

	<u>High School Graduation Years 2021-2023</u>	
Unit Standard Number	Erie County Technical School Computer Programming CIP 11.0201 Task Grid	Proficiency Level Achieved: (X) Indicates Competency Achieved to Industry Proficiency Level
	NOCTI Task or Duty	
100	General Information and Concepts	
101	Apply general design and programming concepts	
102	Identify various hardware platforms and runtime environments	
103	Identify human aspects in information systems	
104	Identify general information technology (IT) definitions and terms	
105	Adhere to best programming practices and methodologies	
106	Exhibit understanding of data hierarchy, access methods, and manipulation	
200	Ethics, Legal Compliance, and Security	
201	Identify concepts of ethics and legal compliance	
202	Identify security concepts	
203	Identify appropriate safety procedures	
300	Analyze Programming Problems, Manage Projects, and Create Flowchart Solutions	
301	Analyze user requirements for a given outcome	
302	Determine input and output formats for a given code segment	
303	Identify and describe a data flow diagram	
304	Describe steps in the system development cycle	
305	Describe steps and roles in the project management life cycle	
306	Define key terminology related to computer programming	
307	Design Program Solutions	
308	Determine appropriate data types and requirements	

309	Determine where data is to be accessed or stored	
310	Design data storage and layout	
311	Apply principles of quality, efficient programming	
312	Explain the importance of a design review	
313	Assess impact of change on existing systems	
400	Code Programs	
401	Distinguish and identify different types of programming languages	
402	Determine the variables and data types for a program	
403	Prepare and code routines using structured logic	
404	Apply appropriate computer language syntax	
405	Create and identify unit testing requirements	
406	Document appropriate comments and programmer notes	
500	Test Programs	
501	Explain system testing requirements	
502	Design and analyze test plan for use in program testing	
503	Test programs and evaluate results for accuracy	
504	Correct programming errors discovered during testing	
505	Apply implementation plans for a new system	
600	Maintain Programs and Implement Change Management Procedures	
601	Change existing programs as requirements change	
602	Update documentation for changes made to existing programs	
603	Provide user instructions on changes made to existing programs	
700	Complete User Documentation and Technical Writing	
701	Develop documentation narrative	
702	Document data use and storage	
703	Develop help resources for users	