International Student Exchange Program Courses in English Available for Exchange Student and Study Abroad
Faculty of Computer Science

No	Faculty	Program Study	Degree	Course Title	Course Code	Credit	Contact Hours	Term Offered	Quota	Course Description
1	Computer Science	Bachelor of Computer Science	Undergraduate	Automata & Theory of Languages	CSCM602241	4	4	1	2	This course discusses theoretical models of computation and formal languages. It covers the underlying concept of theory of computation, several abstract machines as models of computation, including Turing Machines, formal languages such as context-free languages, and the limitation of computation.
2	Computer Science	Bachelor of Computer Science	Undergraduate	Calculus 1	CSGE601012	3	3	1	2	This course discusses basic concepts of calculus and emphasize its importance for solving scientific problems and providing the basis of many computational techniques .
3	Computer Science	Bachelor of Computer Science	Undergraduate	Databases	CSGE602070	4	4	1	2	This course discusses the basic concepts of database management including the aspect of modeling and design, language and facility, implementation and the application of databases.
4	Computer Science	Bachelor of Computer Science	Undergraduate	Discrete Mathematics 1	CSGE601010	3	3	1	2	This course discusses various topics on Discrete Mathematics that provide theoretical foundations to support advanced study in computer science. Applications of each topic in computer science are also discussed.

International Student Exchange Program Courses in English Available for Exchange Student and Study Abroad
Faculty of Computer Science

No	Faculty	Program Study	Degree	Course Title	Course Code	Credit	Contact Hours	Term Offered	Quota	Course Description
5	Computer Science	Bachelor of Computer Science	Undergraduate	Human-Computer Interaction	CSGE602024	3	3	1	2	This course focuses on the interface design concepts for a software. In this course, students are taught how to apply the principles of human-computer interaction in developing an application, and offer a better alternative interaction design. Materials are delivered through active learning methods, such as: small group discussions, project-based learning, and the use of e-learning management system. The scope discussed in this course includes the historical context of human-computer interaction (HCI), interaction design, cognition, techniques in HCI, social aspects of HCI, data collection and analysis, interaction design process, prototyping, and evaluation.
6	Computer Science	Bachelor of Computer Science	Undergraduate	Introduction to Digital System	CSCM601150	4	4	1	2	This course provides a basic understanding and practical aspects in designing digital systems using high-level programming language. such as VHDL. The students will learn basic concepts in designing digital circuits, such as binary representation, Boolean algebra, finite-state-machine and instruction-set processors. They also learn basic components for design on different levels of abstractions such as transistors, gates, flip flops, adders, multipliers, registers, memories and processors.
7	Computer Science	Bachelor of Computer Science	Undergraduate	Linear Algebra	CSGE602012	3	3	1	2	This course prepares the students to be able to solve problems about matrix algebra and vector spaces. It also discusses the application of linear algebra in computer science.

No	Faculty	Program Study	Degree	Course Title	Course Code	Credit	Contact Hours	Term Offered	Quota	Course Description
8	Computer Science	Bachelor of Computer Science	Undergraduate	Numerical Analysis	CSCM603117	3	3	1	2	The course provides the basic knowledge of numerical methods to solve scientific and engineering problems. The students are trained to solve problems that require numerical analysis, e.g., using Matlab as the programming environment. Practical issues in implementing numerical methods, such as software reliability and hardware performance are also discussed.
9	Computer Science	Bachelor of Computer Science	Undergraduate	Operating Systems	CSCM602055	4	4	1	2	This course discusses the organization, structure and concepts of computer operating systems. The trade-off between the performance and the functionality in designing and implementing an operating system is discussed, with the emphasis on processes management, interprocess communication, memory management, I/O management, file system management, implementation examples (GNU/Linux and MS Windows), and the support provided by operating systems for distributed systems.
10	Computer Science	Bachelor of Computer Science	Undergraduate	Platform-Based Development	CSGE602022	4	4	1	2	This course discusses software development process on various platforms. The material studied in this course are related to various programming concepts and rules that are applied to a platform. Examples of platforms that are relevant today are web, mobile devices, embedded devices (robotics / Artificial Intelligence platforms), etc. Each platform has different characteristics, ranging from programming patterns, processing mechanisms, interaction between components / API / hardware, and interactions with users which are applied to high-level programming.

International Student Exchange Program Courses in English Available for Exchange Student and Study Abroad
Faculty of Computer Science

No	Faculty	Program Study	Degree	Course Title	Course Code	Credit	Contact Hours	Term Offered	Quota	Course Description
11	Computer Science	Bachelor of Computer Science	Undergraduate	Programming Foundations 1	CSGE601020	4	4	1	2	This course aims to teach the fundamental concepts and techniques of computer programming by means of Python programming language. This module is taught using a combination of lectures and hands-on programming exercises.
12	Computer Science	Bachelor of Computer Science	Undergraduate	Scientific Writing & Research Methodology	CSGE602091	3	3	1	2	This course focuses on methodolgy for doing research in computer science and develops students' scientific and critical thinking. It is also intended to enrich students' comprehension of the structure and execution of the written academic papers in reporting their research results. It involves the understanding of the process of writing, the techniques used in writing, and the writing itself. The development of writing should be an integrated approach of human-data-information-knowledge-tool interaction which may result in a sound and readable academic writing.
13	Computer Science	Bachelor of Computer Science	Undergraduate	Statistics & Probability	CSGE602013	3	3	1	2	This course provides basics of statistics and probability for data interpretation in order to support problem solving and decision making.