

U.S. Department of Labor Employment and Training Administration Office of Apprenticeship (OA) Washington, D.C. 20210	Distribution: A-541 Headquarters A-544 All Field Tech A-547 SD+RD+SAA+; Lab.Com	Subject: Revision to an Existing Apprenticeable Occupation: Computer Programmer <u>Code:</u> 200
Symbols: DSNIP/RCG	 ApprenticeshipUSA	Action: Immediate

PURPOSE: To inform the staff of OA, State Apprenticeship Agencies (SAA), Registered Apprenticeship program sponsors and other Registered Apprenticeship partners of a revision to an existing apprenticeable occupation:

Computer Programmer
 O*NET-SOC CODE: 15-1131.00
 RAPIDS CODE: 0811CB
 Type of Training: Competency-based

BACKGROUND: Michigan State Director, Mr. Russell Davis, on behalf of Ms. Chioke Mose-Telesford, Director of Admissions, Grand Circus Detroit submitted this revision for the occupation Computer Programmer. It was approved by the OA Administrator on June 2, 2015.

A Computer Programmer is a skilled technician who creates software and writes test cases that meet client requirements. Computer Programmers convert project specifications and statements of problems and procedures to detail logical flow charts for coding into computer language. Develop and write computer programs to store, locate, and retrieve specific documents, data, and information. May program websites.

Computer Programmer will be added to the list of occupations recognized as apprenticeable by OA when the list is reissued. A suggested Work Process Schedule and Related Instruction Outlines are attached.

ACTION: OA staff should familiarize themselves with this bulletin and the attached Work Process Schedule and Related Instruction Outline, as a source for developing apprenticeship standards and/or providing technical assistance.

If you have any questions, please contact Ricky C. Godbolt, Apprenticeship and Training Representative at (202) 693-3815.

NOTE: This bulletin is being sent via electronic mail.

Attachment

- Work Process Schedule

**WORK PROCESS SCHEDULE
COMPUTER PROGRAMMER
O*NET-SOC CODE: 15-1131.00 RAPIDS CODE: 0811CB**

Description: Convert project specifications and statements of problems and procedures to detail logical flow charts for coding into computer language. Develop and write computer programs to store, locate, and retrieve specific documents, data, and information. May program websites.

On-The-Job-Learning Outline: Apprentice will receive training in the various work experiences listed below. The order in which this training is given will be determined by the flow of work on the job and will not necessarily be in the order listed.

Competencies

A. Foundational

- The apprentice will adhere to the organization's rules, responsibilities, policies, and basic workplace ethics. The apprentice will demonstrate basic principles of interpersonal communication and knowledge of the organization's basic structure and functions. The apprentice will follow established safety procedures.
- The apprentice will be able to integrate organizational mission/goals and vision into work practices. The apprentice will use benchmarking and "best practices" to improve performance.
- The apprentice will be able to engage and utilize employee benefits and development programs.
- The apprentice will be able to identify and demonstrate knowledge of the appropriate common office tools used to produce documents, spreadsheets, and presentations.
- The apprentice will be able to develop or update work processes or procedures in accordance with the organization's standards.
- The apprentice will be able to prepare and deliver oral presentations that effectively convey information, concepts, and ideas.
- The apprentice will be able to prepare a complete, accurate, and convincing formal report, on a technical subject, using standard formats and office tools.
- The apprentice will be able to communicate effectively and develop effective communications techniques with others.
- The apprentice will participate as an effective member of a team and work collaboratively with team members.

B. Design Application

- The apprentice will be able to identify and demonstrate the organization's design principles used for application development.
- The apprentice will be able to identify and demonstrate the process to review and provide input for user documentation.
- The apprentice will be able to identify and demonstrate the process to integrate feedback and recommendations into product development.

C. Develop Application

- The apprentice will be able to identify coding languages and standards used by the organization.
- The apprentice will be able to identify and demonstrate the application development process including coding, documentation, and testing.
- The apprentice will be able to review an application's code as part of a peer group.
- The apprentice will be able to revise and adapt existing code to meet emerging requirements.

D. Test and Validate Applications

- The apprentice will be able to demonstrate the process for developing a test plan for an application, including unit testing and integration tasks.
- The apprentice will be able to perform validation testing on new applications.
- The apprentice will be able to demonstrate how to interpret test results and make recommendations.
- The apprentice will demonstrate knowledge of how to support user acceptance testing.

E. Implement, Support, and Maintain Applications

- The apprentice will be able to assist in the development of a release plan for an application.
- The apprentice will be able to transition an application to a new platform.
- The apprentice will be able to maintain and support applications.
- The apprentice will be able to evaluate, implement, and document application enhancements.
- The apprentice will be able to perform system maintenance for application security.
- The apprentice will be able to identify common security risks and threats.

**RELATED INSTRUCTION OUTLINE
COMPUTER PROGRAMMER
O*NET-SOC CODE: 15-1031.00 RAPIDS CODE: 0811CB**

The following related training outline identifies subject matter that must be mastered by the apprentice in order to successfully complete the program.

Method of Delivery: In House Training and e-Learning

Source of Instruction: Grand Circus Detroit

Recommended Instructor-Led Training

Core Courses -	Class Title	Hours
	Working in a Professional Environment	25
	<i>Principles of Team Work</i>	
	<i>Technical Writing and Professional Communications</i>	
	<i>Technical Project Management</i>	
	Career Placement Training (interviewing, networking, resumes)	10
	New Employee Orientation	6
	Fundamentals of Programming (structure of web applications)	20
Programming -	Each Candidate is Required to Choose <i>One</i> Track	
Sub-choice A:	NET Programming Track	240
	<i>Intro to .Net Programming</i>	
	<i>Advanced .Net Programming</i>	
	<i>Final Project</i>	
Sub-choice B:	Java Programming Track	240
	<i>Introduction to Java Programming</i>	
	<i>Advanced Java Programming</i>	
	<i>Final Project</i>	
Sub-choice C:	Android Development Programming Track	240
	<i>Intro to Android Development</i>	
	<i>Advanced Android</i>	
	<i>Final Project</i>	
Total Hours		301