

**COMPUTER INFORMATION SYSTEMS
C++/JAVA ADVANCED PROGRAMMING (CJC)
(HEGIS 5101)
(Applied Academic Certificate)**

This certificate will provide the student with advanced programming techniques in HTML, C, C++, JAVA and Visual Basic. The student will design and code programs using advanced data structures with an emphasis on the development of web-based programs. Students continuing into a two-year degree program are advised to consult the requirements for either the CIS or BUS Applied Science degree programs. Students must have a programming background prior to enrolling in this certificate. Students must be proficient in C programming prior to enrolling in this certificate.

A Certificate is awarded upon completion of the requirements for this program.

Courses should be selected in consultation with an advisor.

<u>Course No.</u>	<u>Descriptive Title</u>	<u>Cr.Hrs.</u>
FIRST SEMESTER		
ENG 101	Composition I	3
CIS 100	CIS Introductory Seminar	1
CIS 215	Internet Programming Using JAVA	3
CIS 113	Visual Basic Programming	3
CIS 107	Conducting Business on the Internet	3
CIS 160	Career Seminar, Career Exploration (a)	<u>2</u>
	TOTAL	15
SECOND SEMESTER		
CIS 126	UNIX/LINUX	3
CIS 214	C++ Object Oriented Programming	3
CIS 235	Advanced JAVA Programming	3
CIS 161	Career Seminar, Career Advancement (a)	2
Elective (b)		3
CIS 133 or CIS 228	Advanced Visual Basic Web Administration	<u>3</u>
	TOTAL	17
	TOTAL CREDIT HOURS	32

a. The cooperative education experience requires 10 hours per week of related work experience.

b. Students must select courses from ACC, BUS, CIS, MAT, or BUS 103.

**COMPUTER INFORMATION SYSTEMS
COMPUTER NETWORKING (CNC)
(HEGIS 5101)
(Applied Academic Certificate)**

This certificate will provide the students with the necessary skills to design and manage a local area network. Upon completion of the certificate, the student, in addition to acquiring an understanding of the basic data communication concepts, will be proficient in the basic skills to manage networks. Students completing the certificate may pursue careers in network support and administration. Students continuing into two-year degree program are advised to consult the requirements for either the CIS, INM or BUS Applied Science degree programs. Prior to entry into the program the student should have a basic computer literacy.

A Certificate is awarded upon completion of the requirements for this program.

Courses should be selected in consultation with an advisor.

<u>Course No.</u>	<u>Descriptive Title</u>	<u>Cr.Hrs.</u>
FIRST SEMESTER		
CIS 100	CIS Introductory Seminar	1
CIS 111	Computer Systems and Applications	3
CIS 117	Data Communication Concepts	3
CIS 126	UNIX/LINUX	3
CIS 216	Windows Server	3
CIS 160	Career Seminar, Career Exploration (a)	<u>2</u>
	TOTAL	15
SECOND SEMESTER		
ENG 101	Composition I	3
CIS 218	Routing and Switching Technology	3
CIS 107 or CIS 108	Conducting Business on the Internet or Conducting Research on the Internet	3
CIS 217 or CIS 226	Advanced Server Advanced Linx	3
or CIS 150	Information Management Security	
CIS 161	Career Seminar, Career Advancement (a)	2
Elective (b)		<u>3</u>
	TOTAL	17
	TOTAL CREDIT HOURS	32

a. The cooperative education experience requires 10 hours per week of related work experience.

b. Students must select courses from: ACC, BUS, CIS, MAT. Students wishing to become familiar with computer programming are encouraged to register for CIS 113.