BACHELOR OF SCIENCE DEGREE IN
INFORMATION TECHNOLOGY

Entry requirements to the Programme: 5 CXC/GCE subjects including Mathematics & English Language

The Bachelor Degree in Information Technology includes a rounded academic curriculum complemented by practical work. Skills are taught in a context that makes them transferable to the job environment and students demonstrate their readiness by completing projects that solve real world problems. The content and focus of the programme are constantly informed by current practice in the field through a participatory approach that includes input from our students, faculty, and advisory board. The curriculum reflects what is pertinent in the information technology industry and is a rigorous course that balances professional competencies and academic abilities.

The programme aims to produce graduates who have the technical, business and interpersonal knowledge, skills, and competencies to make significant contributions within the information technology industry nationally, regionally and globally. Graduates of the four-year bachelor programme are prepared for employment as computer programmers, systems analysts or network administrators. The programme is also designed that after two years and a term, students may graduate with an Associate Degree in Management Information Systems, equipped for entry-level jobs as junior programmers, technical writers or computer service technicians. Work-readiness is an important goal, and so the objectives of this syllabus are specifically intended to reflect job-relevant competencies.

Lower Level

CORE COURSES		Credits
ITT102	Discrete Mathematics I	3
MKT100	Principles of Marketing	3
MTH101	College Algebra	3

SPECIALIZED COURSES		Credits
ITT103	Programming Techniques	3
ITT106	Computer Essentials and Troubleshooting	3
ITT104	Database Management Systems I	3
ITT209	Building Applications using C#	3
ITT201	Data Communications and Networks I	3
ITT200	Object Oriented Programmes using C++	3
ITT203	Data Structures and File Management I	3
ITT208	Internet Authoring I	3

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Upper Level

CORE COURSES		Credit
MTH103	Calculus I	3
MTH300	Calculus II	3
ITT300	Discrete Mathematic II	3
ITT409	Project+	3
ITT408	Information Assurance and Security	3
ITT306	Information Technology Audit and Control	3
RSH405	Introduction to Research	3
RSH406	Applied Research	3

SPECIALIZED COURSES		Credit
ITT205	System Analysis and Design I	3
ITT403	Data Communication and Networks II	3
ITT303	Programming Design using Java	3
ITT305	System Analysis and Design II	3
ITT304	Database Management Systems II	3
ITT301	Data Structures and File Management II	3
ITT405	Human Computer Interaction and Interface Design	3
ITT302	Operating Systems	3
ITT307	Internet Authoring II	3
ITT401	Intelligent Systems	3
ITT410	Linux+	3

GENERAL EDUCATION COURSES		Credit
ENG109	Academic Writing I	3
ENG110	Academic Writing II	3
ITT101	Computer and Information Systems	3
PSY100	Introduction to Psychology	3
SOC100	Introduction to Sociology	3
ENG102	Introduction to Literature	3
ENG111	Public Speaking	3
SPA101	Introduction to Spanish	3
POL100	Introduction to Politics	3
UCC101	Orientation to University Life	1

ELECTIVES (Required 2)   **Credit**
6 credits

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COURSES AND COURSE DESCRIPTIONS

ITT101 Computer and Information Systems
This introductory course provides the necessary background for understanding the role of information systems in organizations and for using computer tools and technology in solving business problems. The main concepts covered include types and categories of computers, software and hardware components, storage, computer networks and operating systems with an emphasis on analyzing problems and creating solutions. In the practical section of the course students will get hands-on experience using office productivity tools.

ITT105 Computer Troubleshooting & Repairs
This introductory course in computer troubleshooting and repairs is designed to give students hands-on experience in diagnosing and solving some of the common hardware and software problems that can occur during the normal usage of a computer.

ITT201 Data Communications and Networks I
This introductory course in Data Communications and Networks is designed to give students an understanding of networks and how they can be used in organizations to increase efficiency. It will also introduce IP addressing and subnets and briefly look at security issues in networking.

ITT403 Data Communication & Networks II
This course is aimed at providing the student with both the advanced theoretical and practical knowledge of the standards and techniques in Internetworking, Network security and introduction to Wireless Communications with particular reference to cellular networks. The course also pays special attention in laboratory sessions to IP routing and configuring of routers and switches. The CISCO IOS is used to illustrate the principles and concepts related to routing in TCP/IP networks.

ITT203 Data Structures & File Management I
This is an introductory course in data structures and file management. It will introduce the concepts of data structures and file management so that students become more familiar with how data is organized and manipulated. It provides students with the theoretical framework for further advanced practical studies in data structures and file management.

ITT301 Data Structures & File Management II
This is an advanced practical course in data structures and file management. It will broaden the knowledge gained in Data Structures and File Management I. The course introduces the student to additional data structures such as trees, sets, graphs, and advanced techniques in sorting (internal and external).

ITT104 Database Management Systems I
This introductory course covers the concepts related to the design and implementation of Database Management Systems. Case studies will be used to give students a practical sense of the issues to be considered in the implementation and use of Information technology, and to introduce the concepts, theories and laws or legal frameworks within which these issues are managed.

ITT304 Database Management Systems II
This course is aimed at providing upper level undergraduate students with intermediate to advanced concepts in data modelling design and database administration. The course explores the variety of options available in database development and administration for current and future use on particular software platform technologies.

ITT102 Discrete Mathematics I
This course will introduce students to the basic idea as to how computer systems are designed and provide a realistic picture of the internal workings and design of computer systems.

ITT300 Discrete Mathematics II
This course builds on the fundamentals of discrete mathematics covered in Discrete Mathematics I. The main focus will be on developing a sound theoretical foundation for further work in computer science and information science. The topics covered in this course will not be exhaustive to discrete structures but will provide the basis for pursuing other advanced courses in discrete structures and mathematics.

ITT405 Human Computer Interaction & Interface Design
This course examines the interaction between humans and computers and explores the design of computer interfaces that are based on the abilities, limitations, and goals of the users. Students will be introduced to the principles underlying the interaction of humans with computers and the design of computer interfaces by reviewing the theories and current research in the area.

ITT401 Intelligent Systems
The course focuses on the basic concepts and methods in artificial "societies" and complex systems. It will concentrate on artificial intelligence, cognitive science and the social context of intelligent systems. It will provide an understanding of the application of intelligent systems in the industry and organization. In particular it will focus on how these systems may be used to assist in the decision making process within the organization.

ITT208 Internet Authoring I
This introductory course in Internet Authoring will introduce students to the tools needed to develop and publish Web Sites. At the end of this course students should be able to comfortably design, develop and publish their site on the Internet. Students will also be exposed to selected internet authoring tools to develop and publish web pages.

ITT307 Internet Authoring II
This course continues from Internet Authoring I, covering some of the same topics in more depth. This course includes coverage of topics in networking technologies for the web, web UI design and site design, client-server architecture and client-side and server-side programming. It covers relevant topics in e-commerce, web security, and engineering concepts such as the three-tier architecture and frameworks for the web. It provides an introduction to mobile web issues and web multimedia.

ITT200 Object-Oriented Programming using C++
This course aims to broaden the student's knowledge of concepts and features of an object-oriented programming language. Students will be required to use these concepts to design solutions for real world problems.

ITT302 Operating Systems
The course introduces the fundamentals of operating systems design and implementation. Topics include an overview of the components of an operating system, mutual exclusion and synchronization, implementation of processes, scheduling algorithms, memory management, and file systems. The course explains the issues the influence the design of contemporary operating systems and may include a laboratory component to enable students to experiment with operating systems.

ITT303 Programming Design using Java
This introductory course in Java programming exposes the students to the fundamental concepts of using Java to develop clearly written and well-structured object oriented programmes that address real world problems. Students are expected to already have a knowledge of programming in general as well as specific knowledge of programming in an object oriented environment.

ITT103 Programming Techniques
This course will introduce students to programming concepts. Students will learn proper programming design techniques and principles. The focus is on developing the logic and thought-processes required for problem solving, rather than on learning a programming language. This course assumes no prior knowledge of programming, however successful students will be those with an aptitude for problem solving. Programming Techniques serves as the foundation course for all other programming courses in the programme.

ITT205 Systems Analysis & Design I
This course covers the design of information systems and takes students right through to implementation and maintenance. The course will explore all aspects of the systems development life cycle (SDLC). The classes will use case studies to give students a practical sense of systems analysis and design and to introduce the concepts, methodologies, tools and techniques that can be used to develop systems.

ITT305 Systems Analysis & Design II
The course will be taught using lectures and seminars, which will focus on the advanced principles, theories and practices of systems analysis and design. The lectures will cover some of the advanced topics relative to the course, which students need to be familiar with in order to practice in the field. More advanced case studies will also be used to bring students closer to practical situations. In these case studies students will be expected to present materials in simulation with real projects. The assignments may be based on advanced case material presented in the textbook(s) or other cases provided by the lecturer, at the lecturer's discretion.

ITT306 Information Technology Audit and Controls
This course is important, because it can be used as a complement by accounting majors as well as IS majors. Because of Sarbanes-Oxley, many accounting firms have recruited IS graduates to grow their consulting services. Practitioners of these firms' senior management have expressed more emphasis in IS programs for audit and control topics. Opportunities for discussion of business ethics fit well with examples of companies that have failed due to poor IT auditing and control procedures. The use of case studies, professional standards, and sample audit software programs is encouraged to exemplify concepts covered.

ITT408 Information Assurance and Security
The information technology (IT) professional must understand, apply, and manage information assurance and security (IAS) in computing, communication, and organizational systems. It is also important for the IT professional to provide users with a framework to be sufficiently security aware to be an asset to the organization rather than a liability. This course includes operational issues, policies and procedures, attacks and defense mechanisms, risk analyses, recovery, and information security.

ITT410 Linux+
This course is aimed at providing students with the skills needed to install and support the Linux operating system and acquire information to assist in the preparation of the CompTIA Linux+ exam. This course will cover programming and administrative tasks which include the managing users and group accounts, scheduling jobs, and backing up essential data.

ITT411 Project+
This course is aimed at providing the student with the tools and techniques needed for successful Project management. The references will mainly be drawn from IT-related projects. This course will certify that the successful candidate has important core knowledge of the project lifecycle, roles and skills necessary to effectively initiate, plan, execute, monitor/control and close a project.

ITT209 Building Applications Using C#
This course exposes students to the development of desktop and internet applications using the popular C# language. Accordingly, students will be exposed to basic OOP concepts such as classes, inheritance and overloading. Additionally, basic programming concepts such as variable creation and manipulation, modularity and the use of control structures will be reviewed.

POL100 Introduction to Politics
This course exposes students to the nature and main forms of Caribbean political institutions and Government, as well as the region's significant culture manifestations. This course does not assume prior knowledge of core concepts; therefore it introduces students to the major methods, approaches and issues of political science, helping to give them grounding in the conceptual and practical fundamentals of the discipline. It provides a comprehensive overview of the following areas of study which include the nature of politics and its phenomena; the major processes and arrangements which shape political behavior, involvement, and perspectives; the challenges posed to and adaptations made by existing political systems; and, through a comparative approach with

the Caribbean, the organization of political systems in other countries and an evaluation of how well their structures and processes work.

SOC100 Introduction to Sociology

This introductory course seeks to provide an overview of Sociology as a discipline. It lays the foundation for the students to apply the various theoretical perspectives to contemporary social problems especially as it relates to the world of work.

ENG102 Introduction to Literature

This introduces students to the traditional genre classifications of literature--prose, poetry, and drama--because these categories provide a convenient and logical structure for an introductory study of Literature. Additionally, the course seeks to emphasize the universality and diversity of imaginative literature as an expression of ideas and emotions, readings, culture, ideas and even language itself through works from various cultures and from differing segments of society, as well as from a variety of time periods.

PSY100 Introduction to Psychology

This introductory course in psychology is designed to give students a basic understanding of human behaviour. Students will learn the major psychological theories that will allow them to explain and predict human behaviour. The emphasis will be on examining their own behaviour and the behaviour of others behaviours within an organizational context.

MKT201 Principles of Marketing

This introductory course in marketing will expose students to the fundamentals and principles of marketing. Participants will gain a general knowledge of marketing, marketing research, consumer behavior, designing and developing products and the pricing and placing of products. Emphasis will be placed during the course on the application of the marketing principles to real world situations

ENG109 Academic Writing I

This is a writing course focusing on expository writings. Basic editing principles are covered and applied to all writing. Selected essays are read and examined as examples of the expository styles to improve critical reading skills, grammar skills, and essay writing. As well, research techniques and documentation are emphasized as methods to enhance writing.

ENG110 Academic Writing II

This class is an introduction to the analysis of critical thinking. The class aims to impart both a skill and some factual knowledge. The skill is an ability to recognize and also to construct in a structured and written way, common types of cogent and non-cogent reasoning.

ENG111 Public Speaking

The course is designed to integrate theory and practice in preparing professionals for public speaking assignments. Participants will be provided with the opportunity to develop skills in the preparation and delivery of speeches for specific types of professional occasions.

RSH405 Introduction to Research
This course exposes students to the traditions of research the concepts of Quantitative and Qualitative research, the designing of a research question and or the hypothesis, and the main aspects of conducting a research.

SPA101 Introduction to Spanish
Introduction to Spanish introduces students to the basic functions and structures of the Spanish language. Students will learn to use the content to communicate in everyday situations and in the business environment. Students will develop the four language skills of listening, speaking, reading and writing with emphasis placed on the oral communication skills. They will also be encouraged to cultivate an interest in Hispanic cultures.

SOC300 Social Psychology
This course uses traditional and cutting-edge social psychological theories to explore some of the most exciting and pressing issues we face in our complex, fast changing world. Topics in the course include emotions, conflict, relationships, the body, personality, prejudice and group processes. Working with multimedia materials, you will develop advanced academic skills of critical evaluation and argument and will have the opportunity to conduct your own independent research project – consolidating and deepening your understanding. The course will also contribute to your personal development by encouraging you to reflect on your life in the light of social psychological evidence.

MTH101 College Algebra
This course will expose students to principles of algebra for the college level. Students will get an understanding of numerical and algebraic relationships and be able to formulate problems into mathematical terms, select, apply and communicate appropriate techniques of solution and interpret the solutions in terms of the problem.

RSH406 Applied Research
This course exposes students to the traditions of conducting a Research and producing a product. This is strongly student-centered and Independent-study-based. Students will develop and refine the Proposal and conduct the Research. This is a coached cognitive Apprenticeship approach to learning from an expert.

MTH103 Calculus I
This is a first college course in calculus. This course was designed to allow students to develop problem-solving skills required for further studies and for the working environment. Students will learn the main principles and theorems of Calculus using a practical approach. This strategy will help students to perceive the subject as one that can be applied instead of being abstract.

UCC101 Orientation to University Life
The course will cover the basics of power-study for success, character building, research skills, time management and career path identification. Students will exposed to the process of cultivating the dignity of succeeding at the university and representing the institution as good student

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ambassadors. The focus of the course will be on building a rounded individual that is a global citizen, who respects individuality and diversity.