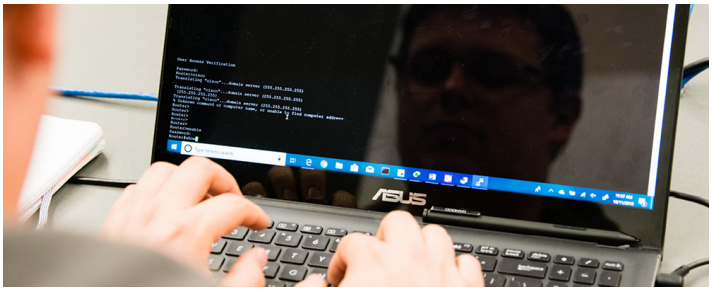
INFORMATION TECHNOLOGY - PROGRAMMING AND DEVELOPMENT, ASSOCIATE OF APPLIED BUSINESS



Programmers, developers and software engineers design and develop many types of software, including computer games, business applications, operating systems, network control systems, and middleware. Students develop competencies in designing, implementing, integrating and maintaining software systems (including mainframes, websites, etc) using a variety of languages and technologies. Skills acquired will assist students in preparing to take industry positions including, but not limited to, customer support, testing, programming and product development.

Skills acquired prepare students to take industry certification.

This program is available to be completed 100% online.

Program contact: Learn more

Learn more about how certificate credits apply to the related degree and about related training programs.

Related Degrees and Certificates

- Mobile Application Development, Short-Term Certificate
- Web Application Development, Short-Term Certificate
- .NET Programming, Post-Degree Professional Certificate
- Information Technology, Programming and Development, Post-Degree Professional Certificate

Related Training and Credentials

- Cleveland Codes Tri-C Software Developers Academy

Program Admission Requirements

- High School Diploma/GED not required, but highly recommended
- ENG-0995 Applied College Literacies or appropriate score on English Placement Test.

Other Information

- Non-degree students may enroll for individual courses, providing they meet the course-specific prerequisites.

Program Learning Outcomes

This program is designed to prepare students to demonstrate the following learning outcomes:

a. Communicate effectively utilizing verbal, written, and presentation skills to interview and educate stakeholders.
b. Operate in a diverse team environment with professionalism, integrity, and accountability.
c. Explain and implement technologies that are impacted by legal and ethical issues.
d. Plan, organize and prioritize tasks in order to meet project deadlines.
e. Adapt to change within their profession by demonstrating a commitment to continuous research and learning.
f. Apply knowledge of organizational structures, models, processes, procedures, rules and distribution of power and authority in order to function as an effective IT resource that meets organizational goals.
g. Apply knowledge of programming, website maintenance, operating systems, networking and security to install, configure, troubleshoot and provide ongoing support and maintenance for technology related organizational systems.
h. Apply knowledge of programming (application, web, data and security) at the enterprise level. Use industry standards, guidelines and appropriate tools to gather requirements, develop, test and quality assure organizational information technology business systems (new and existing).
i. Work as part of a development team using industry standards and guidelines.

Suggested Semester Sequence

First Semester		Credit Hours
BADM-1020	Introduction to Business	3
IT-1025	Information Technology Concepts for Programmers	3
IT-1050	Programming Logic	3
Select one of the following:		3
ENG-1010	College Composition I	
ENG-101H	Honors College Composition I	
Select one of the following:		3
COMM-1010	Fundamentals of Speech Communication	
COMM-101H	Honors Speech Communication	
	Credit Hours	**15**
Second Semester		
IT-2310	Web Programming	3
IT-2650	Java Programming	4
IT-2700	Systems Analysis and Design	3
MATH-1xxx	1000-level MATH course or higher	3
Select one of the following:		3
BADM-2010	Business Communications	
BADM-201H	Honors Business Communications	
	Credit Hours	**16**
Summer Session		
Select one of the following:		1-3
IT-2830	Cooperative Field Experience	

ITNT-2300	Networking Fundamentals [1]	
	Credit Hours	**1-3**
Third Semester		
IT-2320	Interactive Internet Programming	4
IT-2351	Enterprise Database Systems	4
IT-2660	Data Structures & Algorithms	4
Social and Behavioral Science/Natural Science (See requirements)		3
	Credit Hours	**15**
Fourth Semester		
IT-2030	ASP.NET Web Programming	4
ITXX-xxxx	Programming Elective	3-4
Select one of the following:		3
PHIL-2020	Ethics	
PHIL-202H	Honors Ethics	
Select one of the following:		3
BADM-1301	Small Business Management (Small Business Management)	
ACCT-1311	Financial Accounting (Financial Accounting)	
	Credit Hours	**13-14**
	Total Credit Hours	**60-63**

[1] Course cannot be used for both a requirement and an elective. ITNT-2300 can only be used to meet an elective requirement for students who successfully complete IT-2830.

Programming Electives

Select from the following courses to fulfill the programming elective requirement. Courses cannot be used for both a requirement and elective (in the case of an "or" selection above):

Code	Title	Credit Hours
IT-2070	Introduction to Data Science and Analytics	3
IT-2080	Data Visualization	4
IT-2090	Data Analytics Programming	4
IT-2100	iOS Application Programming	4
IT-2110	Android Mobile Application Development	3
ITNT-2300	Networking Fundamentals	3
IT-2600	E-Business Programming Technologies	3
IT-2670	C/C++ Programming Language	4
IT-2680	Visual C# .NET	4
IT-2720	Ethical Hacking and Systems Defense	3
IT-2730	Intrusion Detection/Prevention Systems Fundamentals	3
IT-2740	Fundamentals of Client Operating Systems and Hardware for Cybersecurity	4
IT-2750	Scripting Fundamentals for Cybersecurity	3

MATH-1140, MATH-1141, MATH-1200, MATH-1270, and MATH-1280 can no longer count towards fulfilling the college-level mathematics requirement. These courses were re-classified as developmental mathematics by the state of Ohio in 2016. Tri-C established a 5-year transitioning window for students who had completed these courses prior to 2016 to apply them towards meeting graduation requirements, which expired in Summer 2021. It is highly recommended to see a counselor to determine the appropriate math required for your current major.