

Republic of the Philippines  
**AURORA STATE COLLEGE OF TECHNOLOGY**  
Baler, Aurora

*BOT Resolution No: 902 Series of 2008*  
**BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY**

**DESCRIPTION OF COURSES**

**A. GENERAL EDUCATION CORE**

**1. Language and Humanities Cluster**

**ENGL100 – Study and Thinking in English**

This course is designed to develop language-learning strategies, effective communication techniques, academic study skills, critical thinking and problem-solving skills. It provides students with the basic skills in oral and written communications.

Credits: 3 units 3 hours per week  
Prerequisite: None

**IT-ENGL102 – Communications for IT**

This course is designed to develop basic writing skills of students in the Information Technology discipline, particularly in writing business correspondence and reports. It also covers communications using the Internet.

Credits: 3 units 3 hours per week  
Prerequisite: ENGL101

**IT-ENGL103 – Advanced Communications for E-business**

This course prepares the students for employment in national and international eBusiness and designed for students whose objective is career in the multinational business setting, the call center industry or in broadcast media. This course enriches, strengthens and updates the student's communication skills in listening, speaking, reading, and writing in the context of American culture and language in informal, colloquial or formal English, and when necessary, using the jargon of eBusiness.

Credits: 3 units 2 hours lecture 3 hours lab per week  
Prerequisite: ENGL102

**FIL100 – Komunikasyon sa Akademikong Pilipino**

Metalingwistika na pag-aaral sa gamit ng akademikong Pilipino sa iba't-ibang sitwasyon at larangan sa paraang interdisiplinaryo at interaktibo. Inaasahang at malilinig sa mga istudyante ang mga kalinangang kaalaman at kasanayan sa paggamit ng Pilipino sa lalong mataas na edukasyon.

Credits: 3 units 3 hours per week  
Prerequisite: None

**FIL101 – Pagbasa at Pagsulat Tungo sa Pananaliksik**

Pagpapalawak ng mga kaalaman at kasanayan sa kritikal na pagbasa at lohikal na pagsulat tungo sa pagsasagawa ng sariling pananaliksik.

Credits: 3 units 3 hours per week  
Prerequisite: Fil100

**HUM100 – Art Appreciation**

This course aims to give the students an appreciation of the various forms of arts such as visual arts, music, performing arts, cinema, theater, architecture and literature and the principles underlying these art forms.

Credits: 3 units 3 hours per week  
Prerequisite: None

**HUM101 – Philosophy of Man**

This course aims to provide an introduction to philosophy, with man as the key point. It includes the necessary topic in learning and knowing the nature of man, his actions, activities, his problems and their implications and relationship

Credits: 3 units 3 hours per week  
Prerequisite: None

**LIT103 – Philippine and World Literature**

This is a study of the different forms of literature in the Philippines and the rest of the world. It also encourages the study literature in the regional or local setting.

Credits: 3 units 3 hours per week  
Prerequisite: None

**2. Mathematics, Natural Science and Technology Core****MATH100 – College Algebra**

This course provides a solid foundation in algebra for students who have moderate to no previous experience with algebra, as well as to help students succeed with non-mathematical courses that require an understanding of algebraic fundamentals. The concepts examined in this course will include a review of mathematical principles, equations, problem solving, graphing, real world applications, critical thinking, decision-making, and geometrical functions.

Credits: 3 units 3 hours per week  
Prerequisite: None

**MATH101 – Trigonometry**

This course covers trigonometric functions, identities and equations; solutions of triangles; law of sines; law of cosines; complex numbers; and inverse trigonometric functions.

Credits: 3 units 3 hours per week  
Prerequisite: Math100

**MATH103 – Probability and Statistics**

This course covers the principles of statistics, charts, graphs, presentation and analysis of data averages, median, mode deviations, probability, normal curves and applications.

Credits: 3 units 3 hours per week  
Prerequisite: Math100

### **NS100 – Environmental Science**

The course provides an integrated coverage of the basic concepts and principles of ecology and the major human implications of these concepts. This involves a holistic approach in dealing with man's relationship with his environment. Included are topics on the nature of ecosystems, relations of individuals and populations, the major communities and man's impact on environment. This course also discusses a familiarization and orientation on the basic environmental management system, principles of environmental assessment and monitoring systems, and the impact of human on the environment.

Credits:           3 units           3 hours per week  
Prerequisite:     None

### **NS101 – Physical Science**

The course covers the development and history of the physical sciences with applications of principles to daily living. It also covers the basic concepts of kinematics, dynamics, Newtonian physics, sound, and thermodynamics through lectures, laboratory experiences, and problem solving.

Credits:           3 units           3 hours per week  
Prerequisite:     None

## **3. Social Science and Communications Cluster**

### **SOCSCI100 – General Psychology**

This course aims to give the students an understanding of contemporary approaches to the analysis and treatment of complex human behavior. It focuses on man as he acts and interacts with the environment and includes understanding of intelligence, motivation, personality and social psychology in the Philippine setting.

Credits:           3 units           3 hours per week  
Prerequisite:     None

### **SOCSCI101 – Society and Culture with Family Planning**

This course is an introduction to the field of sociology and anthropology. It assumes that social and cultural forces external to individuals shape behavior. It aims to identify, understand and explain what these specific forces are and how they shape behavior with cultural communities. It will also introduce students to the discipline, examining its history, the work of its early and contemporary contributors, essential concepts, research methods, theory and application with the aim of equipping the students with the tools to understand and analyze the issues that affect the Philippines and the rest of the world. It also includes the different concepts of family planning.

Credits:           3 units           3 hours per week  
Prerequisite:     None

### **SOCSCI103 – Basic Economics with Taxation and Agrarian Reform**

In this course, students will learn the various economic concepts such as elasticity, price regulation and consumer choice. General topics include basic market analysis, consumer behavior, and theory of the firm, market structures, general equilibrium and the firm's economic policies, and market structures. It also covers a study of national economic issues and measures of performance. The focus is on national income accounting and determination. Students are introduced to problems pertaining to unemployment, trade balances, income distribution, fiscal and monetary policies and the global environment (international trade, globalization of market, foreign exchange controls, trade restrictions, regional and international trade agreement, etc.)

Credits: 3 units 3 hours per week  
Prerequisite: None

**PI100 – Philippine History with Politics and Governance**

This course presents a panoramic presentation of the achievements of the Filipinos from prehistoric to the present times as gathered from the oral and written account, shared belief and archeological findings. It covers the political, economic, social, and cultural development of the Philippines from its beginnings to modern period. It also includes an overview of the basic concept and issues concerning politics and governance at the local, national and global level. The course aims at familiarizing the students with the development of political, social, and cultural traditions that helped shape the character of the Filipino nation at different historical stages.

Credits: 3 units 3 hours per week  
Prerequisite: None

**PI101 – Life and Works of Rizal**

This is a comprehensive study of the life of Dr. Jose Rizal. It gives detailed account of his love of knowledge and country, his various travels, his family, the women in his life, his literary and artistic works, his various ideas and ideals of human society. The course also deals with the awakening of nationalism among the Filipinos.

Credits: 3 units 3 hours per week  
Prerequisite: None

**B. BASIC ITE COURSES**

**IT101 – IT Fundamentals**

This course provides an introduction to the industry of Information Technology, an overview of the IT profession, and basic computer concepts.

Credits: 3 units 2 hours lecture, 3 hours lab per week  
Prerequisite: None

**IT102 – Programming 1**

This course allows the student to learn and apply the art and style of procedural programming to solve computational problems adhering to the standards and guidelines of documentation. It includes discussion on I/O statements, loop and branching instructions, and creating functions and procedures.

Credits: 3 units 2 hours lecture, 3 hours lab per week  
Prerequisite: None

**IT103 – Programming 2**

This course allows the student to apply advanced techniques in procedural programming to solve computational problems adhering to the standards and guidelines of documentation. It covers the creation, manipulation and application of user-defined data structures, recursion, and file-handling techniques.

Credits: 3 units 2 hours lecture, 3 hours lab per week  
Prerequisite: IT102

**IT104 – Internet and Web Development**

This course covers various web design concepts and techniques that will allow students to design, build and create effective, interactive and dynamic web applications.

Credits: 3 units 2 hours lecture, 3 hours lab per week  
Prerequisite: IT102

### **IT105 – Computer Organization**

This course provides an overview of the architecture and organization of a computer, how it is built. It includes a discussion of the CPU, memory, I/O organization and peripherals.

Credits: 3 units 2 hours lecture, 3 hours lab per week  
Prerequisite: IT103

### **IT106 – Discrete Structures**

This course introduces the foundations of discrete 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.

Credits: 3 units 2 hours lecture, 3 hours lab per week  
Prerequisite: MATH100

### **IT107 – Professional Ethics**

The course introduces ethics and ethical theories; provides discussions on the ethical dilemmas and issues facing IT practitioners. An appreciation and discussion of the Code of Ethics of I. T. Professionals; cybercrimes and appropriate Philippine Laws are also included.

Credits: 3 units 3 hours lecture  
Prerequisite: IT101

## **C. BSIT PROFESSIONAL COURSES**

### **IT201 – Accounting Principles**

This course is an introduction to the fields of managerial and financial accounting, focusing more on the latter. It is designed to equip Information Management students with knowledge and skills on accounting processes, systems, concepts, principles, and applications in both a manual and computer-based environment.

Credits: 3 units 3 hours lecture  
Prerequisite: MATH101

### **IT202 – Object Oriented Programming**

This course allows the student to learn and apply the basic language syntax and principles of object-oriented programming to solve computational problems adhering to the standards and guidelines of documentation.

Credits: 3 units 2 hours lecture, 3 hours lab per week  
Prerequisite: IT103

### **IT203 – Database Management System 1**

The course covers discussion of database systems, the nature of the data, data association, data semantics and data models. A specific DBMS will be used to implement data models for use in business application programs.

Credits: 3 units 2 hours lecture, 3 hours lab per week  
Prerequisite: IT202

### **IT204 – Database Management Systems 2**

The course continues the topics on Database Management System 1. It will cover different database management system application programs to equip the students with knowledge in selection and implementation of database system models applicable in specific conditions and requirements.

Credits: 3 units 2 hours lecture, 3 hours lab per week  
Prerequisite: IT203

### **IT205 – Operating System Applications**

This course provides an introduction to the concepts, theories and components that serve as the bases for the design of classical and modern operating systems. Topics include process and memory management, process synchronization and deadlocks.

Credits: 3 units 2 hours lecture, 3 hours lab per week  
Prerequisite: IT105

### **IT206 – Network Technology and Management**

This course introduces the concept of data communication and computer networking. Detailed discussion is based on the 7-layers of the OSI reference models.

Credits: 3 units 2 hours lecture, 3 hours lab per week  
Prerequisite: IT105

### **IT207 – Systems Analysis and Design**

This course covers the different phases of systems development focusing on analysis and design. Students will learn the rudiments of systems development through a feasibility study.

Credits: 3 units 2 hours lecture, 3 hours lab per week  
Prerequisite: IT204

### **IT208 – JAVA Programming**

This course focuses on giving the student an understanding of exactly what Java is and how to build, compile, and distribute effective stand-alone Java applications. The course is designed to be a comprehensive overview of the Java language and runtime model for developers experienced with another programming language. In lab exercises the students will write Java code without the assistance of any visual programming or “wizards,” leaving him/her prepared to read and write Java code in a production environment. Upon completion, the students will be able to program using Java. The students will know how to create stand-alone applications and applets.

Credits: 3 units 2 hours lecture, 3 hours lab per week  
Prerequisite: IT202

### **IT209 – Software Engineering**

This course introduces the software engineering processes; its principles, techniques and practices to produce quality software products.

Credits: 3 units 2 hours lecture, 3 hours lab per week  
Prerequisite: IT207

### **IT210 – Multimedia Systems**

This three (3) units course equips the IT student with the skills to develop interactive multimedia applications which combine audio, video, text, animation, and still images that can be delivered from CD-ROM to LAN, from Internet to the Intranet.

Credits: 3 units 2 hours lecture, 3 hours lab per week  
Prerequisite: IT104

**IT211 – Capstone Project (Technopreneurship)**

This course covers the principles and theories of technopreneurship. Students are expected to develop and implement a feasible IT business plan.

Credits: 3 units 3 hours lecture  
Prerequisite: 4<sup>th</sup> Year Standing/ IT402

**D. BSIT ELECTIVES**

**IT301 – Productivity Applications**

This course covers different computer applications that can be used for personal productivity and in office settings. Focus will be on word processing, spreadsheet and presentation software like MS Office, Open Office and other applications.

Credits: 3 units 2 hours lecture, 3 hours lab per week  
Prerequisite: None

**IT302 – PC Troubleshooting and Maintenance**

This course equips the students with the basic knowledge in troubleshooting, repair, and maintenance of computers and applications. It also covers PC assembly and installation of computer hardware and software.

Credits: 3 units 2 hours lecture, 3 hours lab per week  
Prerequisite: IT101

**IT303 – Mobile and Wireless Computing**

This course introduces the students to the emerging technologies of mobile computing like mobile communications, embedded systems, mobile applications, wi-fi, 3G, wi-max, HSDPA etc. It also covers setup and installation of wireless networks.

Credits: 3 units 2 hours lecture, 3 hours lab per week  
Prerequisite: IT206

**IT304 – Open Source Computing**

This course equips the students with knowledge and skill in using Free and Open Source Software as an option or alternative in the specification and implementation of computer systems. It covers basic knowledge of free and open source operating systems and application software.

Credits: 3 units 2 hours lecture, 3 hours lab per week  
Prerequisite: IT 105 & IT301

**IT305 – Information Systems**

This course covers the concepts of information systems, which is the system of persons, data records and activities that process the data and information in a given organization, including manual processes or automated processes. It includes topics on planning, building and managing of different information systems.

Credits: 3 units 2 hours lecture, 3 hours lab per week  
Prerequisite: IT204

## **E. FREE ELECTIVES**

### **IT401 – Quality Systems and Processes**

This course covers the different concepts in quality systems including policies, processes and procedures required for planning and execution (production / development / service) in the core business area of an organization. It also covers product standards and certification schemes applicable to local and international settings.

Credits: 3 units 2 hours lecture, 3 hours lab per week  
Prerequisite: IT101

### **IT402 – Fundamentals of Business and Management with eCommerce**

This course intends to give an introduction to business and management concepts, It also aims to develop the management skills of the students through the self-regulated activities that will be employed in the course. It also covers eCommerce which is the application of business models in an online environment.

Credits: 3 units 2 hours lecture, 3 hours lab per week  
Prerequisite: IT101

### **IT403 – Current Trends in IT**

This course intends to give the students broad concepts of the current trends in information technology. Focus will be on new technology, software and hardware as well as current IT news in the local and international settings.

Credits: 3 units 2 hours lecture, 3 hours lab per week  
Prerequisite: IT101

### **IT404 – Image and Video Processing**

This course aims to provide the student with the basic knowledge and skill in processing of images and video. Topics include use of different imaging devices like digital cameras, scanners and printers and video camera and digital processing of images and videos. The students will learn to process, edit, manipulate, layout, and produce image and video outputs for different uses.

Credits: 3 units 2 hours lecture, 3 hours lab per week  
Prerequisite: IT210

## **F. PRACTICUM/OJT**

### **IT501 – Practicum**

This is a requirement for students who want to get an Associate in Information Technology Certificate. It aims to immerse the students in real work environment to give them a chance to apply their skills and knowledge learned in the school.

Credits: 3 units  
Prerequisite: Passed all First Year subjects.

### **IT502 – Internship/OJT/Practicum**

Internship/OJT/Practicum is an immersion program wherein the students will have the chance and opportunity to be with the IT industry. This program is important because the students will have the chance to apply the skills, knowledge and attitude



learned in the school and at the same time the opportunity to experience the corporate environment.

Credits: 9 units 27 hours per week  
Prerequisite: completion of 80% of total units of the curriculum

## **G. PHYSICAL EDUCATION**

### **PE100 – Self-Testing Activities**

This course provides the students with the correct body mechanics, free-hand exercises, physical fitness tests, parameters of physical fitness, conditioning exercises, simple stunts and tumbling and aerobics.

Credit: 2 units  
Prerequisite: None

### **PE101 – Rhythmic Activities**

This course deals with basic movement and rhythmic skills in learning and creating simple, natural basic dance steps and dance terms needed in the correct interpretation and performance of folk dances and ballroom dances. It also includes activities and social recreation.

Credit: 2 units  
Prerequisite: None

### **PE102 – Individual and Dual Sports**

This course deals with the basic skills and simple rules and regulations of some individual and dual sports like swimming, athletics, arnis, table tennis and taekwondo.

Credit: 2 units  
Prerequisite: None

### **PE103 – Team Sports**

This course intends to develop leadership, teamwork and cooperation among members of the team. It introduces the students to the basic skills, strategies and techniques and rules and regulations of some team sports like soccer, sepak takraw, baseball/softball and lawn tennis.

Credit: 2 units  
Prerequisite: None

## **H. NSTP**

### **NSTP-ROTC 1 – Military Service 1**

This course covers the training module on Military Training Service 1 which includes orientation on the fundamental laws and pertinent Republic Acts, military organizations, customs and practices, basic concept of Civil Military Operations, human rights, dynamics of communism and traditional crimes and preparations to the rudiments of military training.

Credits: 3 units 3 hours per week  
Prerequisite: None

**NSTP100-CWTS 1 – National Service Training Program 1**

This course offered to all male and female first year students designed to help them understand, appreciate and eventually live by the concept of National Service Reserve Corps with view of empowering them into becoming potent resource for community development.

Credits: 3 units 3 hours per week

Prerequisite: None

**NSTP-ROTC 2 – Military Service 2**

The training module on Military Training Service 2 provides the basic ROTC cadets with the basic knowledge of general military subjects, small units tactics, crew-service weapons, individual unit training necessary to become potential PA reservist.

Credits: 3 units 3 hours per week

Prerequisite: NSTP-ROTC 1

**NSTP101-CWTS 2 – National Service Training Program 2**

The course is a continuation of NSTP-CWTS 1 designed to immense students in practicum activities that will arm them with the capability to contribute to the uplift of the general welfare, improve the quality of life of all members of the community and enhancement of facilities in the community.

Credits: 3 units 3 hours per week

Prerequisite: NSTP100-CWTS 1

**Summary of Courses and Units**

Courses	Units	
	BSIT Curriculum	CHED Minimum Req.
General Education Courses	54	54
Basic ITE Core Courses	21	18
ITE Professional Courses	33	33
ITE Electives	15	12
Free electives	12	9
Practicum/OJT	12	required
PE	8	8
NSTP	6	6
<b>Total</b>	<b>161</b>	<b>140</b>