COURSE PROFILE: INFORMATION TECHNOLOGY BASICS

Title	Information Technology Basics
Length	4 days

Description	This course covers the following topics.
	
	➢ Computer system fundamentals both mainframe and PC, including
	  ○ Processing hardware
	  ○ Input/output hardware
	  ○ Storage hardware
	➢ System and Application Software
	➢ Communication Technology
	➢ Files and Databases
	➢ Ethics, Privacy, Security

Target Audience	This course targets systems analysts, managers and others that use IT systems or develop requirements for IT systems. This course is ideal for staffs that are moving from an end user position to a technical IT position.
Prerequisites	None
Learning Objectives	The student will be able to describe: • and identify the internal and external parts that make up a computer, • the difference between system and application software, • how data communication works, • systems analysis, design and programming concepts, • files and databases and how they work, • trends in computing, and • ethics, privacy and security issues.
Course Material	Each Student will receive a: • College level textbook pertaining to IT Fundamentals and • Course training manual
Cost	Our all inclusive local onsite fee for up to 15 students is $12,500.00*. *Effective Date: 01/01/2010. This price does not include travel outside the Baltimore, MD or District of Columbia area.

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Course Content	***Introduction to IT*** • What a computer does • Categories of computers • Peripheral devices • Interacting with computers ***Processing Hardware*** • CPU • Memory • Input/output hardware • Storage hardware ***System Software*** • Mainframe operating systems • PC operating systems ***Application Software*** • Mainframe application software • PC application software ***Communications Technology*** • Communication signals • Bandwidth • Transmission speed • Signal detection • Protocols • Synchronous and asynchronous protocols • Communications links • Communications systems • LAN/WAN **Web *Systems Development Process*** • Systems analysis • Project teams • Defining the problem • Determining system requirements • Identifying potential solutions • Off-the-shelf • In-house application development • Creating applications • Testing applications • Acceptance testing • Maintain the system

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Course Content, continued	***Introduction to Analysis*** • Structured Analysis • Object Oriented Analysis and Design ***Introduction to Programming*** • Computer programs • The problem statement • Algorithms • Expressing an algorithm • Program sequence • Program constructs • Testing programs • Program documentation ***Programming Languages*** • Procedural • Declarative • Scripting languages • Low-level • High-level • Compiled • Interpreted ***Files and Databases*** • Fields • Data types • Records ***Data Models and Data Bases*** • Entity relationship • Flat databases • Hierarchical databases • Networked database • Relational databases • Object oriented databases • Designing the file structure ***Boolean Logic*** • Set theory • Boolean queries • SQL queries

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Course Content, continued	***Ethics, Privacy, And Security*** • Viruses • Vandalism • Computer crime • Data security ***Trends*** • Trends in hardware • Trends in programming