

LANSING COMMUNITY COLLEGE

Computer, Engineering/Manufacturing Industrial Technologies

**Curriculum Code: 0113
(Effective Fall 2018 –
Summer 2023)**

Computer Programmer/Analyst, A.B. Pathway

Programmer/analysts plan, develop, test, and document computer programs at the request of a specific user, applying knowledge of programming, project management, testing, and quality assurance techniques and computer systems. They may evaluate user requests to determine feasibility, cost, and time required, as well as compatibility with current system and computer capabilities. In addition, they read manuals, periodicals, and technical reports to develop programs that meet user requirements and to remain current with developments and standards in the information technology industry. They formulate a plan outlining steps required to develop programs and convert project specifications into program source instructions which are entered into the computer system and tested. They may write documentation and the user manual. Students completing this curriculum may also be eligible for a Certificate of Completion for Computer Programmer/Analyst (0969), Certificate of Achievement for Computer Software Tester (1633), and a Certificate of Achievement for Mobile Application Developer (1712). Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

For More Information

Contact the Computer Information Technologies Program in the West Campus Building, Room M103, telephone number (517) 267-6406 or Academic Advising Department, Gannon Building – StarZone, telephone number (517) 483-1904.

Semester I	Course Title	Prerequisites	Credit/Billing Hours
Math Core Area - <i>Select 1</i>			
MATH 119	Math - Applications for Living	(Minimum 2.0 in MATH 105 or MATH 106 or MATH 107 or Math Level 5) and Reading Level 5 and Writing Level 4	4 / 4
STAT 170	Introduction to Statistics	(Minimum 2.0 in MATH 105 or MATH 106 or above or Math Level 5) and Reading Level 5 and Writing Level 4	4 / 4

Program of Study Requirements			
CITF 110	Intro Computer Info Systems	Reading Level 4 and Writing Level 4	3 / 3
CITP 110	Intro to Programming-Python	Reading Level 5 and (Math Level 4 or minimum 2.0 in MATH 105 or MATH 106)	4 / 4
CITP 130	Intro to Mobile App Devel	Minimum 2.0 in (CITP 110 or CPSC 230 or concurrently) and Reading Level 5 and Writing Level 6 and (Math Level 4 or minimum 2.0 in MATH 105 or MATH 106)	3 / 3
CITW 150	Internet Literacy	Reading Level 5 and Writing Level 6	3 / 3
Credits			17 / 17
Semester II	Course Title	Prerequisites	Credit/Billing Hours
Writing Core Area - <i>Select 1</i>			
ENGL 121	Composition I	Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently)	4 / 4
Program of Study Requirements			
BUSN 118	Introduction to Business	Reading Level 5 or (Reading Level 4 and ENGL 099 concurrently) and Writing Level 4	3 / 3
CITD 120	SQL Concepts	Reading Level 4 and Writing Level 4	2 / 2
CITW 160	Web Development HTML & CSS	Reading Level 5 and Writing Level 6	3 / 3

Intro Programming Electives - <i>Select 1</i>			
CITP 150	Intro to VB.NET Programming	Minimum 2.0 in (CITP 110 or CPSC 230) and Reading Level 5 and Math Level 4	4 / 4
CITP 180	Intro to C#.NET Programming	Minimum 2.0 in (CITP 110 or CPSC 230) and Reading Level 5 and Math Level 4	4 / 4
CITP 230	Mobile App Devel for Android	Minimum 2.0 in CITP 130 and Reading Level 5 and Writing Level 6 and Math Level 4	4 / 4
CITP 235	Mobile App Devel for Apple	Minimum 2.0 in CITP 130 and Reading Level 5 and Writing Level 6 and Math Level 4	4 / 4
Credits			16 / 16
Semester III	Course Title	Prerequisites	Credit/Billing Hours
Communication Core Area - <i>Select 1</i>			
COMM 110	Oral Comm in the Workplace	Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently)	3 / 3
COMM 120	Dynamics of Communication	Reading Level 5 and Writing Level 6	3 / 3
COMM 130	Fund of Public Speaking	Reading Level 5 and Writing Level 6	3 / 3
Program of Study Requirements			
CITP 140	Software Testing	Minimum 2.0 in (CITP 110 or concurrently) and Reading Level 5 and (Math Level 4 or minimum 2.0 in MATH 105 or MATH 106)	3 / 3
CITP 190	Intro to Programming in JAVA	Minimum 2.0 in (CITP 110 or CPSC 230) and Reading Level 5 and Math Level 4	4 / 4

Computer Electives - <i>Select at least 1 course for a minimum of 3 credits</i> <i>Courses may not be duplicated.</i>			
CITF 140	Information Technology Ethics	Reading Level 5 and Writing Level 6	3 / 3
CITW 165	Web Development JavaScript	Minimum 2.0 in CITW 160 and Reading Level 5 and Writing Level 6	3 / 3
CITW 180	Web Development ASP.NET	Minimum 2.0 in (CITW 160 and (CITP 150 or CIP 180)) and Reading Level 5 and Writing Level 6 and Math Level 4	4 / 4
CITW 185	Web Development PHP & MySQL	Minimum 2.0 in (CITW 160 or ARTS 173 or concurrently) and Reading Level 5 and Writing Level 6	4 / 4
Credits			13-14 / 13-14
Semester IV	Course Title	Prerequisites	Credit/Billing Hours
Science Core Area - <i>Select 1</i>			
BIOL 120	Environmental Science	(Reading Level 5 or ENGL 099 concurrently) and Writing Level 6	4 / 6
CHEM 135	Chemistry in Society	Reading Level 5 and Writing Level 6 and (Math Level 4 or minimum 2.0 in MATH 105 or MATH 106)	4 / 5
PHYS 120	The Art of Physics	Reading Level 5 and Writing Level 6 and (Math Level 5 or MATH 107 concurrently or MATH 109 concurrently)	4 / 5
Global Perspectives and Diversity Core Area - <i>Select 1</i>			
GEOG 200	World Regional Geography	Reading Level 5 and Writing Level 6 and (Math Level 4 or minimum 2.0 in MATH 105 or MATH 106)	4 / 4
MGMT 234	Diversity in the Workplace	Reading Level 5 and Writing Level 6	3 / 3
SOCL 120	Introduction to Sociology	Reading Level 5 or (Reading Level 4 and ENGL 099 concurrently)	4 / 4

Program of Study Requirement			
CITF 260	Systems Analysis and Design	Minimum 2.0 in (CITF 110 and (CITP 110 or CITP 150)) and Reading Level 5 and Writing Level 6 and Math Level 4	4 / 4
Advanced Programming Electives - <i>Select 1</i> <i>Courses may not be duplicated.</i>			
CITP 230	Mobile App Devel for Android	Minimum 2.0 in CITP 130 and Reading Level 5 and Writing Level 6 and Math Level 4	4 / 4
CITP 235	Mobile App Devel for Apple	Minimum 2.0 in CITP 130 and Reading Level 5 and Writing Level 6 and Math Level 4	4 / 4
CITP 250	Advanced VB.NET Programming	Minimum 2.0 in CITP 150 and Reading Level 5 and Math Level 4	4 / 4
CITP 280	Advanced C#.NET Programming	Minimum 2.0 in CITP 180 and Reading Level 5 and Math Level 4	4 / 4
CITP 290	Adv JAVA Programming for Busn	Minimum 2.0 in (CITP 190 and (CITW 160 or concurrently)) and Reading Level 5 and Writing Level 6 and Math Level 4	4 / 4
Computer Electives - <i>Select at least 1 course for a minimum of 3 credits</i> <i>Courses may not be duplicated.</i>			
CITD 250	Database Concepts	Minimum 2.0 in (CITF 110 and (CITP 110 or CITP 150)) and Reading Level 5 and Writing Level 6	3 / 3
CITN 120	Networking Concepts	Reading Level 4 and Writing Level 4	3 / 3
CITP 220	Game Design & Development	Minimum 2.0 in CITP 180 and Reading Level 5 and Writing Level 6 and Math Level 4	2 / 4
CITP 295	Programming Internship	Department Approval	3 / 3
Credits			18-21 / 19-25
Total Credits			64-68 / 65-72