PENINSULA
COLLEGE

2022 - 2023

Programme Handbook
(Diploma in Computer Science)

UPDATED: 05/22

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OUR HISTORY

Peninsula College Georgetown, formerly acknowledged as ALC College, is proudly treading into its' magnificent 21st year in tertiary education.

Holding devotedly to our motto – "Your Employability…Our Priority", Peninsula has always been conscious to not limit our academicians with a strong background of subject matter, but also a significant industrial shade that assures distinctive entrepreneurial and industry expectations tutoring to students. Probably, this could be our niche of producing graduates with 100% employability record for all these years.

The year 2017 flagged the notable expansion of Peninsula Higher Education Group which includes awarding of MS ISO 9001: 2015 and welcoming of new academic partner, University of Plymouth, UK, in addition to our years long distinguished partner, University of Gloucestershire, UK.

Becoming wholly-owned by PKT Logistics Group Sdn Bhd, a prominent ownership made Peninsula being the pioneer in Southeast Asia to build state-of-art corporate campuses in Selangor and Penang, Malaysia. This enables students' learning to be colliding with the real working environment, a platform for them to enhance their academic knowledge through the hands-on exposure.

The institution is unwavering on its primary mission of providing far-reaching and holistic learning environment. The Ship Campus located in Batu Kawan, Penang, is designed with the campus-in-industry model, whereby having a physical presence in an industrial park puts us in a unique position to bridge the gap between graduate skills and industry needs via academia-industry collaboration. Our other 2 campuses, The Lighthouse Campus in Shah Alam and The City Campus in Klang are also designed to encourage learning in a real-world corporate environment.

Peninsula College Georgetown – "Your Employability…Our Priority"

VISION, MISSION & INSTITUTION PHILOSOPHY

Vision

To be a leading higher education provider of industry-relevant courses

Mission

Peninsula College is socially responsible institution of higher learning providing industry driven teaching within cutting edge campus buildings, located within a business environment. Its activities aim to inspire and enlighten businesses and communities to produce a positive impact upon individuals, industry, and society.

Institution Philosophy

To achieve organisation and individual aspirations which bring fulfilment and happiness to life

DIPLOMA IN COMPUTER SCIENCE

Approval Code	(N/481/4/0823)
Accreditation Code	PA13808
Classification	Diploma
Subject Area	-
Course Mode	Full Time
Course Duration (FT)	2 Years 4 Months (7 long semesters) / (14 weeks per long semester)
Intakes	January / May / September

PROGRAMME OVERVIEW

This programme is designed to give students knowledge and skills in computing and cyber security. Demand for the programme is in line with the digital transformation and the rapid growth of digital economy and e-commerce, cyber security is a critical business factor.

Upon the completion, students will be able to deal with complex issues both systematically and creatively, make sound judgments in the absence of complete data and communicate their conclusions clearly to those who have expertise in this field or not. Students will be able to demonstrate self- direction and originality in tackling and solving problems, and act autonomously in planning and implementing tasks at a professional level or equivalent. Students who take this programme are able to a more striking power of their thinking in the field of computing.

ACADEMIC AND SUPPORT STAFF

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** Peninsula college reserves the right to make changes without prior notice.*

ENTRY REQUIREMENT

Minimum Entry Qualification for Diploma in Computer Science	
Qualifications	**Academic Requirements**
SPM or equivalent	3 credits inclusive Mathematics & pass in Bahasa Malaysia and Sejarah (History)
IGCSE / O-Level	3 credits (Grade C and above) including Mathematics
UEC	A pass in UEC with a minimum of Grade B in any subject including of Mathematics

PROGRAMME OBJECTIVES AND OUTCOME

The programme aims to provide:

Students with the necessary knowledge, values, skills and competencies in computing at supervisory positions as well as encouraging students to reflect on their learning and to be increasingly self-motivated and self-critical via assignments and examinations throughout the course.

The programme educational objectives are to produce graduates who are able to:

1. Obtain employment in local and global industries and organization, where they are competent in applying the fundamental knowledge, computational principles and skills in computer network and security areas.
2. Demonstrate the ability to learn and grow throughout their career and further contribute to the advancement of the computer network and security discipline.
3. Develop software of increasing size and complexity, proficiently applying computer network and security theoretical knowledge across different application.
4. Become leaders or technopreneurs in computer science discipline.

The programme learning outcomes are:

1. Demonstrate knowledge of essential facts, fundamentals, concepts, principles, and theories relating to Computer Science.
2. Utilise relevant techniques and demonstrate analytical and critical thinking skills in problem solving.
3. Design, apply, implement, and manage Computer Science solutions, resource and professional practice which enhance professional competence.
4. Demonstrate interpersonal and social skills for collaboration and relationship in team.
5. Communicate effectively with peers, clients and superiors.
6. Demonstrate the ability to use information/digital technologies to support work and studies which includes sourcing n processing data using application.
7. Apply computational thinking skills to measure, calculate and analyse problems arises from Computer Science based applications.
8. Demonstrate effective teamwork and leadership skills with autonomy and responsibilities.
9. Apply skills and principles of lifelong learning in academic and career development.
10. Demonstrate entrepreneurial skills in real world perspectives.
11. Demonstrate professionalism and social and ethical consideration in accordance with ethical and legal principles.

PROGRAMME STRUCTURE (FULL TIME)

YEAR 1			
SEMESTER 1			
No	**Code**	**Name of Course**	**CH**
1	DCS1113	Introduction to Information Technology and Applications	3
2	DCS1123	Discrete Mathematics	3
3	DCS1323	English Language Proficiency	3
4	DCS1253	Problem Solving in Computing	3
5	MPU2183	Penghayatan Etika dan Peradaban	3
SEMESTER 2			
6	DCS1213	Introduction to Computer Architecture	3
7	DCS1133	Introduction to Networking	3
8	DCS1143	Fundamentals of Programming	3
9	DCS2233	Database Management System	3
10	MPU2323	Malaysian Economics	3
SEMESTER 3			
11	DCS1233	Business Communication	3
12	DCS2213	Systems Analysis and Design	3
13	DCS1343	Operating Systems	3
14	DCS1353	Data Structure and Algorithms	3
15	MPU2213 / 2223	Bahasa Kebangsaan A / Public Speaking	3
YEAR 2			
SEMESTER 1			
16	DCS1224	Calculus and Algebra	4
17	DCS1243	Network Technology	3
18		Elective I	3
19		Elective II	3
SEMESTER 2			
20		Elective III	3
21	DCS2113	Object-oriented Programming	3
22	DCS2243	Security Management	3
23	DCS2133	Cryptography	3
24	DCS1313	Network Security	3

SEMESTER 3			
25	DCS2313	Internet Development	3
26	DCS2333	Ethical Hacking and Intrusion Prevention	3
27	DCS2343	Cyber Law	3
28	MPU2412	Community Service 1	2
YEAR 3			
SEMESTER 1			
29	DCS3096	Industrial Training	6
		TOTAL CREDIT HOURS	**90**
		GRAND TOTAL	**90**

ELECTIVE COURSES			
	DCS2123	Computer Security and Forensic	3
	DCS2323	Cyber Risk Management	3
	DCS2353	Multimedia Principles	3
	DCS2223	Cloud Computer Security	3
	DCS2363	Visual Programming	3

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SEMESTER DURATION:

Semester	Lecture (Week)	*'Study Week'* (Week)	Final Examination (Week)	Total (Week)
Long	12	1	1	14

Note:

1. *College implements 3 Semester per year*
2. *Total number of semesters per year = 3*
3. *Total number of weeks per year = 42*

COURSES OFFERED

1.	Introduction to Information Technology and Applications	**Synopsis** To introduce the fundamental roles that information technologies play in modern global business environment by introducing basic concepts about information, information technologies and information systems. Two major determinants of IT support which are organizational structure and the functions that employees perform within organizations are looked in detail. Fundamentals of technical components of information systems such as hardware which includes variety of related technologies involved with getting data into and out of the computer.
		Course Learning Outcomes CLO 1: Describe the major hardware and software components of a computer system. CLO 2: Describe the role of Information systems within an organisation. CLO 3: Explain the impact of emerging technologies and its applicability.
2.	Discrete Mathematics	**Synopsis** This subject will introduce to students the arithmetic in different number system; the operations of Floating Points in base 10; the operations of sets; and the workings of Boolean Algebra.
		Course Learning Outcomes CLO 1: Explain the representation of instructions, numbers in Scientific Notation, Floating Points and Real Form Round numbers. CLO 2: Express sets, Do set operations, Draw Venn Diagrams, Identify Logic Gates. CLO 3: Create Truth Tables, Draw Logic Diagram, Derive Boolean Expression for Logic Diagram.

3.	Introduction to Networking	**Synopsis** This subject will expose the students how to evaluate the benefit of networks, apply architectural concepts to the design/evaluation of networks, install network software and perform network management responsibilities.
		Course Learning Outcomes CLO 1: Understand the basic knowledge about the data communication. CLO 2: Explain the standard for protocols, network types, topologies, network hardware, references model and internet address. CLO 3: Evaluate the different control, privacy and security application.
4.	Fundamentals of Programming	**Synopsis** This module is intended to introduce the student to a software development procedure, like how to develop a design specification; how to design a top level modular structure; how to design modules in detail; how to use a basic structure and features of a procedural language; how to use control and sub-program structures in the implementation of modules; how to define, manipulate and implement data structures; how to implement file input and input and output operations; how to test modules for conformance with specifications. The topics that will be covered are: • Introduction to C Programming and Its Basic Structures • Operators, Expressions, Data Types and Data Input / Output • Decision, Loop and Case Control Structures • Pointers and Functions • Arrays and Strings • Structures and Files
		Course Learning Outcomes CLO 1: Describe programming structure such dividing a program into functions and use the various storage classes of variables, passing the data between functions either by value or by reference, designing, coding and documenting a programming projects. CLO 2: Construct a program heading using program comments and printing out a source listing. CLO 3: To demonstrate an understanding of fundamental object-oriented programming.

5.	Penghayatan Etika dan Peradaban	**Synopsis** Kursus ini mempersiapkan pelajar untuk menghayati etika dan peradaban yang wujud dalam masyarakat kepelbagaian etnik di Malaysia untuk memperteguhkan pemikiran kritikal dan analitikal mereka bagi menangani kehidupan yang lebih mencabar. Pengisian kursus ini memfokuskan kepada penghayatan etika dan peradaban dalam acuan Malaysia. Pelajar akan didedahkan dengan dinamika konsep etika dan peradaban yang menjadi kekuatan kepada pembentukan negara Malaysia berdasarkan susur masa evolusi sejarahnya dari era pra-kolonial sehingga ke pasca-kolonial. Kefahaman tentang pembentukan etika dan peradaban dalam masyarakat kepelbagaian dibincangkan bagi meningkatkan penghayatan etika dan peradaban ke arah pemantapan kesepaduan nasional dan bangsa Malaysia. Peradaban acuan Malaysia perlu dikupas serta diperdebatkan dalam aktiviti akademik berpandukan Perlembagaan Persekutuan sebagai tapak integrasi dan wahana etika dan peradaban. Pembinaan kesepaduan nasional amat dipengaruhi oleh globalisasi dan perkembangan teknologi maklumat dan komunikasi yang kompleks. Oleh kerana itu, Page 12 of 24 penghayatan etika dan peradaban menzahirkan perilaku tanggungjawab sosial dan digerakkan pada peringkat individu, keluarga, komuniti, masyarakat, dan negara. Justeru, perubahan yang berlaku dalam masyarakat dan pembangunan langsung ekonomi telah membawa cabaran baru dalam mengukuhkan kelestarian etika dan peradaban di Malaysia. Amalan Pendidikan Berimpak Tinggi (HIEPs) dipraktikkan dalam pengajaran dan pembelajaran bagi mendalami kursus ini. (pengajaran & pembelajaran).
		Course Learning Outcomes CLO1: Menjelaskan konsep etika dan peradaban dalam konteks penghayatannya mengikut acuan Malaysia. CLO2: Menganalisis sistem, tahap perkembangan, kemajuan sosial dan kebudayaan merentas etnik. CLO3: Menilai isu kontemporari berkaitan ekonomi, politik, sosial, budaya dan alam sekitar daripada perspektif etika dan peradaban.
6.	Introduction to Computer Architecture	**Synopsis** This subject will give the students the knowledge regarding the number systems and microcomputer system architecture. The topics that will be covered including: Number bases such as binary, hex and octal and how to convert numbers between bases. The methods used to perform mathematical operations within these number bases. The various levels of abstraction of the Data Hierarchy, i.e. from bit level, through bytes and ASCII. The use of Boolean algebra to form equations that describe logic circuits

		and the basic techniques used to manipulate Boolean equations. Design and Construction of Logic circuits, both synchronous and asynchronous, including encoders, decoders and adders. A detailed view of memory devices such as: ROM, DRAM, SRAM, etc. The differences between Expansion bus architectures such as USB, ISA, EISA, MCA, VL, AGP and PCI. Hard drive standards such as IDE and SCSI. Peripheral devices used for input and output.
		Course Learning Outcomes CLO 1: Manipulate the various numbers bases applicable to computing. CLO 2: State the operation and design of logic gates and how they used in synchronous and asynchronous circuits. Use Boolean algebra in representing logic circuits. Manipulating Boolean algebra to simplify circuits. CLO 3: Explain the differences between different memory devices such as RAM and DRAM and the differences between expansion bus architectures , the different I/O devices and peripherals available.

7.	Calculus and Algebra	**Synopsis** This course gives emphasis on calculation basic and calculating integration in the mathematical problem solving, algebraic methods, trigonometric methods and calculus.
		Course Learning Outcomes CLO 1: Perform algebraic operations using different techniques to solve equation, indices, logarithms and matrices. CLO 2: Solve problems involving linear programming, statistics and probability. CLO 3: Apply the rules of differentiation and integration in solving a variety of problems.
8.	Business Communication	**Synopsis** This course covers the writing of formal business letters in response to a variety of situations. It also identifies the Technology available for business communication and how it benefits business; It also differentiates written and oral communication, and how to use oral communication effectively.; Students are also exposed ton how to deal with customers; prepare an effective summary of a longer document, prepare pictorial representation of statistics. Common communications structures within organisations, their benefits and limitations as well as meanings of common business terms and abbreviations are also covered.
		Course Learning Outcomes CLO 1: Identify all the usual forms of business correspondence from given data. CLO 2: Apply current developments in communications technology and the effect that they have on business. CLO 3: Present a variety of data unambiguously in both written and graphical form, bearing in mind the fundamental importance of neatness, clarity and accuracy.

9.	Network Technology	**Synopsis** The course introduces network technologies through a layered approach in a top-down manner. It works its way from the application layer down toward the physical layer, motivating students by exposing them to the important concepts of networking. Besides the fundamental elements of data communication and transmission, the course also introduces students to recent the advances of networking, including wireless and mobile networks, VoIP, and IoT.
		Course Learning Outcomes CLO 1: Describe the general principles of data communication. CLO 2: Explain how computer networks are organized with the concept of layered approach. CLO 3: Discuss the applications of network technologies.
10.	Problem Solving in Computing	**Synopsis** Learning will be largely based on exercises and problem solving activities. Lectures will be used to introduce topics which will be reinforced through tutorial.
		Course Learning Outcomes CLO 1: Illustrate problems using computational thinking and design computer based solutions. CLO 2: Explain the fundamental programming concepts and constructs such as expressions, variables, procedures, conditionals, repetition and modularization. CLO 3: Explain the basic data structure such as array.
11.	Network Security	**Synopsis** This course covers on the concept of security, cyptography and authentication methods. Includes also various methods and techniques of information security skills with practical skills that will be useful for managing security through online
		Course Learning Outcomes CLO 1: Explain the concept of security and cyptography. CLO 2: Analyze diffrent types of Public Key Cryptography to protect data from unauthorized access. CLO 3: Adapt appriopriate methodologies and techniques of intrusion detection and firewall techniques to secure information systems.

12.	English Language Proficiency	**Synopsis** The basic language skills (writing, reading, speaking and listening) are enhanced and there is emphasis on critical analysis of current affairs or social issues. Students use the steps to conduct research projects. In reading, students respond to and analyse literary elements of a novel. Strategies are advanced to help them to understand reading materials. Effective communication skills are demonstrated through role-plays, dramas and presentations.
		Course Learning Outcomes CLO 1: Extract relevant information from written texts and reproduce it in note form. CLO 2: Use appropriate reading skills and strategies that can assist them to read independently and critically in their area of study. CLO 3: Present project work orally.
13.	Operating System	**Synopsis** This subject will expose the students to the basic concepts on what an operating system (OS) is, its functions and main components. It will instill the knowledge of various process scheduling algorithms, basic concepts of distributed system management, functions of process storage management, function of process management. Study of a few OS such as UNIX and MSDOS will be carried out.
		Course Learning Outcomes CLO 1: Explain the fundamental of operating system concepts and the underlying structure. CLO 2: Analyze the usability and ability of the operating system such as Windows and Linux. CLO 3: Perform basic system administration task in Windows operating system.

14.	Data Structure and Algorithiums	**Synopsis** Covers the design, analysis, and implementation of data structures and algorithms to solve engineering problems using an object-oriented programming language. Topics include elementary data structures, (including arrays, stacks, queues, and lists), advanced data structures (including trees and graphs),the algorithms used to manipulate these structures, and their application to solving practical engineering problems
		Course Learning Outcomes CLO 1: Describe the concept of data structure and algorithms. CLO 2: Distinguish various data structure elements that can performed effectively in the program. CLO 3: Apply various algorithms in Java.
15.	Bahasa Kebangsaan A	**Synopsis** Kursus ini membolehkan pelajar mempertingkat kecekapan berbahasa sesuai dengan intelekpelajar untuk berkomunikasi secara lisan dan tulisan dalam konteks rasmi, kreatif dan bukankreatif. Mata pelajaran ini disediakan untuk mempertingkat kecekapan berbahasa sesuaidengan intelek pelajar untuk berkomunikasi dengan lisan dan tulisan dalam konteks rasmi,kreatif dan bukan kreatif
		Course Learning Outcomes CLO 1: Menggunakan bahasa dengan berkesan dari segi lisan dan tulisan CLO 2: Berkomunikasi secara lisan dengan berkesan dari segi sebutan dan intonasi, tatabahasa, kosa kata, ungkapan dan laras CLO 3: Memahami bahan bertulis yang beraneka jenis dan gaya, dan seterusnya mengungkapkan fikiran secara lisan dan tulisan dengan bahasa yang betul dan berkesan CLO 4: Merumuskan butiran dan memperluas sesuatu idea dengan cara yang tersusun, padat, dan berkesan, secara lisan dan tulisan.

16.	Public Speaking	**Synopsis** This is a basic course for students primarily to prepare them with the public speaking skills. At the earlier stage, students are exposed to concepts of idea building, research for topics, audience analysis and the general communication process. At the later stage, the various techniques of writing speeches, using audio visual aids, delivery of speeches from the aspects of language and style and the non-verbal are emphasized.
		Course Learning Outcomes CLO 1: Practise the various techniques of public speaking in order to help them increase their efficiency in public and small group communication. CLO 2: Apply ICT in speeches for effective public communication. CLO 3: Present public speeches effectively to a small group of audience.
17.	Object-oriented programming	**Synopsis** This course is an introduction to programming, emphasizing understanding and implementation of applications using object-oriented techniques. Topics to be covered include program design and testing as well as implementation of programs.
		Course Learning Outcomes CLO 1: Explain the principles of object-oriented programming in Java with usage of classes, inheritance, polymorphism, interfaces, containers and design patters. CLO 2: Analyze basic algorithms and Java language basics, including types, operators and program control. CLO 3: Use a Java integrated development environment and the Java JDK at command line to both test code snippets and author professional program.

18.	Computer Security and Forensic	**Synopsis** This subject is designed to provide students with the fundamentals of computer security and will expose the students how to identify an intruder's footprints and to properly gather the necessary evidence to prosecute. Some of today's top tools and the basic methodologies and techniques of forensics will be discussed during this subject.
		Course Learning Outcomes CLO 1: Define basic terminology in computer security and computer forensic. CLO 2: Analyze various types of computer security problems and its solutions. CLO 3: Apply suitable methods and tools for developing solutions to problems in computer forensics and security.
19.	Cryptography	**Synopsis** This subject will expose the students to various security issues, cryptographic algorithms and security services that are essential for network protection. It will instill the knowledge of various security techniques to solve network security problems.
		Course Learning Outcomes CLO 1: Explain a variety of generic security threats and vulnerabilities. CLO 2: Analyze particular security problems for a given application. CLO 3: Apply appropriate security techniques to solve network security problems

20.	Malaysian Economics	**Synopsis** The knowledge of Malaysian economy is vital to help students understand economic issues that affect them as consumers, workers, producers, investors, citizens and in other roles they assume over a lifetime. It also gives them the tools for understanding Malaysian economy and how to interpret events that will either directly or indirectly affect them.
		Course Learning Outcomes CLO 1: Analyse the Malaysian economy and its components. CLO 2: Explain the economic development of the nation thus far and assess fundamental economic analysis provided by the media CLO 3: Analyse and suggest appropriately methods on economy crisis CLO 4: Evaluate current issues and analyse the implication of current policies on the macroeconomic environment.
21.	System Analysis and Design	**Synopsis** This course will cover the principals of information systems including analysis and design. Students will learn techniques in data requirements collection and analysis along with methods to modeling data needs. Modeling of data will occur at the conceptual, logical, and physical levels along with an ability to compare and contrast the different approaches given their merits and limitations. Students will understand the importance and constraints imposed by the domain of the information system along with business rules that guide the design. Functional dependencies and domain normalization will also be discussed as part of the requirements analysis. Object-oriented information system modeling will be surveyed. User-centered design techniques will be explored.
		Course Learning Outcomes CLO 1: Explain the system development life cycle model. CLO 2: Able to collect and record facts required in an information systems development. CLO 3: Produce a good design by applying various components.

22.	Cloud Computer Security	**Synopsis** The course delves deep into the secure cloud architectural aspects with regards to identifying and mitigating risks, protection and isolation of physical& logical infrastructures including compute, network and storage, comprehensive data protection at all OSI layers, end-to-end identity management & access control, monitoring and auditing processes and meeting compliance with industry and regulatory mandates.
		Course Learning Outcomes CLO 1: Explain the Fundamentals of cloud computing architectures based on current standards, protocols, and best practices intended for delivering Cloud based enterprise IT services and business applications. CLO 2: Analyze the known threats, risks, vulnerabilities and privacy issues associated with Cloud based IT services. CLO 3: Relate security architectures of physical and logical infrastructures including computer, network and storage, comprehensive data protection, end-to-end identity and access management, monitoring and auditing processes and compliance with industry and regulatory mandates.
23.	Database Management System	**Synopsis** This module will teach students how to use DBMS technologies, perform database administrative tasks and devise strategies for a multi-user environment.
		Course Learning Outcomes CLO 1: Explain the traditional filing system and their limitations; database administrative tasks and database environment routine. CLO 2: Identify the conceptual modelling concepts and use ER Model to design database applications. CLO 3: Use an industry standard query language (SQL) to query the relational databases.

24.	Security Management	**Synopsis** This subject will focus on the analysis, management and information governance aspects of being an Information Assurance practitioner.
		Course Learning Outcomes CLO 1: Apply security risks associated with a computer system using a standard methodology. CLO 2: Interpret legal, governance and compliance issues for information assurance. CLO 3: Illustrate success factors in information security management.
25.	Internet Development	**Synopsis** A course examining the development and evolution of the Internet and Web, examining network protocols (TCP/IP) and Internet client/server architecture; web page design, creation, and evaluation; the markup, styling, and scripting languages (HTML, XML, CSS, JS, PHP) used for web development as well as the tools supporting web 2.0 and beyond
		Course Learning Outcomes CLO 1: Practice using Hyper Text Markup Language (HTML) CLO 2: Apply web development tools to develop website CLO 3: Apply various techniques and abilities in web designing.
26.	Cyber Risk Management	**Synopsis** This subject is designed to provide students with the fundamental theories and practices of cyber security protection techniques, policies, programs and risk assessment.
		Course Learning Outcomes CLO 1: Identify the vulnerabilities and threats posed by criminals, terrorist and nation states to national infrastructure CLO 2: Recognized the role security management plays in cyber security defence CLO 3: Employ the security management methods to maintain security protection

27.	Ethical Hacking and Intrusion Prevention	**Synopsis** Students learn how hackers attack computers and networks, and how to protect systems from such attacks, using both Windows and Linux systems. Students will learn legal restrictions and ethical guidelines, and will be required to obey them. Students will perform many hands- on labs, both attacking and defending, using port scans, foot printing, exploiting Windows and Linux vulnerabilities, buffer overflow exploits, SQL injection, privilege escalation, Trojans, and backdoors.
		Course Learning Outcomes CLO 1: Identify ethical, legal and social issues around the use of hacking CLO 2: Describe creative solutions in relation to practical security problems. CLO 3: Analyse methods of ethical hacking for the evaluation of networked information systems.
28.	Cyber Law	**Synopsis** Cyberlaw examines the effect of the Internet on the law, and of the law on the internet. In one sense, Cyberlaw provides a petri dish to examine how technology interacts with and impacts the entire law. In a richer sense, Cyberlaw shows how intermediated network technologies can disrupt existing forms of power—laws, markets, and social norms—in unexpected ways, creating new centers of norms and power. In that sense, Cyberlaw is a study of how technology brings chaos as well as unexpected order. Whether the chaos and order is good will be a central and recurring question. Topics covered will vary depending on current developments in law and technology and one can expect the class to regularly confront ongoing events. Topics in any semester may include: online jurisdiction; cyber-speech; trolling and bullying; privacy and anonymity; defamation; online intellectual property disputes; service provider liability; social networks; cybersecurity, cyberwar, and cybercrime; and network neutrality
		Course Learning Outcomes CLO 1: Apply appropriate ethical theories to case studies in computing. CLO 2: Interpret legal statutes relevant to the computing industry CLO 3: Appraise risk in IT projects.

29.	Community Service 1	**Synopsis** This course covers the topics of project management which includes planning, organizing and controlling the organizing committee, Students will learn the skills of carrying out a social project that benefit to the community. They will need to develop a feasible plan and implement the plan to bring positive impacts to the wellbeing of the society. The learning outcomes are assessed through assignment/project evaluation.
		Course Learning Outcomes CLO 1: Practice the main processes and concept of project management. CLO 2: Explain the basic concepts related to community service. CLO 3: Form a team spirit, discipline and be able to communicate with the public. CLO 4: Plan, organize and implement community service projects successfully.
30.	Industrial Training	**Synopsis** Student undertaking this course is required to complete 4 credit hours of industrial training in an approved setting. This industrial training shall provide opportunities for students to understand the link between theory and practice in relation to industrial management. It is intended to allow students to gain working experience and to apply theoretical knowledge at the workplace. This course will involve the students in participation within a placement setting. It is envisaged that students will apply interpersonal skills and organisational skills in the respective placement settings. They will need to develop the skills of data presentation and interpretation of graphical data.
		Course Learning Outcomes CLO 1: Perform the skills and knowledge (theory) in industrial training and the ability of transfer of learning in new tasks, work assignments and jobs at the workplace. CLO 2: Practice communication skills, problem solving, computer and system (ICT) application skills and analytical skills at the workplace CLO 3: Display good attitudes (quality of work and creativity; leadership qualities; flexibility and receptive to work/tasks assignments and possess time management skills) and level of motivation at the workplace

31.	Multimedia Principles **Elective*	**Synopsis** This course will introduce to the students the concept of multimedia; including its components, tools and applications. Tools and theoretical aspects of multimedia discussed include graphics, audio, video, animations and compression. Multimedia architecture also will be introduced to students. Besides that, multimedia application development process and principles of best design practices will also be discussed.
		Course Learning Outcomes CLO 1: List the fundamental concepts of multimedia. CLO 2: Recognise the different file formats for graphics, images, audio and video. CLO 3: Apply some principle of best practice in the design and development of effective multimedia application.
32.	Visual Programming **Elective*	**Synopsis** This unit aims to introduce the student to modern visual programming language such as Visual Basic. Students will learn how to work with forms and controls; how to design applications through objects. They will learn the concepts of objects, properties, methods and event handling. In addition, the students will learn about databases, and learn to connect forms to databases. The topics that will be covered are: - Introduction to Visual Basic 2010 - Working with Forms and Controls - The Visual Basic Language - Decision Making - General Procedures - Repetition - Working with Arrays in Visual Basic - Accessing Database Files
		Course Learning Outcomes CLO 1: Write a programme using Visual Basic. CLO 2: Employ the structure of Visual Basic 2010; create menus, multiple forms, sub Procedures, array; access database files and functions. CLO 3: Appreciate the communication and interaction between computers and people.

Examination System

Below is the standard institutional grading scheme:

GRADING SCALE				DESCRIPTION	
Grade	**Grade Point**	**Mark Scale**	**Description**		
A	4.00	80% – 100%	Distinction	EX	Exemption from unit approved on basis of other equivalent studies
A-	3.67	75% – 79%	Distinction		
B+	3.33	70% – 74%	Credit	CT	Credit Transfer from unit approved on basis of other equivalent studies
B	3.00	65% – 69%	Credit	W	Withdrawn
B-	2.67	60% – 64%	Credit	DNA	Did not attend
C+	2.33	55% – 59%	Credit	ANN	Result annulled due to misconduct
C	2.00	50% – 54%	Credit	DA	Deferred Assessment
C-	1.67	45% – 49%	Fail	TBA	To Be Attempted
D+	1.33	40% – 44%	Fail	**ACADEMIC STANDING**	
D	1.00	35% – 39%	Fail	Distinction	3.67 – 4.00
E	0.67	25% – 34%	Fail	Credit	2.00 – 3.66
F	0.00	0 – 24%	Fail	Probation	GPA Below 2.00
				Suspension	No improvement after probation

External Moderator

Industry professionals and academics will act as external moderators. They will examine the exam papers and answers scripts to ensure the achievement of high quality and academic excellence.

Programme route

The programme is offered at a foundation level and is designed to train students to progress to an undergraduate programme. A study of foundational knowledge, skill, competence, leadership, creativity, innovative and research capability are related to the needs of the students' future workplace with the emerging demands in industry.

Students could further their studies to various bachelor's degrees including business, accounting, logistics, and others at the same college or at other colleges or universities.

Dress Code

Student is required to adhere to the following requirements when entering campus.

- Wear student identification name tag upon entering the campus.
- Must be decently dressed and conduct themselves properly at all times.

Students are required to read the Student Handbook for more information.

This Programme Handbook should be read together with the Student Handbook.