COMPUTER SCIENCE

BSc (Hons) in Computer Science degree programme produces high quality graduates with strong analytical and quantitative skills with a comprehensive knowledge in Mathematics, Programming, Software Engineering, System Modelling, and Research. The graduates must be versatile in the knowledge drawn from the key knowledge areas of Computer Science including Algorithms Design and implementation, Intelligent Systems, Parallel Computing and Computational Science. Graduates are expected to succeed in a career in Software Engineering, Computer Scientists, High Performance Computing Specialists, Computational Specialists, Artificial Intelligence/Machine Learning Specialists and Data Scientists.

A computer science graduate will have the fundamental knowledge and skills of a software engineering graduate, with an emphasis on developing their own tools, frameworks, and required algorithms. In addition, a Computer Science graduate will also be able to apply state-of-the-art computer science methods in Algorithms, Fault-tolerant Design, Code Optimization, and High-performance Computing. Because of the rapid pace of change in the computing field, Computer Science graduates must be life-long learners to maintain their knowledge and skills within their chosen discipline.

CAREER OPPORTUNITIES

- Computer Scientists
- Computational Specialists
- Software Engineers
- Academics
- High Performance Computing Specialists
- AI/ML Specialists
- Data Scientists
- Researchers

ENTRY REQUIREMENTS

Minimum of 3 “S” passes in Physical Science Stream (Covering Combined Mathematics, Physics & Chemistry or ICT) in G.C.E. A/L (Sri Lanka) in one and the same sitting or Minimum of 3 “C” passes (Covering Mathematics, Physics & Chemistry or Computer Science/IT) in G.C.E A/L Cambridge or Edexcel in one and the same sitting, AND pass the special Aptitude Test & Interview conducted by SLIIT Faculty of Computing.

YEAR ONE

SEMESTER 01

SE1012	Programming Methodology	03
IE1004	Computational Thinking	04
IE1014	Engineering Mathematics - I	03
SE1022	Discrete Mathematics	03
SE1032	Communication Skills	03

SEMESTER 02

IE1024	Computer Organization and Architecture	03
IE1034	Engineering Mathematics - II	03
IE1044	Digital Electronics	03
SE1042	English for Academic Purposes	03
SE1052	Data Structures and Algorithms	04

YEAR TWO

IE2004	Computer Networks	03
SE2012	Object Oriented Analysis and Design	04
SE2022	Design and Analysis of Algorithms	03
SE2032	Database Management Systems	03
IE2024	Probability and Statistics	03
SE2042	Operating Systems	03
SE2052	Programming Paradigms	04
SE2062	Distributed Systems	03
SE2072	Software Engineering	03
SE2082	Human Computer Interaction	03

YEAR THREE

SE3022	Case Study Project	03
SE3032	Graphics and Visualization	03
SE3112	Advanced Software Engineering	03
IE3014	Professional Skills	03
SE3062	Intelligent Systems	03
SE3082	Parallel Computing	03
SE3012	Industry Economics and Management	03
SE3092	Platform Based Development	03
SE3102	Research Methods	02
SE3072	Industry Training	06

YEAR FOUR

SE4012	Research Project	04
SE4022	Machine Learning	03
SE4032	Advanced Mathematics	03
IE4054	Information Security	04
SE4042	Modelling and Simulation of Sciences	04
SE4012	Research Project	08
SE4052	Compiler Construction (Elective)	03
SE4062	Image Processing and Computer Vision (Elective)	03
SE4072	Deep Learning (Elective)	03
IE4094	Robotics (Elective)	03

*** Elective Module offerings are subject to annual review and may not be available in all years**