

Business and Information Technology Division
Computer Programming (A25130)
Associate of Applied Science Degree

COURSE NO.	COURSE TITLE	HOURS	HUMANITIES ELECTIVES	SOCIAL SCIENCE ELECTIVES	SOCIAL SCIENCE ELECTIVES continued
<i>Fall</i>			ART 111 Art Appreciation 📖 📚 📖	ANT 210 General Anthropology 📖 📚	POL 220 International Relations 📖 📚
CIS 110	Intro to Computers 📖 📚	3	ART 114 Art History Survey I 📖 📚 📖	ANT 220 Cultural Anthropology 📖 📚 📖	PSY 150 General Psychology 📖 📚 📖
CIS 115	Intro to Programming & Logic 📖 📚 📖 📚	3	ART 115 Art History Survey II 📖 📚 📖	ANT 221 Comparative Cultures 📚	SOC 210 Intro to Sociology 📖 📚 📖
ENG 111	Expository Writing 📖 📚 📖 📚	3	ART 116 Survey of American Art 📖 📚 📖	ANT 230 Physical Anthropology 📚	SOC 213 Sociology of the Family 📖 📚 📖
MAT 161	College Algebra 📖 📚 📖 📚	3	ART 117 Non-Western Art History 📖 📚	ANT 240 Archaeology 📚	SOC 220 Social Problems 📖 📚
MAT 161A	College Algebra Lab 📖 📚 📖 📚	1	ENG 131 Intro to Literature 📖 📚 📖	ECO 151 Survey of Economics 📚	SOC 225 Social Diversity 📖 📚
NOS 110	Operating Systems Concepts 📖	3	ENG 231 American Literature I 📖 📚	ECO 251 Prin of Microeconomics 📖 📚	SOC 230 Race and Ethnic Relations 📖 📚
<i>Spring</i>			ENG 232 American Literature II 📖 📚	ECO 252 Prin of Macroeconomics 📖 📚	SOC 240 Social Psychology 📖 📚
CSC 139	Visual Basic Programming 📖 📚 📖 📚	3	ENG 241 British Literature I 📖 📚	GEO 111 World Geography 📖 📚 📖	
CSC 141	Visual C++ Programming 📖 📚 📖	3	ENG 242 British Literature II 📖 📚	GEO 112 Cultural Geography 📖 📚	
DBA 110	Database Concepts 📖	3	ENG 273 African-American Literature 📖 📚	GEO 130 Physical Geography 📚	
NOS 130	Windows Single User	3	HUM 110 Technology and Society 📖 📚	GEO 131 Physical Geography I 📖 📚	
WEB 110	Internet/Web Fundamentals 📖	3	HUM 160 Intro to Film 📚	GEO 132 Physical Geography II 📚	
<i>Summer</i>			MUS 110 Music Appreciation 📖 📚	HIS 111 World Civilizations I 📖 📚 📖	
CTS 285	Systems Analysis & Design 📖 📚	3	MUS 112 Intro To Jazz 📚	HIS 112 World Civilizations II 📖 📚 📖	
DBA 115	Database Applications 📖 📚	3	MUS 113 American Music 📚	HIS 114 Comparative World History 📖 📚	
ENG 114 OR	Prof Research & Reporting OR	3	MUS 210 History of Rock Music 📚	HIS 116 Current World Problems 📖 📚	
ENG 112 OR	Argument-Based Research OR		PHI 210 History of Philosophy 📖 📚 📖	HIS 121 Western Civilization I 📖 📚	
ENG 113	Literature-Based Research 📖 📚 📖		PHI 215 Philosophical Issues	HIS 122 Western Civilization II 📖 📚	
Elective	Social Science Elective	3	PHI 220 Western Philosophy I 📖 📚 📖	HIS 131 American History I 📖 📚	CSC Programming Elective
<i>Fall</i>			PHI 221 Western Philosophy II 📖 📚 📖	HIS 132 American History II 📖 📚	CSC 151 JAVA Programming 📖 📚
CSC 239	Adv Visual Basic Programming 📖 📚 📖	3	PHI 230 Introduction to Logic 📖 📚 📖	HIS 162 Women and History 📖 📚	CSC 153 C# Programming 📖 📚
CSC 241	Adv Visual C++ Programming 📖 📚 📖	3	PHI 240 Intro to Ethics 📖 📚	HIS 211 Ancient History 📖 📚	CSC 251 Adv JAVA Programming 📖 📚 📖
CTS 115	Info Systems Business Concepts 📖	3	REL 110 World Religion 📖 📚	HIS 212 Medieval History 📖 📚	CSC 253 Adv C# Programming 📖 📚 📖
Elective	CSC Programming Elective	3	REL 111 Eastern Religion 📖 📚	HIS 213 Modern Europe to 1815 📖 📚	
Elective	Humanities Elective	3	REL 112 Western Religion 📖 📚	HIS 214 Modern Europe Since 1815 📖 📚	
<i>Spring</i>			REL 211 Intro to Old Testament 📖 📚 📖	HIS 221 African-American History 📖 📚	
CSC 289	Programming Capstone Project 📖 📚 📖	3	REL 212 Intro to New Testament 📖 📚 📖	HIS 236 North Carolina History 📖 📚	
NET 110	Networking Concepts 📖	3	REL 221 Religion in America 📖 📚	POL 110 Intro Political Science 📖 📚	
SEC 110	Security Concepts 📖	3		POL 120 American Government 📖 📚	
Elective	CSC Programming Elective	3		POL 130 State & Local Government 📖 📚	
CTS 287 OR	Emerging Technologies 📖 OR	3		POL 210 Comparative Government 📖 📚	📖 Course available online
COE (xxx)	(contact co-op office for information)				
			Note: Major course credits earned over five years ago will not apply toward this degree.		📖 Articulated course
					📖 Prerequisite required
Total Program Hours		73			

Gaston College Computer Programming

The Computer Programming curriculum prepares individuals for employment as computer programmers and related positions through study and applications in computer concepts, logic, programming procedures, languages, generators, operating systems, networking, data management, and business operations. Students will solve business computer problems through programming techniques and procedures, using appropriate languages and software. The primary emphasis of the curriculum is hands-on training in programming and related computer areas that provide the ability to adapt as systems evolve. Graduates should qualify for employment in business, industry, and government organizations as programmers, programmer trainees, programmer/analysts, computer operators, systems technicians, or database specialists.

Occupational Outlook Handbook Information (www.bls.gov)

Education and training. Most programmers have a bachelor's degree, but a two-year degree or certificate may be adequate for some jobs. Some computer programmers hold a college degree in computer science, mathematics, or information systems, whereas others have taken special courses in computer programming to supplement their degree in a field such as accounting, finance, or another area of business. Employers who use computers for scientific or engineering applications usually prefer college graduates who have a degree in computer or information science, mathematics, engineering, or the physical sciences. Employers who use computers for business applications prefer to hire people who have had college courses in management information systems and business, and who possess strong programming skills.

Employers highly value relevant programming skills, as well as experience. Although knowledge of traditional programming languages is still important, employers are placing an emphasis on newer, object-oriented languages and tools such as C++ and Java. Additionally, employers seek people familiar with fourth- and fifth-generation languages that involve graphic user interface and systems programming. College graduates who are interested in changing careers or developing an area of expertise may return to a two-year community college or technical school for specialized training.

Other qualifications. When hiring programmers, employers look for people with the necessary programming skills who can think logically and pay close attention to detail. Programming calls for patience, persistence, and the ability to perform exacting analytical work, especially under pressure. Ingenuity and creativity are particularly important when programmers design solutions and test their work for potential failures. The ability to work with abstract concepts and to do technical analysis is especially important for systems programmers because they work with the software that controls the computer's operation.

Because programmers are expected to work in teams and interact directly with users, employers want programmers who are able to communicate with non-technical personnel. Business skills are also important, especially for those wishing to advance to managerial positions.

Student Success

"The valuable education I gained from the computer programming curriculum at Gaston College in the early 80's paved the way for a successful IT professional career today. By serving as an IT advisory board member now, I am able to give back to the school while also interacting with the instructors and helping build a strong information technology program."

Larry Bumgardner
IT Project Leader, FMC Lithium

Gaston College Graduates

Gaston College Computer Programming graduates have obtained employment with local employers including: Dole, Gaston College, PSNC Energy, City of Gastonia and Duke Energy.

Contact Information

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