Program Planning Guide

Information Technology-Business Systems & Operations Support Diploma (D25590)

Program Length: 3 semesters
Program Sites: Lee Main Campus - Day Program with some evening courses available
Career Pathway Options: Associate in Applied Science Degree in Information Technology-Business Systems & Operations Support; Diploma in Information Technology-Business Systems & Operations Support

Suggested Course Schedule		Class	Lab	Work	Credits	Notes:
1st Semester (fall)						
ACA 122	College Transfer Success	0	2	0	1	
CTI 110	Web. Pgm, & Db Foundation	2	2	0	3	
CTI 120	Network & SEC Foundation	2	2	0	3	
CTS 115	Info Sys Business Concepts	3	0	0	3	
CTS 120	Hardware/Software Support	2	3	0	3	
NOS 130	Windows Single User	2	2	0	3	
ENG 111	Writing & Inquiry	3	0	0	3	
	Total Semester Hours	**14**	**11**	**0**	**19**	
2nd Semester (spring)						
CIS 115	Intro to Prog & Logic	2	3	0	3	
CSC 113	Artificial Intelligence Fundamentals	2	2	0	3	
DBA 110	Database Concepts	2	3	0	3	
WEB 115	Web Markup & Scripting	2	3	0	3	
Mathematics requirement, select one:						
MAT 143	Quantitative Literacy	2	2	0	3	
MAT 171	Precalculus Algebra	3	2	0	4	
	Total Semester Hours	**10/11**	**13**	**0**	**15/16**	
3rd Semester (summer)						
NOS 230	Windows Administration I	2	2	0	3	

Effective Term: 2023Fall

SEC 110	Security Concepts	2	2	0	3	
Programming Elective, select one:						
CSC 134	C++ Programming	2	3	0	3	
CSC 139	Visual BASIC Programming	2	3	0	3	
CSC 151	JAVA Programming	2	3	0	3	
	Total Semester Hours	**6**	**7**	**0**	**9**	
Total Semester Hours Credit required for Graduation: 33/34						

Course Descriptions

ACA 122   College Transfer Success
This course provides information and strategies necessary to develop clear academic and professional goals beyond the community college experience. Topics include the CAA, college policies and culture, career exploration, gathering information on senior institutions, strategic planning, critical thinking, and communications skills for a successful academic transition. Upon completion, students should be able to develop an academic plan to transition successfully to senior institutions. This course has been approved for transfer under the CAA/ICAA as a premajor and/or elective course requirement.

CIS 115 Introduction to Programming and Logic
Prerequisites: MAT-003 P3 grade
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 general education course in Mathematics.

CSC 113   Artificial Intel. Fundamentals
This course provides a survey of artificial intelligence and machine learning. Topics include the history, development, and current applications of artificial intelligence and machine learning. Demonstrate general artificial intelligence and machine learning concepts.

CSC 134   C++ Programming
This course introduces computer programming using the C++ programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test and debug at a beginning level. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

CSC 139   Visual BASIC Programming
This course introduces computer programming using the Visual BASIC programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test and debug at a beginning level. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

CTI 110   Web, Pgm, & Db Foundation
This course covers the introduction of the tools and resources available to students in programming, mark-up language and services on the Internet. Topics include standard mark-up language Internet services, creating web pages, using search engines, file transfer programs; and database design and creation with DBMS products. Upon completion students should be able to demonstrate knowledge of programming tools, deploy a web-site with mark-up tools, and create a simple database table.
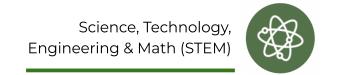
CTI 120   Network & Sec Foundation
This course introduces students to the Network concepts, including networking terminology and protocols, local and wide area networks, and network standards. Emphasis is placed on securing information systems and the various implementation policies. Upon completion, students should be able to perform basic tasks related to networking mathematics, terminology, media and protocols.

CTS 115   Information Systems Business Concept
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.

Science, Technology, Engineering & Math (STEM)

CTS 120   Hardware/Software Support
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.

DBA 110   Database Concepts
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.

ENG 111   Writing and Inquiry
Prerequisite: Take one set: Set 1: DRE 097; Set 2: ENG 002; Set 3: BSP 4002
Corequisite: Take ENG 011
This course is designed to develop the ability to produce clear writing in a variety of genres and formats using a recursive process. Emphasis includes inquiry, analysis, effective use of rhetorical strategies, thesis development, audience awareness, 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/ICAA as a general education course in English Composition.

MAT 143   Quantitative Literacy
Prerequisite: Take one set: Set 1: DMA 010, DMA 020, DMA 030, and DRE 098; Set 2: DMA 010, DMA 020, DMA 030, and ENG 002; Set 3: DMA 010, DMA 020, DMA 030, and BSP 4002; Set 4: DMA 025 and DRE 098; Set 5: DMA 025 and ENG 002; Set 6: DMA 025 and BSP 4002; Set 7: MAT 003 and DRE 098; Set 8: MAT 003 and ENG 002; Set 9: MAT 003 and BSP 4002; Set 10: BSP 4003 and DRE 098; Set 11: BSP 4003 and ENG 002; Set 12: BSP 4003 and BSP 4002
Corequisite: Take MAT 043
This course is designed to engage students in complex and realistic situations involving the mathematical phenomena of quantity, change and relationship, and uncertainty through project- and activity-based assessment. Emphasis is placed on authentic contexts which will introduce the concepts of numeracy, proportional reasoning, dimensional analysis, rates of growth, personal finance, consumer statistics, practical probabilities, and mathematics for citizenship. Upon completion, students should be able to utilize quantitative information as consumers and to make personal, professional, and civic decisions by decoding, interpreting, using, and communicating quantitative information found in modern media and encountered in everyday life. This course has been approved for transfer under the CAA/ICAA as a general education course in Mathematics (Quantitative).

MAT 171   Precalculus Algebra
Prerequisites: Take one set: Set 1: DMA 010, DMA 020, DMA 030, DMA 040, DMA 050; Set 2: DMA 010, DMA 020, DMA 030, DMA045; Set 3: DMA 025, DMA 045; Set 4: DMA 025, DMA 040, DMA 050; Set 5: MAT 121; Set 6: MAT 003; Set 7: BSP 4003
Corequisite: Take MAT 071
This course is designed to develop topics which are fundamental to the study of Calculus. Emphasis is placed on solving equations and inequalities, solving systems of equations and inequalities, and analysis of functions (absolute value, radical, polynomial, rational, exponential, and logarithmic) in multiple representations. Upon completion, students should be able to select and use appropriate models and techniques for finding solutions to algebra-related problems with and without technology. This course has been approved for transfer under the CAA/ICAA as a general education course in Mathematics.

NOS 130   Windows Single User
This course introduces operating system concepts for single-user systems. Topics include hardware management, file and memory management, system configuration/ optimization, and utilities. Upon completion, students should be able to perform operating systems functions at the support level in a single-user environment.

NOS 230   Windows Administration I
This course covers the installation and configuration of a Windows Server operating system. Emphasis is placed on the basic configuration of core network services, Active Directory and group policies. Upon completion, students should be able to install and configure a Windows Server operating system.

Science, Technology,
Engineering & Math (STEM)

SEC 110   Security Concepts
This course introduces the concepts and issues related to securing information systems and the development of policies to implement information security controls. Topics include the historical view of networking and security, security issues, trends, security resources, and the role of policy, people, and processes in information security. Upon completion, students should be able to identify information security risks, create an information security policy, and identify processes to implement and enforce policy.

WEB 115   Web Markup and Scripting
This course introduces Worldwide Web Consortium (W3C) Internet programming using JavaScript. Topics include basic syntax, object-oriented programming, functions, variables, events, arrays, validation, accessibility, and web standards. Upon completion, students should be able to write, debug, maintain well-formed and well documented interactive web content using JavaScript code.