Degree Programme

Fourth (4th) Year

Course Code	Course Title	Pre-requisite	Credits	Pathway 1	Pathway 2	Pathway 3	Pathway 4	Pathway 5	Counted for GPA
AINT 44052	Intelligent Autonomous Robotics	CSCI 32022	2	-	-	C	O	O	YES
AINT 44062	Computational Cognitive Science	AINT 31022	2	-	-	O	-	-	YES
AINT 44072	Introduction to Virtual Reality	CSCI 32062	2	-	-	O	O	O	YES
SCOM 44012	High Performance Computing	SCOM 32012	2	O	O	O	C	O	YES
SCOM 44022	Advanced Numerical Analysis and	SCOM 31013	2	-	-	-	C	-	YES
SCOM 44033	Survey of Materials Simulation Methods	CSCI 12042, CSCI 31014	3	-	-	-	O	-	YES
SCOM 44043	Finite Element Methods in Scientific Computing	CSCI 12042, CSCI 31014	3	-	-	-	O	-	YES
SCOM 44052	Graphics Processing Unit programming	CSCI 32062	2	-	-	-	O	-	YES

Reference

C – Compulsory   O – Optional

CSCI	– Computer Science	Pathway 1 – Cyber Security
CSEC	– Cyber Security	Pathway 2 – Data Science
AINT	– Artificial Intelligence	Pathway 3 – Artificial Intelligence
DSCI	– Data Science	Pathway 4 – Scientific Computing
SCOM	– Scientific Computing	Pathway 5 – Standard Pathway
DELT	– English for Professionals	

Selection Criteria for a Pathway

Any student can select the pathway 5 without any restriction (default pathway). A student with at least C grade for all course units in Year 1 and 2 are eligible for applying for a pathway 1, 2, 3 and 4. Applicants will be selected for the applied pathway on merit basis. A pathway will be offered only if at least ten (10) applicants are eligible for that pathway. Maximum number of students selected for a pathway is fifteen (15) and this number will be increased according to the student demand, national need or if the intake for the B.Sc. Honours in Computer Science Degree is increased.

Award of Class for B.Sc. Honours in Computer Science Degree Programme

Eligibility for the Award of the B.Sc. Honours in Computer Science Degree

To be eligible for the B.Sc. Honours in Computer Science Degree, a student must
  i. Accumulate grades of D or better, in course units aggregating to at least 30 credits, including all compulsory course units considered for the calculation of the GPA in each academic year, totalling to minimum of 120 credits, and
  ii. Obtain grades of C or better aggregating to at least 104 credits of which at least 52 credits should be from level 3 and 4 course units, and at least grades of D for the remaining course units considered in section (i) above, and
  iii. Obtain grade C or better for the course unit CSCI 43018, and
  iv. Obtain grades of D or better for the MGMT course units, and
  v. Obtain grades of D or better for professional course unit (DELT course units), and
  vi. Obtain a minimum GPA of 2.00 or greater, and
  vii. Completes the relevant requirements within a period of six (06) consecutive academic years.

First Class

A student who is eligible for the B.Sc. Honours in Computer Science Degree may be awarded First Class, if he/she
  i. Accumulates grades of C or better in course units considered for the calculation of the GPA under eligibility criteria for the award of the degree above, and
  ii. Obtains a minimum GPA of 3.70, and
  iii. Obtains grades of A or better in course units aggregating to at least half the number of total credits for the course units considered under eligibility criteria for the award of the degree above, and
  iv. Obtains grades of A or better in course units aggregating to at least half the number of total credits for the course units in year 3 and year 4 considered under eligibility criteria for the award of the degree above, and
  v. Completes the relevant requirements within four (04) consecutive academic years.

Second Class (Upper Division)

A student who is eligible for the B.Sc. Honours in Computer Science Degree may be awarded Second Class (Upper Division), if he/she
  i. Accumulates grades of C or better in course units aggregating to at least 112 credits and grades D or better in the remaining course units considered for the Calculation of the GPA under eligibility criteria for the award of the degree above, and
  ii. Obtains a minimum GPA of 3.30, and
  iii. Obtains grades of B or better in course units aggregating to at least half the number of total credits for the course units considered under eligibility criteria for the award of the degree above, and
  iv. Obtains grades of B or better in course units aggregating to at least half the number of total credits for the course units in year 3 and year 4 considered under eligibility criteria for the award of the degree above, and
  v. Completes the relevant requirements within four (04) consecutive academic years.

Award of Class for B.Sc. Honours in Computer Science Degree Programme

Second Class (Lower Division)

A student who is eligible for the B.Sc. Honours in Computer Science Degree may be awarded Second Class (Lower Division), if he/she

i. accumulates grades of C or better in course units aggregating to at least 112 credits and grades D or better in the remaining course units considered for the calculation of the GPA under eligibility criteria for the award of the degree above, and

ii. obtains a minimum GPA of 3.00, and

iii. obtains grades of B or better in course units aggregating to at least half the number of total credits for the course units considered under eligibility criteria for the award of the degree above, and

iv. obtains grades of B or better in course units aggregating to at least half the number of total credits for the course units in year 3 and year 4 considered under eligibility criteria for the award of the degree above, and

v. completes the relevant requirements within four (04) consecutive academic

Gold Medals

Criteria of the Gold Medal Awarded by the Alumni Association of the University of Kelaniya

The recipient should be graduated from the Faculty of Computing and Technology obtaining a First Class Honours pass with the highest GPA in the faculty.

Criteria for the Award of Gold Medals to Graduates of the Faculty of Computing and Technology.

The graduates who followed and obtained the highest GPA for the following degree program with a first-class will be considered for the award of gold medals by the faculty of Computing and Technology.

Gold Medals
- Bachelor of Information and Communication Technology (BICT) Honours Degree
- Bachelor of Engineering Technology (BET) Honours Degree
- Bachelor of Science Honours in Computer Science Degree

Criteria for the Gold Medal Awarded by the Bank of Ceylon for the Most Outstanding Student of the Faculty of Computing and Technology

1. Eligibility Requirements
(a) The recipient should be graduated from the Faculty of Computing and Technology obtaining a First Class Honours pass.
(b) Displayed outstanding performance in extracurricular activities at the International, National, or University level during the period of the academic program.
At least 10 marks should be obtained for extracurricular activities for consideration for the award as per the criteria in Annex 1.
(c) A student shall be considered ineligible for the said award:
- If the student has obtained an improved grade/grades subsequently, by repeating a module/modules.
- If any kind of disciplinary action has been taken against the student by the Council, Vice-Chancellor, or Deputy Vice-Chancellor for any form of misconduct.

2. Application Procedure
- The Dean of the faculty will announce the call for applications at the end of each academic year.
- Any student who believes that he/she is eligible can apply for the award.
- Application forms can be downloaded from the Faculty of Computing and Technology website.
- The application form will serve as a tool for assessment against established evaluation criteria.
- Students shall submit their applications through the Senior Student Counsellor of the faculty who shall certify the contents of the application.
- Students shall submit certified copies (certified by the Senior Student Counsellor of the faculty or the Academic Advisor of the respective degree programme) of all documentary evidence with the application.
- Students shall prepare and participate in an interview if the selection committee requests.

Post Graduate Degrees offer by the FCT

Master of Science in Information Technology in Education (MITE)

The Master of Science in Information Technology in Education Degree is a two-year (24 months/SLQF level 10) postgraduate degree. During the two-year period, a student is required to earn a total of at least 60 credits of which at least 30 credits should be earned each year. This education degree programme has a strong focus on the application of information technology knowledge in the educational sector. The credit levels for the subjects are divided equally among the information technology and education areas measuring 30 credits per each area. During the second year (Level 6), each candidate is expected to carry out a "Dissertation in Education" of 12 months duration on a selected topic under the supervision of a senior member of the academic staff and submit a dissertation. All the subject contents are designed to have cutting-edge, up-to-date technologies and theories which can be used by the students in their careers.

Following are the main benefits of the Master of Science in Information Technology and Education Degree Programme to the Sri Lankan education sector.

- Developing IT literacy and learning how to apply IT in education; the focus is on the technical functions and uses of IT and on the need for knowledge and representation of the impacts of IT systems as a whole. This involves teachers' personal use of IT, such as, for instance, the use of word processing to prepare worksheets, locating information on CD-ROMs or on the Internet, or communicating with friends and family by email. The emphasis is on training in a range of tools and applications, and increasing teachers' awareness of the opportunities for applying IT to their teaching in the future.

- Use IT for professional purposes, focusing on improving their subject teaching in order to enrich how they teach with a range of IT applications. This approach often involves teachers in integrating IT to teach specific subject skills and knowledge; beginning to change their methodology in the classroom; and using IT to support their training and professional development. Teachers gain confidence in a number of generic and specialized IT tools that can be applied to the teaching of their subject area. The opportunity to apply IT in all their teaching is often limited only by a lack of ready access to IT facilities and resources, which is why it is not fully integrated into all lessons for all students.

- Infusing IT to improve learning and management of learning. IT infuses all aspects of teachers' professional lives in such ways as to improve student learning and the management of learning processes. The approach supports active and creative teachers who are. able to stimulate and manage the learning of students, integrating a range of preferred learning styles and uses of IT in achieving their goals. The infusing approach often involves teachers easily integrating different knowledge and skills from other subjects into project-based curricula.

- Transforming teaching through IT; teachers regard IT as so natural and part of the everyday life of schools that they begin to look at the process of teaching and learning in new ways. The emphasis changes from teacher-centred to learning-centred. Teachers, together with their students, expect a continuously changing teaching methodology designed to meet individual learning objectives.

Like most of the world's renowned universities, the Faculty of Computing & Technology, the University of Kelaniya also follows the prestigious IEEE/ACM computing guidelines (as recommended by the Standing Committee on Computing of the UGC of Sri Lanka) to formulate the Information Technology curricular that meets the international standards. Moreover, all the required University level Mathematics courses are also offered to the proposed degree candidates. This further helps them to improve their analytical skills required in effectively applying IT for Education.

Diplomas offer by the FCT

Diploma in Web-based Software Engineering

The Diploma in Web-based Software Engineering proposed by the Faculty of Computing and Technology, University of Kelaniya aims to prepare professionals who are able to design, develop and maintain substantially complex programming systems, environments and applications. Students will be trained specifically on industry oriented software development skills such as, requirements gathering and elicitation, system analysis and modelling, software and hardware optimization and quality assurance of software using computer-aided tools. Students will work individually and as members of teams in web-based software development projects. The programme emphasizes on problem based learning that includes real world problem solving in almost all the course modules.

There is high demand for Diploma courses that have sufficient depth in programming skills from students who have followed ICT at the GCE Advanced Level. These students can hone their software related skills and identify suitable career paths by following this Diploma in Web-based Software Engineering.

Students who follow the Diploma in Web-based Software Engineering will have the opportunity to learn industry standard web programming languages so they may adapt to any challenge that may arise in their career. The programme has been developed in accordance to the ACM-IEEE curriculum guideline for Software Engineering. The standard for Software Engineering stresses programming concepts and syntax across major languages currently in demand. Students who complete the program will be able to pick up a job using any programming language, the confidence to learn and practice new languages immediately.

Learning Centered Education

FCT has adopted the Learning Centred Education (LCE) pedagogy for its programme design and delivery for the first time in Sri Lanka. A series of workshops were conducted both in Sri Lanka and at the University of Oxford, UK under the guidance of Prof. Lynn McAlpine, Professor Emerita of University Education Development, Oxford Learning Institute, University of Oxford to train the staff and adopt the curriculum to reflect learning-centered-ness.

The LCE approach promotes active learning where the emphasis is placed on creating and managing tasks and activities which will empower student learning, both inside and outside the class. The pedagogical style required to enable active learning is different to traditional lecturing.

A different set of instructional and assessment strategies are adopted in the LCE approach to facilitate independent learning by the students. This approach places less importance on the traditional end of the semester exams, and a considerable percentage of marks will be earned by the students through in-class and outside the class activities which are spread throughout the module.

Industry Consultative Forum

The Industry Interaction Cell for Computing and Technology (IICfCT) at the Faculty of Computing and Technology, University of Kelaniya, hosted a successful Industry Consultative Forum on July 27-28 at Taj Samudra, Colombo. The event brought together over 50 industry leaders and academic experts to strengthen ties between academia and the tech industry.

Dr. Chamli Pushpakumara, Dean of FCT, emphasized aligning graduate competencies with future industry requirements. Dr. Pradeep Samarasekere, Director of IICfCT, highlighted the importance of industry-academia collaboration in addressing national challenges. Industry leaders shared insights, stressing the need for curriculum updates and real-world projects to enhance graduate employability.

The forum also sparked in-depth discussions on developing future-oriented programs within Engineering Technology, Information and Communication Technology, and Computer Science pathways. Industry experts provided valuable suggestions on the specific skills and subjects they expect from graduates, highlighting the need for practical and technical competencies that align with current and future market demands.

The forum initiated discussions on potential research partnerships and internships, aiming to bridge the knowledge gap between academia and industry. FCT remains dedicated to providing industry-relevant education and shaping future tech professionals through collaborative efforts.

FCT Career Fairs

The Industry Interaction Cell for Computing and Technology (IICfCT), Faculty of Computing and Technology had successfully organized two consecutive career fairs 2023 & 2024, strengthening ties between academia and the tech industry.

The inaugural FCT Career Fair '23 on September 25, 2023, marked a milestone as the faculty's first career fair, held at the new faculty distinguished guests from Asian Development Bank, esteemed university officials, and industry partners participated on the event and highlighted importance of bridging industry and academia to develop future tech professionals. 30+ companies engage with the career fair and interviews.

Building on this success, the FCT Career Fair '24 on July 26, 2024, featured 40+ leading companies in Engineering and IT sectors. It continued to provide students with valuable industry insights and career opportunities.

FCT remains committed to making the career fair an annual event, ensuring students are well-prepared for success in the evolving tech industry.

Science and Technology Human Resources Development Project

The Science and Technology Human Resource Development Project funded by the Asian Development Bank (ADB) supports the government to develop technology faculties in three universities viz. University of Kelaniya, Rajarata University of Sri Lanka and Sabaragamuwa University of Sri Lanka, and the Faculty of Engineering at the University of Sri Jayewardenepura to nurture a new breed of technology-oriented graduates equipped with market-relevant skills and entrepreneurial spirit. The total contribution for the project from the Asian Development Bank is USD 145 Million while the government contribution is USD 20 Million.

The project has five key outputs planned: (1). Innovative technology learning and research environment established, (2). Quality and industry-relevant higher technology education programs implemented, (3). Industry linkages and international collaborations strengthened, (4). Faculty management capacity strengthened, and (5). New higher education project preparation supported.

The Faculty of Computing and Technology of the University of Kelaniya has been allocated a total sum of USD 29.2 Million under this project and a further sum of USD 10 Million is available for the four universities to be utilised under competitive proposal basis.

The formal approval for the project was received on 30th August 2018 and the faculty will receive funding under this project until 30th June 2024 for its development activities.

The Faculty of Computing and Technology will utilise the above funding to construct the building complex at the proposed Mudun Ela premises, procure books, software & equipment, train the staff, establish partnership programmes with reputed international universities and develop collaborative programmes with the industry. These environmentally friendly buildings are expected to receive Platinum ratings under both the UDA Blue Green rating system as well as the green building rating system of the Green Building Council of Sri Lanka.

The proposed building complex, constructed at a total cost of LKR 4350 million, will comprise of state-of-the-art laboratory facilities, lecture rooms and all other necessary amenities at an international standard. A total floor area of over 34,000 square meters spread in 6 buildings has been added to the faculty complex under this project. The faculty was shifted from old Peliyagoda premises to the eleven story laboratory building at the Mudun Ela premises on the 26th January 2023. On 10th May 2024, thousand seater Auditorium, Academic building complex and the Administrative building complex were afficially added to the operations. The event were witnessed by the Vice chancellor of the university senior prof. Nilanthi de Silva, Deans of the Faculties and the invitees from the academic, administrative and non-academic staff. In addition invitees from the industry and the joint venture participated the event.

Science and Technology Human Resources Development Project

International Conference on Advances in Technology and Computing (ICATC)-2023

The Faculty of Computing and Technology University of Kelaniya, Sri Lanka, successfully organized and held the 8th International Conference on Advances in Technology and Computing (ICATC) 2023 on 15th December 2023. This distinguished conference, themed "Leveraging Computing and Technology for Sustainable Economic Recovery," attracted a diverse group of researchers, academics, industry professionals, and policymakers.

ICATC 2023 served as a dynamic platform for exploring and sharing innovative ideas across various technology and computing domains. Key topics included artificial intelligence, data science, cybersecurity, software engineering, networking, automation and sustainable technologies. Attendees had ample opportunities to network, exchange ideas, and form collaborations aimed at advancing the field.

The conference featured a keynote address by Dr. Yu Kai Wang from the University of Technology, Sydney, who provided valuable insights and expertise on leveraging various domains of computing and technology for economic recovery. Additionally, two engaging workshops enhanced the conference experience of the attendees. Mr. Demintha Mathumagala, an Engineer at Cybersecurity NGXess, conducted a workshop titled "Securing WiFi Networks." Meanwhile, Mr. Dharshana Adhikari, a Machine Learning Engineer at Ibeo Automotive Systems, led an interesting session on "Artificial Intelligence and Robotics."

The 3rd Student Research Symposium, FCT-FRS, held on 20th December 2023, further complemented the conference by offering a platform for undergraduates to present and gain recognition for their research contributions. This symposium, organized by the Research Centre of the Faculty of Computing and Technology, provided a valuable opportunity for students to showcase their findings and engage with the broader academic community.

Overall, ICATC 2023, along with the workshops and the student symposium, offered a comprehensive experience, blending academic research with practical insights to drive forward the field of technology and computing.

Industry Interaction Cell for Computing and Technology (IICfCT)

The Industry Interaction Cell for Computing and Technology (IICfCT) was established in 2016 as the academic-industry linkage arm of the Faculty of Computing and Technology at the University of Kelaniya. Launched with the approvals from the Senate and the Council of the University.The Cell aims to bridge the gap between the university and the professional sector, promoting sustainable development in computing and technology.

The primary objectives of the IICfCT include enhancing collaboration, improving students' employability through industry-focused programs, and facilitating the exchange of knowledge and expertise between scholars and professionals. Additionally, the Cell is dedicated to strengthening students' soft skills, broadening their knowledge base, and deepening their understanding of corporate environments. These objectives ensure that students experience continuous career growth by aligning academic learning with the demands of the professional world.

The IICfCT organizes a wide range of professional activities and employability enhancement programs designed to benefit students within the faculty. These initiatives provide opportunities for real-world exposure, preparing students for the dynamic challenges they will face in their careers.

The activities of the IICfCT are grouped into three main categories: systems development, implementation, and maintenance; contract research and consultancies; and enhancing teaching, learning, training, and professional development. Through these initiatives, students gain valuable hands-on experience and broaden their professional capabilities, contributing to both their personal growth and the development of the faculty.

By meeting its objectives and organizing these strategic activities, the IICfCT plays a vital role in advancing computing and technology industries. The Cell fosters a collaborative ecosystem of learning, research, and innovation, empowering students, faculty, and industry stakeholders to work together toward shared goals in technological progress and professional development.

Centers of the Faculty

Center for Advanced Materials and Smart Manufacturing (CAMSM)

The Center for Advanced Materials and Smart Manufacturing (CAMSM) is operating with the overarching objective of promoting translational academic research and innovation, while creating a sustainable research ecosystem in FCT, in the domains of engineering and biosystems technologies including advanced materials, smart manufacturing, and environmental technologies contributing to the sustainable development of Sri Lanka. Aligning with these objectives, CAMSM is currently involved in facility creation for research by enhancing and managing research related resources and infrastructure, initiation of industry collaborations for conducting translational research, inculcating a research culture in FCT and promoting research driven innovation and entrepreneurship in engineering and bio systems technology domains.

Center for Excellence in Technology Education (CETE)

The Center for Excellence in Technology Education (CETE) is dedicated to advancing excellence in technology education, research, and innovation. Our mission is to empower students, faculty, and industry partners to succeed in an ever-changing technological landscape through interdisciplinary collaboration and transformative educational experiences. We envision a future where technology education inspires creativity, drives innovation, and contributes to social impact. CETE aspires to be a leader in technology education, raising awareness of advancements in education in the fields of science, technology, engineering and computing, teaching excellence, and strong partnerships between stakeholders of technology education in Sri Lanka.

Staff Development Unit – Faculty of Computing and Technology

The Staff Development Unit (SDU) of the Faculty of Computing and Technology is dedicated to the continuous professional growth of both academic and non-academic staff. Through a range of development programs and workshops, the SDU promotes best practices in teaching and assessment, while also focusing on enhancing professional success, productivity, and performance appraisal. In close coordination with the Staff Development Center of the University of Kelaniya, the SDU ensures that our faculty members are equipped with the skills and knowledge necessary to excel in an ever-evolving educational environment.

Center for Data Science and artificial Intelligence (CDS-AI)

The Center for Data Science and Artificial Intelligence is a unique tech-centered experiential learning center that serves as a community hub for data science and artificial intelligence (AI). The center aims to explore essential modern research skills in data analytics, artificial intelligence, data mining, data preprocessing, data visualization, data exploration, and digital discovery. The space will function as a community crossroads, where interested parties can come together and connect in a data-driven environment. The center will be a workspace for undergraduates, industry professionals, and academics, providing development project experience and multidisciplinary applications in data science and artificial intelligence.

Tutoring and supporting Center (TSC)

The Tutoring and Support Center is open in-person and remotely for your tutoring needs. The center is intended to help students gain a better understanding of their course content and to provide additional support when needed. The center will offer extra help for most theoretical undergraduate course modules and provide a pleasant environment where students can study together and support each other. Students who pass the aptitude tests will have the opportunity to work as undergraduate tutors, and their efforts will be rewarded with certificates.

Centers of the Faculty

FCT – Research Centre (FRC)

As the University of Kelaniya places an emphasis on research and development in a multitude of disciplines from its seven faculties, the FCT - Research Centre (FRC) aims to create knowledge through research in computing, science, engineering and technology. In this new era of scientific and technological innovation, FRC is uniquely equipped to perform interdisciplinary research through its departments in both computing and technology.

FRC facilitates and promotes the research activities in the faculty. This is the principal hub through which faculty members can receive guidance on funding strategies, proposal preparation, inter-faculty and inter-university research collaborations, international collaborations, identification of innovative research and guidance on industry collaborative research and commercialization of research outcomes through coordination with the Industry Interaction Cell for FCT (IICFCT).

FRC coordinates the annual faculty research conference (International Conference on Advances in Technology and Computing) and annual research Symposium. Additionally, FRC collaborates with the bachelor's degree programs offered by the faculty to foster undergraduate research through various initiatives including but not limited to organizing seminars and workshops and offering financial support for research projects.

Student Associations and Activities

The Engineering Technology Students' Association (ETSA)

The Engineering Technology Students' Association (ETSA) was established to improve the knowledge and skills of its members in fields relevant to engineering technology and to increase awareness of the capabilities and abilities of engineering technology students within stakeholder groups. The association also seeks to interact with professionals and experts in the fields of engineering and technology to improve its members' knowledge and awareness, as well as their soft skills and other necessary skills for success in the engineering and technology sector; to provide members with knowledge and technical know-how for research projects and research work; and to organise events to promote engineering technology among school sttudents, the cooperative sector, and the general public.

ETSA has organised many successful events and the pictures of some are shared.

Student Associations and Activities

Information Technology Students' Association (ITSA)

The Information Technology Students' Association (ITSA) is a student-led initiative by undergraduates pursuing the Bachelor of Information and Communication Technology (Honours) degree at the Faculty of Computing and Technology, University of Kelaniya. ITSA is pivotal in providing mentorship, career guidance, and fostering skill development among its members. Its primary focus is to prepare students for the competitive IT industry by enhancing their expertise in various subject areas. ITSA is committed to creating a dynamic community of passionate individuals dedicated to continuous learning and contributing to the growth of the IT sector, both in Sri Lanka and globally.

The association organizes various events, including workshops, webinars, and sessions, covering topics such as the Software Industry, Network Industry, Gaming, Animation, and more. The events are designed to equip students with the practical skills and knowledge essential for thriving in the industry.

By joining ITSA, students can enhance their knowledge and skills and connect with like-minded individuals and industry professionals. The association provides a supportive and inclusive environment where students can learn, grow, and thrive in their chosen fields.

Student Associations and Activities

Computer Science Students' Association (CSSA)

The Computer Science Students' Association is the pioneer subject association of the Faculty of Computing and Technology and one of the most dynamic student bodies at the University of Kelaniya, with a member base of 250+ undergraduates. The students who follow the Computer Science program at FCT are members of this association. On par with the Faculty's vision, which is "To become a centre of excellence in creation and dissemination of knowledge in computing and technology for sustainable development", The Computer Science Students' Association was formed as the student body of the Computer Science undergraduates to maximise students' potential by organising different activities and events that would bring the best within themselves and build up the recognition of the Bachelor of Science Honors in Computer Science degree program in the corporate sector and university arena. The association mobilises members through various collaborations and programs such as coding competitions, hackathons, tech talks, and numerous technology-related programs.

The main aim of CSSA is to build up the recognition of Bachelor of Science Honours in Computer Science degree programs in the corporate sector and the university arena. Further, to improve the cooperation between different ethnicities and religions. We are proud to say that the members of the CSSA are not only going out academically but have also improved their soft skills, managing and organising skills, and time management skills from working with the association.

Student Associations and Activities

Green Club of FCT

The Green Club was established for the community of the Faculty of Computing and Technology, University of Kelaniya. This is the best place which strives to develop the love of nature and adventure while ensuring a balance between economic growth, environmental care and social well-being. The sole purpose is to enhance the knowledge and awareness of the sustainability, waste management and efficient energy management of the FCT community through expertise in the relevant field.

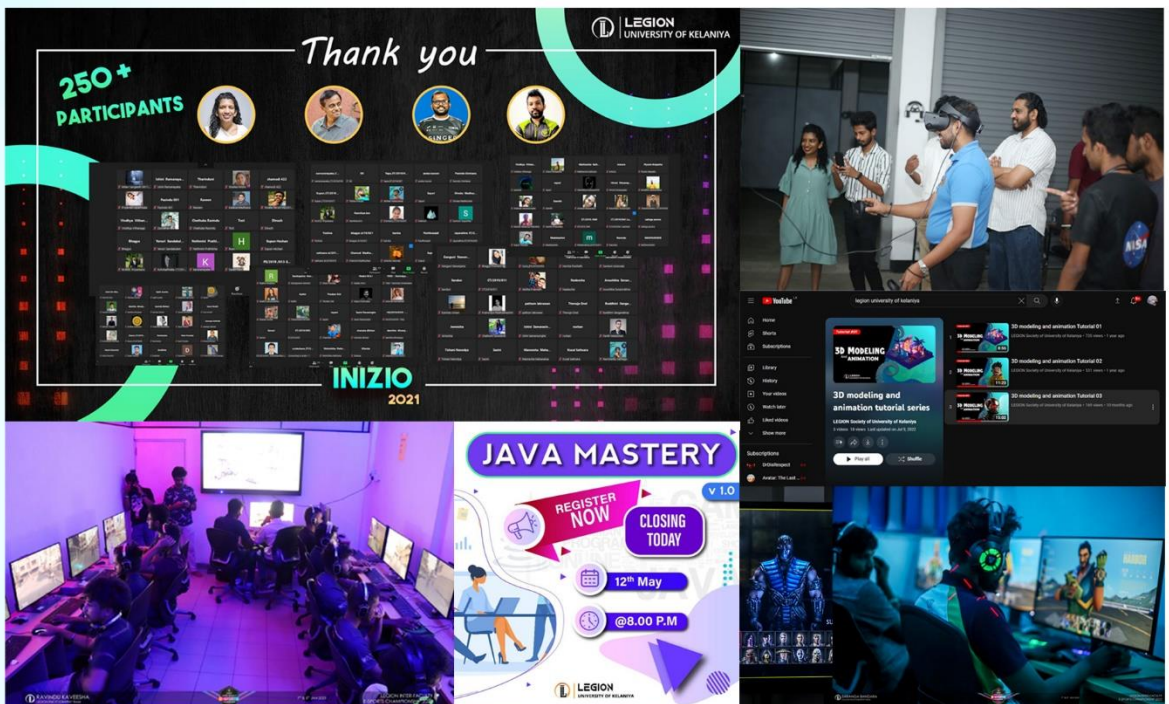# Student Associations and Activities

Legion Club

Legion Club of University of Kelaniya, a thriving community of digital creative and competitive E-sport enthusiasts. Composed with the vision to create an island-wide digital creative and competitive E-sport platform, where all university undergraduates can share and improve their skills. The club provides an exciting opportunity for members to learn, create, and showcase their digital creative talent, and engage in competitive E-sports, representing the university with pride.

The club is passionate about spreading awareness on the importance of non-academic skills, and offer 10 different digital creative platforms such as graphic designing, audio designing, 3D animation, game development, video editing, and more, so that members can find their inner potential and showcase or learn their skill under any of these platforms.

Legion club strives to stay ahead of the curve by providing the latest industry trends and opportunities for the members. It is done by actively engaging them in organising E-sports tournaments, digital creative workshops, podcasts, YouTube tutorial series, and much more.

Being the ultimate goal to ignite the passion and elevate the skills of the members. So, if an undergraduate is looking for a dynamic and exciting community to be a part of, the The Legion Club of University of Kelaniya is the place. Join in and embark on a journey of creativity, innovation, and personal growth.

Student Associations and Activities

ISACA
UOK Student Group

Information Systems Audit and Control Association (ISACA)

The University of Kelaniya ISACA Student Group was established in 2021 as the fourth Student Group under the ISACA Sri Lanka Chapter, which is part of ISACA Global, a worldwide association of Information security, governance, audit, and control professionals. ISACA offers globally recognized certifications for both students and professionals in the IT/IS industry. The Association has currently expanded over 188 countries and with 225 local chapters all over the world.

UOK ISACA Student Group was established with the vision of providing undergraduates an opportunity to interact with the IT Industry and level up their skills, and expand their knowledge in the cybersecurity domain to lay a solid foundation for their careers. During the short tenure, UOK ISG organized a number of webinars, workshops, discussions, and the all-island Inter-University Cybersecurity quiz competition "CyberZee" focusing on both academic and industrial topics and the latest trends in information security.

Our teams are the pillar of strength behind every event organized by the ISG. Members of UOK ISG have the opportunity to become part of the Editorial team, Digital Media Team, Public Relations Team, and the Member Training and development team to showcase your talents, collaborate with different organizations and play an active role in club activities.

Join the UOK ISACA Student Group and become a part of a vibrant community of aspiring professionals in information systems, cybersecurity, and audit. Whether you are looking to expand your knowledge, network with like-minded individuals, or kickstart your career, the ISACA Student Group of the University of Kelaniya is here to support and empower you on your journey. Connect with us on social media, attend our events, and explore the resources we offer.

Faculty of Computing and Technology
University of Kelaniya
Sri Lanka