

Computer Information Systems Technology

Available: Shoals Campus

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Northwest-Shoals Community College offers AAS Degrees in Computer Information Systems that prepare the graduate to go right to work upon graduation. The options are: Cyber Security and Software Development. These options emphasize different areas of information technology, but both include experience in several programming languages and office applications. The CIS curriculum is updated upon recommendations of business/ industry representatives.

Graduates of both options will have utilized the Test-Out system to practice on virtual computer hardware from anywhere as well as a physical lab on campus for hands-on computer hardware and software experience. All graduates have advanced knowledge and experience with Microsoft Office.

Graduates of the Cyber Security Option have the skills to repair and rebuild computer hardware, set up and configure computer systems and networks, and secure networks and infrastructure against threats, including mitigating the effects of a security breach. The Security portion of this degree incorporates computer and infrastructure security, so graduates are trained in ethical hacker techniques, including those against hardware devices like Programming Logic Controllers (PLCs), which are utilized in Industrial Control Systems.

Graduates of the Software Development Option have experience developing software for the Microsoft Windows platform, the Android and Apple mobile platforms, the web, and the IBM Power System. The Swift programming language is used for Apple App development. A Mac lab has been established on campus so that students can write the Apple Swift programs. The lab includes iPods and mini iPads for testing purposes. Students also have access to their own virtual IBM Power System that they can access from anywhere courtesy of the IBM Academic Initiative. Students taking this option are also exposed to networking and maintenance techniques. Graduates are trained via Net Lab to practice ethical hacking techniques.

Entering students are required to complete ORI 107. Transfer students are exempt from this requirement.

NOTE:

Keyboarding skills are essential for the successful completion of ENG 101 and CIS classes.

Program: Computer Information Systems Technology

Type: Associate in Applied Science

Cyber Security Option: Area I: Written Composition

Item #	Title	Credits
ENG 101	English Composition I	3

Cyber Security Option: Area II: Humanities and Fine Arts

Item #	Title	Credits
	CIS Area II Elective	3

Cyber Security Option: Area III: Natural Sciences and Mathematics

Choose one natural science course from:

Biological Science, Chemistry, Environmental Science, Physics, or Physical Science

Item #	Title	Credits
MTH 116	Mathematical Applications	3

Cyber Security Option: Area IV: History, Social and Behavioral Science

Item #	Title	Credits
	CIS Area IV Elective	-3

Cyber Security Option: Area V: Technical Concentration and Electives

Item #	Title	Credits
CIS 146	Microcomputer Applications	3
CIS 147	Advanced Microcomputer Applications	3
CIS 148	Post Advanced Microcomputer Applications	3
CIS 157	Introduction to App Development with Swift	3
CIS 199	Network Communications	3
CIS 202	Python Programming	3
CIS 205	Control Language and Utilities Applications	3
CIS 207	Introduction to Web Development	3
CIS 209	Advanced Web Development	3
CIS 214	Security Analysis (PEN Testing)	3
CIS 220	App Development with Swift	3
CIS 227	App Development with Swift II	3
CIS 245	Cyber Defense	3
CIS 246	Ethical Hacking	3
CIS 249	Microcomputer Operating Systems	3
CIS 251	C++ Programming	3
CIS 255	Java Programming	3
CIS 263	Computer Maintenance	3
CIS 280	Network Security	3
CIS 297	Co-Op for Cis II	3

Software Development Option: Area I: Written Composition

Item #	Title	Credits
ENG 101	English Composition I	3

Software Development Option: Area II: Humanities and Fine Arts

Item #	Title	Credits
	CIS Area II Elective	3

Software Development Option: Area III: Natural Sciences and Mathematics

Choose one Natural Science Course from:

Biological Science, Chemistry, Environmental Science, Physics, or Physical Science

Item #	Title	Credits
MTH 100	Intermediate College Algebra	3

Software Development Option: Area IV: History, Social and Behavioral Science

Item #	Title	Credits
	CIS Area IV Elective	-3

Software Development Option: Area V: Technical Concentration and Electives

Item #	Title	Credits
CIS 146	Microcomputer Applications	3
CIS 147	Advanced Microcomputer Applications	3
CIS 148	Post Advanced Microcomputer Applications	3
CIS 155	Introduction to Mobile App Development	3
CIS 157	Introduction to App Development with Swift	3
CIS 199	Network Communications	3
CIS 202	Python Programming	3
CIS 205	Control Language and Utilities Applications	3
CIS 207	Introduction to Web Development	3
CIS 209	Advanced Web Development	3
CIS 220	App Development with Swift	3
CIS 227	App Development with Swift II	3
CIS 245	Cyber Defense	3
CIS 249	Microcomputer Operating Systems	3
CIS 251	C++ Programming	3
CIS 255	Java Programming	3
CIS 263	Computer Maintenance	3
CIS 280	Network Security	3
CIS 297	Co-Op for Cis II	3
	Total credits:	73-76

Course Sequencing