

**Central Carolina Community College**  
**Program Planning Guide**  
**Computer Information Technology**  
**Credential: Diploma in Computer Information Technology (D25260)**

The Computer Information Technology (CIT) curriculum is designed to prepare graduates for employment with organizations that use computers to process, manage, and communicate information. This is a flexible curriculum that can be customized to meet community information systems needs.

Coursework will develop a student's ability to communicate complex technical issues related to computer hardware, software, and networks in a manner that computer users can understand. Classes cover computer operations and terminology, operating systems, database, networking, security, and technical support. Graduates should qualify for employment in entry-level positions with businesses, educational systems, and governmental agencies which rely on computer systems to manage information. Graduates should be prepared to sit for industry-recognized certification exams.

Program Length: 3 semesters

Career Pathway Options: Specialized Tracks of Study include: Database Programming, Network Technologist, Software Specialist, and Web Development

Program Sites: Lee Campus - Day Program

Suggested Course Schedule:	HOURS			Grade	Semester	Notes
	Class	Lab	Credit			
1st Semester (Fall)						
ENG 111	Expository Writing	3	0	3		
ENG 111A	Expository Writing Lab	0	2	1		
CTS 115	Information Sys. Business Concepts	3	0	3		
CIS 110	Introduction to Computers	2	2	3		
NOS 110	Operating System Concepts	2	3	3		
		10	7	13		
2nd Semester (Spring)						
MAT 140	Survey of Mathematics	3	0	3		
DBA 110	Database Concepts	2	3	3		
CIS 115	Intro to Programming & Logic	2	3	3		
NOS 130	Windows Single User	2	2	3		
NET 110	Networking Concepts	2	2	3		
CTS 120	Hardware/Software Support	2	3	3		
		13	13	18		
3rd Semester (Fall)						
CTS 285	Systems Analysis & Design	3	0	3		
NOS 230	Windows Administration I	2	2	3		
		5	2	6		

Total Semester Hours Credit: 37

**Computer Information Technology Course Descriptions:**

**CIS 110 Introduction to Computers 2-2-3**

This course introduces computer concepts, including fundamental functions and operations of the computer. Topics include identification of hardware components, basic computer operations, security issues, and use of software applications. Upon completion, students should be able to demonstrate an understanding of the role and function of computers and use the computer to solve problems. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

**CIS 115 Introduction to Programming and Logic 2-3-3**

*Prerequisite: MAT 070, MAT 080, MAT 090, MAT 095, MAT 120, MAT 121, MAT 161, MAT 171, or MAT 175*

This course introduces computer programming and problem solving in a structured program logic environment. Topics include language syntax, data types, program organization, problem solving methods, algorithm design, and logic control structures. Upon completion, students should be able to manage files with operating system commands, use top-down algorithm design, and implement algorithmic solutions in a programming language. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

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**CTS 115 Information Systems Business Concept 3-0-3**

The course introduces the role of IT in managing business processes and the need for business process and IT alignment. Emphasis is placed on industry need for understanding business challenges and developing/managing information systems to contribute to the decision making process based on these challenges. Upon completion, students should be able to demonstrate knowledge of the 'hybrid business manager' and the potential offered by new technology and systems. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

**CTS 120 Hardware/Software Support 2-3-3**

*Prerequisite: CIS 110 or CIS 111*

This course covers the basic hardware of a personal computer, including installation, operations and interactions with software. Topics include component identification, memory-system, peripheral installation and configuration, preventive maintenance, hardware diagnostics/repair, installation and optimization of system software, commercial programs, system configuration, and device-drivers. Upon completion, students should be able to select appropriate computer equipment and software, upgrade/maintain existing equipment and software, and troubleshoot/repair non-functioning personal computers.

**CTS 285 Systems Analysis and Design 3-0-3**

*Prerequisite: CIS 115*

This course introduces established and evolving methodologies for the analysis, design, and development of an information system. Emphasis is placed on system characteristics, managing projects, prototyping, CASE/OOM tools, and systems development life cycle phases. Upon completion, students should be able to analyze a problem and design an appropriate solution using a combination of tools and techniques.

**CTS 287 Emerging Technologies 3-0-3**

This course introduces emerging information technologies. Emphasis is placed on evolving technologies and trends in business and industry. Upon completion, students should be able to articulate an understanding of the current trends and issues in emerging technologies for information systems.

**CTS 289 System Support Project 1-4-3**

*Prerequisite: CTS 285*

This course provides an opportunity to complete a significant support project with minimal instructor assistance. Emphasis is placed on written and oral communication skills, project definition, documentation, installation, testing, presentation, and user training. Upon completion, students should be able to complete a project from the definition phase through implementation.

**DBA 110 Database Concepts 2-3-3**

This course introduces database design and creation using a DBMS product. Emphasis is placed on data dictionaries, normalization, data integrity, data modeling, and creation of

simple tables, queries, reports, and forms. Upon completion, students should be able to design and implement normalized database structures by creating simple database tables, queries, reports, and forms.

**DBA 120 Database Programming I 2-2-3**

This course is designed to develop SQL programming proficiency. Emphasis is placed on data definition, data manipulation, and data control statements as well as on report generation. Upon completion, students should be able to write programs that create, update, and produce reports.

**ENG 111 Expository Writing 3-0-3**

*Prerequisites: Take one set: RED 090 and ENG 090, ENG 095, or appropriate placement test scores.*

*Corequisites: ENG 111A*

This course is the required first course in a series of two designed to develop the ability to produce clear expository prose. Emphasis is placed on the writing process including audience analysis, topic selection, thesis support and development, editing, and revision. Upon completion, students should be able to produce unified, coherent, well-developed essays using standard written English. This course has been approved for transfer under the CAA and ICAA as a general education course in English Composition.

**ENG 111A Expository Writing Laboratory 0-2-1**

*Prerequisites: Take one set: RED 090 and ENG 090, ENG 095, or appropriate placement test scores.*

*Corequisites: ENG 111*

This writing laboratory is designed to apply the skills introduced in ENG 111. Emphasis is placed on the editing and revision components of the writing process. Upon completion, students should be able to apply those skills in the production of final drafts in ENG 111. The computer is used as a writing and design tool for this course.

**MAT 140 Survey of Mathematics 3-0-3**

*Prerequisite: Take one set: MAT 060 and MAT 070, MAT 060 and MAT 080, MAT 060 and MAT 090, MAT 095, MAT 120, MAT 121, MAT 161, MAT 171, MAT 175, or appropriate placement test scores.*

This course provides an introduction in a non-technical setting to selected topics in mathematics. Topics may include, but are not limited to, sets, logic, probability, statistics, matrices, mathematical systems, geometry, topology, mathematics of finance, and modeling. Upon completion, students should be able to understand a variety of mathematical applications, think logically, and be able to work collaboratively and independently. Under the CAA and ICAA, this course satisfies the general education Mathematics requirement for the AA and AFA degrees. It does not satisfy the general education Mathematics requirement for the AS degree.

