INFORMATION TECHNOLOGY DEPARTMENT
COURSE DESCRIPTIONS
(Enhanced Curriculum 2014)

BSIT 111 INFORMATION TECHNOLOGY FUNDAMENTALS. The primary goals of this course are exposure to important areas of information technology including ethics and the impact of Information Technology on society, as well as proficiency in modern tools for communication, presentation, word processing, spreadsheets, introduction to internet, and other information processing. Upon completion of the course, students will better understand the appropriate application of technology to problem solving and have an increased ability to learn and explore new technologies with confidence. Credit: 3 units

BSIT 112 COMPUTER PROGRAMMING I. The chief objective of this course is to allow students without background in computer programming to become proficient programmers through learning the Java programming language. Topics include syntax, data types, iteration, conditional expressions, arrays, references and methods. Since this is an introductory course, several non-Java-specific topics will be included such as basic software engineering and debugging techniques. If time allows, sometime may be spent on topics such as graphical programming and GUIs. Credit: 3 units

BSIT 123 COMPUTER PROGRAMMING II. This course provides the students with the fundamental understanding of object-oriented programming using Java. It introduces the different concepts that are commonly associated with object programming. Unique aspects of programming with Java will be discussed including object-oriented methods, the syntax for classes and inheritance, and Java package APIs. Prerequisite: Computer Programming I Credit: 3 units

BSIT 211 COMPUTER ORGANIZATION. This course provides an overview of the architecture and organization of a computer system and how it is built. It includes a discussion of the evolution of computers, computer arithmetic, and the components of computers such as the CPU, memory, input and output devices and peripherals. It also includes an introduction to assembly language, addressing modes and instruction sets, CPU hardwired and micro programmed control design, input-output organization, and implementation and maintenance. Prerequisite: Computer Programming II Credit: 3 units

BSIT 212 DATABASE MANAGEMENT SYSTEM I. This course covers basic issues in data modeling, database application software design and implementation. File organizations, relational model, relational database management systems, and query languages are addressed in detail. Two-tier architecture, three-tier architecture and development tools are also discussed. Prerequisite: Computer Programming II Credit: 3 units

BSIT 214 OBJECT-ORIENTED PROGRAMMING. This subject is a continuation of Computer Programming II. This subject teaches advanced topics in object oriented programming. Topics include Arrays, Exception handling and Event Driven programming, Streams and file I/O, vectors and Linked List, recursions, multithreading, etc. Prerequisite: Computer Programming II Credit: 3 units

BSIT 221 NETWORK MANAGEMENT. This course discusses the fundamentals and principles of computer networking. The discussion follows the ISO/OSI reference model for computer networks. Part of this course will demonstrate installation configuration and maintenance of a Local Area Network (LAN). Prerequisite: Database Management I Credit: 3 units

BSIT 222 DISCRETE MATHEMATICS. This course introduces the foundations of mathematics as they apply to Computer Science. Topics include functions, relations and sets, basic logic, proof techniques, basics of counting and introduction to digital logic and digital systems. Prerequisite: College Algebra Credit: 3 units

BSIT 223 DATABASE MANAGEMENT SYSTEM II. This is an advanced course in database management systems. The potential topics covered in class include processing and optimization of declarative queries, transactions, crash recovery, data stream systems, Web data management, information integration, and data mining Prerequisites: Object-Oriented Programming and Database Management I Credit: 3 units

BSIT 311 WEB DEVELOPMENT. The course is designed to be a project-based course that teaches professional web design and development utilizing Macromedia Web tools. Students will develop key skills in project design, management, and web-authoring. The final project will involve working with a local client to design and implement a web site. Prerequisite: Network Management Credit: 3 units

BSIT 312 OPERATING SYSTEMS APPLICATIONS. This introductory subject in Operating Systems includes concepts, architectures, components and theories that serve as basis for the design of classical and modern computer systems. Several aspects of basic computer system design will be covered in varying degrees of detail. Prerequisites: Computer Organization and Network Management Credit: 3 units

BSIT 322 SYSTEMS ANALYSIS AND DESIGN. This course aims to equip students with the concepts and methods used in the analysis, design, and deployment of information systems in organizations. It involves a theoretical study of system concepts, components and business organizations. Prerequisites: Object-Oriented Programming and Database Management II Credit: 3 units

BSIT 323 MULTI MEDIA DEVELOPMENT. In this course, the student will learn to create a lively animations and transition effects, edit and play sounds for their movies, create and apply behaviors to animate sprites with and without scripting and trigger animation and sound feedback to prompt user actions using Macromedia director application and lingo scripting. Prerequisite: Web Development Credit: 3 units

BSIT 324 SOFTWARE ENGINEERING. This course introduces students to the concepts, principles and dynamics of software engineering. It involves the study of methodologies and techniques, and the construction of models at each major software development phase, namely, requirements analysis, design, testing and implementation. At the end of the course, the students should be able to submit a software project complete with technical documents. Prerequisites: Object-Oriented Programming and Database Management II Credit: 3 units

BSIT 413 CAPSTONE PROJECT. The capstone project/research course allows students to apply the knowledge and skills acquired in their courses to their school or district environment. Students are encouraged to select projects that are of particular interest to them and that will result in professional growth and benefit their career. Prerequisites: System Analysis and Design and Software Engineering Credit: 3 units

BSIT 421 ON THE JOB TRAINING. This is an immersion program wherein the students will have the chance and opportunity to be with the IT industry. They will be able to apply the skills, knowledge and attitude learned in the school and at the same time have the opportunity to experience the corporate environment. Prerequisite: Completed 80% of the total number of units in the curriculum Credit: 3 units